Program on Information Resources Policy

Center for Information Policy Research

Harvard University

THE INFLUENCE OF POLICY MAKING ON C^{3}I

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General Rosenberg's view of the C^{3}I elephant is colored by his responsibilities on the National Security Council staff, which shade toward intelligence. His perspective is thus distinctive, in that he views the field from the vantage of policy making — how it constrains C^{3}I, and what possibilities it opens up.

I am going to try to describe to you, through my eyes, the policy process as it relates to the strategic command, control, communications and intelligence architectural problem. I am glad to see that you are going to find time to spend with someone like Lee Paschall, who has to take the wild machinations of the policy dreamers who don't know much about the real world and make it all really work.

That is probably the most difficult task: putting together some of the things we come up with. Each administration feels, to a certain degree, that everything started with it. That is, we write our own genesis. We all put up organization charts that show ourselves at the hub of the wheel, and the National Security Council, I suppose, is no different from any government bureaucracy. A lot of the issues we have dealt with in the past three years have emanated from an examination of the strategic C^{3}I problem from the National Security Council vantage point. We come into office feeling that we have made a lot of campaign promises that we must carry out — but that we are going to do things a lot better than our predecessors. In the case of strategic C^{3}I, we felt it was essential to redress the grievances of past malpractices, some very real. (I will talk later on about the fallacy of what we refer to as "mutual assured destruction.") Part of our problem today is that our whole architectural approach to the C^{3}I business stems from an age of strategic superiority, which the United States enjoyed for many, many years. In the current environment of

equivalency or parity, however, we can no longer afford to have systems that are capable only of reacting in spasm to an aggressor attack.

I think it is important to understand what the NSC is, because I am going to try to weave for you a picture of a tremendously large set of interrelationships amongst various bureaucracies. I'll try to describe the key players and then, when all of that is background, try to get you to see how we have gone about addressing the issue of what I will call "enduring command, control and communications." The National Security Council has its foundation in the National Security Act of 1947; the statute that covers that is Public Law 235-61 as amended in 1949. By the Federal Reorganization Act of 1949 the National Security Council was made part of the Executive Office of the President. But, as it turns out, the NSC is a creature of its boss. That is, each President has interpreted Public Law 235-61 in the way he sees an NSC can best serve him. Harry Truman, as the originator of all this, used the NSC strictly as a coordinating mechanism. History says that President Eisenhower overorganized it (typically, as we military people do) and made a general staff out of the National Security Council. President Kennedy refused to use the NSC, depending on individual advisors instead. Then there was the wisdom of Henry Kissinger. And the Carter administration has felt it important to invent its own NSC within the constraints of the Public Law.

The constraints include the NSC's statutory membership. It consists of the President, the Vice President, the Secretary of State and the Secretary of Defense. There are two key statutory advisors. One, the Chairman of the Joint Chiefs of Staff, is not a voting member of the Council, but is the key advisor on all military matters. The key statutory advisor for intelligence is the Director of Central Intelligence, who is also the head of the Central Intelligence Agency, which was set up by the National Security Act of 1947. The principal individual responsible for orchestrating the National Security Council process is the Assistant to the President for National Security Affairs who, in the Carter Administration, is supported by a National Security Council staff of some thirty professionals organized for regional responsibilities (such as Far East, Middle East, West Europe, Soviet Union, Latin Affairs) and functional responsibilities (such as intelligence, technology, defense policy, advanced strategic planning, global affairs).

What makes the Carter administration's National Security Council different from some of its predecessors is that President Carter saw the NSC as a body that should go far beyond just treating the classical attitude toward foreign policy and defense policy — picking up to a great extent, I dare say, on some of the articulated failings of the NSC from the Kissinger years. (Henry himself admitted as a problem that we had not paid enough attention to the interrelationship of domestic affairs with our National Security policy and our international economic situation.) So in the Carter administration other cabinet members often participate fully in the NSC process — the Secretary of Commerce, the Secretary of the Treasury, the Secretary of the Interior, depending on the particular issues being handled.

To put all this in an organizational setting: very early in his administration (January 20, 1977) President Carter signed a Presidential Directive. (Those of you who are students of government buzzwords are probably familiar with the terms NSSM and NSDM — National Security Study Memoranda and National Security Decision Memoranda. Well, we did away with those. We changed all the names. We now call NSSMs PRMs, Presidential Review Memoranda, and we call NSDMs PDs, Presidential Directives. Sometimes we

have trouble just keeping the alphabet soup straight.) The Presidential Directive, signed on the first day of office, established two key committees of the National Security Council: the Policy Review Committee (PRC) and the Special Coordinating Committee.

The Policy Review Committee deals with major issues that are principally the responsibility of one department of the government, but have a lot of interrelated impact on others — such as the Defense Department's responsibility in the field of foreign military sales and military assistance, which is almost equally an issue and responsibility of the State Department. In dealing with our general arms sale policy issues, the Secretary of Defense normally takes the chair of the Policy Review Committee, and the Secretary of State, the Secretary of Commerce and the other interested members of the cabinet participate in that process. When dealing with the pros and cons of the Middle East peace negotiation process and establishing our options, what path we should follow, the Secretary of State has been the chairman of the Policy Review Committee when it met to discuss that. The Special Coordinating Committee is a horse of a slightly different color — it meets to deal with cross-cutting issues, where everybody's ox is going to be gored more or less. The Assistant to the President for National Security Affairs, who is supposed to be an unbiased judge (in spite of what you read in the newspapers about Zbigniew Brzezinski), is the Chairman in that case.

These two committees, then, don't have their foundation in law or in executive orders. Rather, they are an elephant that has been built by this administration to serve its perceived view of how the National Security Council should operate. They are part of the broad background of how any particular sizable issue, like our strategic posture, is handled. The two groups formulate domestic, foreign and military policies related to our national security. They develop issues and options and attempt to reach consensus. Where there is no consensus, the options are presented to the President for his decision. Generally, as a matter of fact, even when there is consensus the President — this President — wishes to have the final say. I served in the last nine months of the Ford administration, as one of the very few NSC survivors, and I can tell you that the Carter administration's National Security Council operates entirely differently from the Ford administration's, at least as I saw it. Only history will tell whether that was for the better or for the worse; I won't be a judge of that.

Very early on, the NSC met to cover some problems of broadranging concern to the Carter administration leadership. One of the first tasks it undertook was a net assessment of Soviet strategic military power and economic power vis-a-vis the United States, and this was called PRM 10, Presidential Review Memorandum 10. Almost a year-long net assessment took place. It involved the bureaucracy at large, ranging from economic considerations through mobilization to the active military confrontation capabilities of both sides. The study resulted in Presidential Directive 18.

Student. You are describing the net assessment being done by a National Security Council process that is very much the creature of the particular President within the broad confines of statutes and so forth. My understanding of the significance of that is that the very notion of a net assessment which balances out Soviet or other capabilities and U.S. capabilities essentially can't be done anyplace else, since no one else has either the statutory or other kind of charter to do it on a continuing basis. That is, unless I am wrong, the intelligence folks don't, the military folks don't and, unless it happens to have the priority of

something like an NSC activity, it is not likely to get done. Is that a fair statement, or am I off track?

Rosenberg. It's a true statement at some times and not at others. You have put your finger on one of the most violent debates inside the administration. Stansfield Turner, for example, is over on the Hill right now presenting a national intelligence overview to several committees, and Harold Brown is apoplectic that Stan is presenting net assessments, and the Defense Department and the JCS are up in arms over the fact that the DCI is making presentations that show U.S. strategic and general purpose force capability vis-a-vis the Soviets. I can't really assess how much their concern has to do with the impact Stan's presentation will have on the survival of some of their pet projects in the authorization and appropriation process, and how much it is associated with feeling that Turner's assessments are not valid and will therefore lead to mistaken approvals and disapprovals of programs. (Turner does not have the access to the blue forces that the Defense Department does; he has the red information, but not the blue.) At the same time Andy Marshall also thinks he is responsible for all net assessments; yet he has met with a jaundiced eye from those who are looking for a disinterested assessment, because they think Marshall, as Director of OSD net assessment, is biased toward selling defense programs to the Congress. So you are wrong to the extent that both DoD and the DCI engage in net assessments. Since PRM 10 the NSC has failed to meet its responsibility for continuing that work.

Oettinger. Some of those net assessments are done in a quasi-NSC manner; that is, there are representatives of all of the concerned agencies on the committees that write those net assessments. And if you have a net assessment coming out of the State committee, it can be as rounded as something from the NSC would be, yet nowhere near as powerful as an NSC assessment. I didn't want to derail you too far; the point is one that bears scrutiny and might touch an interesting subject for exploration in a paper. You were about to say something about the substance of what emerged.

Rosenberg. Well, the substance was that we will have a survivable, enduring strategic war fighting capability. That was a rather bold statement. As you will see later on, we found that we had a lot harder time getting there than just writing it down on paper. And this, sometimes, is the very serious shortfall of the policy making process — that we policy makers quite often fail to communicate with the Lee Paschalls of the world who have to find a way within constrained budgets to make the kinds of things we talk about happen.

But let me talk a little more about the key players, because the NSC, at the top of this debating body, is really only the tip of the iceberg. Ninety-five percent of the work gets done elsewhere before it gets there. And there are key players, in particular, in the arena we are going to talk about today. They are in all three branches — Legislative, Judicial and Executive.

The Department of Commerce is a key player; its new role in the telecommunications business was established under Executive Order 12046, whose primary purpose was to disband the Office of Telecommunications Policy and move all the OTP functions into other entities of the government. By and large, what Executive Order 12046 did was take those OTP responsibilities and either put them in the Executive Office of the President assigned to OMB or OSTP or the National Security Council, or give them to the Commerce

Department, to NTIA. Their responsibilities include being the principal coordinator for all federal, state, local and international telecommunications matters as they relate to the U.S. government. They are responsible for developing all the major telecommunications policy options under a Presidential Directive that derived from a presidentially directed review of our telecommunications security problems.

Commerce was also given the responsibility under PD 24, and confirmed in the Executive Order, to safeguard significant unclassified government information related to our national well-being — such as data transmitted by the federal regulatory agencies. This is part of our national telecommunications security issue, safeguarding unclassified information and preventing it from falling into the hands of foreign adversaries who would use it to the detriment of our national security. As part of that task, Commerce has the responsibility for public education, in terms of sensitizing the private sector at large to the telecommunications intercept threat to their interests. Commerce also is responsible for regulation within the Executive Branch — as opposed to the FCC, which regulates the common carriers et al. Commerce also inherited from OTP the responsibility for frequency allocation and spectrum planning for the future. So, with all these tasks, Commerce has a major influence on where our strategic command, control and communications capabilities can go, in terms of both capabilities and restraints.

The Department of Defense is another major player. It is the executive agent for the National Communications System, and the Director of the Defense Communications Agency in his dual role serves as the Director of the National Communications System as well. DoD is responsible for NCS architecture, systems management and operation, procurement and technology development. NSA, as I said, has a key role from a protective standpoint, in that it is the U.S. Government's executive agent for communications security, that is, protection of classified information.

The Department of State has an equally key role in C^3I, particularly as it relates to State's responsibility for foreign policy, and for establishing the U.S. position in international negotiations. GSA has a key role as procurer of a tremendously large amount of our telecommunications equipment. The newly created Federal Emergency Management Agency has a key role as a resource manager for working the broad spectrum of telecommunication problems. The Attorney General is also a very important player. And probably one of the most important roles inside the Executive Branch falls to the Office of Management and Budget — not chiefly for its advertised responsibilities in Executive Order 12046, which holds OMB responsible for procurement, management of policy, and frequency allocation adjudication when some department is in a dispute with Commerce. More importantly (as I try to get my own boss to understand every day), budgets drive policy in this government; policy does not drive budgets. Those of you who end up either going back to the federal bureaucracy or going to work in industry somewhere are going to have to deal with the government, and you'll find the power of the budget supreme. I haven't got enough fingers and toes to count for you the number of Presidential Directives that really don't have very strong teeth because the OMB budget examiner managed to make sure there was no money to support the effort.

I have put the NSC down near the bottom of this list of people with responsibility for telecommunications. In the reorganization, the responsibility for all mobilization planning related to telecommunications, and setting the architectural policies for the National Communications System, were transferred to the National Security Council. OSTP has roles similar to the NSC's.

Student. Would you define "architectural?"

Rosenberg. In a broad sense architectural responsibility is to set policy goals that provide for a total set of functions that must be done to support some end cause. Establishing the overall basic needs for the program — setting, for example, from a policy standpoint (as you will see when we get to Presidential Directive 53) the National Telecommunication Security Policy set of principles which will guide the design options that the National Communications System Manager must follow in developing and fielding a telecommunications capability, including hardware, software, the whole business.

Oettinger. This may sound like logic chopping, but it may be worth pursuing. This seems somewhat narrower than what an architect would call architecture.

Rosenberg. Now, this is not a systems view.

Oettinger. No; an architect would call what you have described the building program — the size of the rooms, and the activities that would happen, the number of people who come in per day, what you have to provide for circulation, whether you want to seat people in it, and so on. And then the architect and his engineers and others go on to figure out whether they can put it in. But, if I understood you accurately, what you have described is only a part of the architectural process, mainly a setting of architectural goals. Then the architect and the client and the engineers and the air conditioning people every once in a while get back together with the client and say "By the way, if you want this your budget will double, or the air conditioner won't work, or your corridors can't handle this — and there is a kind of an iterative process. But if I hear you correctly, in this administration, and perhaps built into the statutory structure, once that architecture is launched, there is little of the kind of interaction a good architectural firm would do.

Rosenberg. You remember I started to tell you that we made a statement in PD 18 that later on we discovered we couldn't do; so in trying to save the house from falling down we began to shore it up, first with Executive Order 12046, then with PD 53. One smart thing that we did in setting up Executive Order 12046 (since everybody is hard pressed for Indians to do their work for them, and since the Executive Office of the President's Staff is small and the Carter Administration wants to keep it small), we wrote into the Executive Order that the NSC and the OSTP have the right to go out and say to any department or agency: you will provide me a staff to do my work for me. In this case we selected the National Communications System to do our staff work for us. So, after three years, Frank Press and Brzezinski have both Henry Geller's NTIA and the NCS serving as their staff to provide this iterative process.

Student. I can see that you are circumscribing the NSC's role rather narrowly as a result of 12046. It seems that the NSC has not worked hard to ensure it has a primary role in developing national telecommunications policy as related to national security. You seem to be giving the primacy to the Department of Commerce. Isn't there a certain tension there between Defense/NSC and Commerce?

Rosenberg. There is a good deal. The tension between the NSC and both Commerce and Defense is in trying to make both of them do what they are responsible for under the

Executive Order and other statutes that are guiding instruments. We have had an endless battle over the last three years with the Defense Department over this issue of survivable, enduring command, control and communications.

Student. What is the point about the memorandum of understanding between the OSTP and the National Security Council, that came out shortly after 12046 and clarified the role of the National Security Council and OSTP policy, to limit the influence of the Department of Commerce in national security-related aspects of telecommunications?

Rosenberg. In that memorandum of understanding Frank Press and his staff on the one hand, and Zbigniew Brzezinski and his staff on the other, carved up the pie, if you will, so we wouldn't be stepping on each other in what we were trying to do for a living. (Incidentally, both staffs call on the same person to do the coordination effort — Wayne Kay, who works for Frank Press and also for Ben Huberman, who is on both Dr. Brzezinski's and Dr. Press' staff.)

As in any bureaucratic struggle, there is some friction amongst individuals between one organization and another. But, participating in the drafting of that MOU, I had no intent to cut NTIA out of anything. As a matter of fact, most of my struggles were with my colleagues over at OMB, making sure that NTIA had an adequate budget to do the job we gave them, both under PD 24 for their telecommunications security responsibility and under 12046. Now, I don't want to sound like I am not being candid with you, or naive. Yes, there was a lot of friction at the outset in setting up 12046 with the Domestic Council staff. And NSC staff got into a lot of jurisdictional fights, which in fact resulted in NSC being given the responsibility for policy over the National Communications System.

Student. Maybe I misstated the question. You have stated that the NSC's responsibilities are architectural, that as specified in 12046 it has policy direction over the National Communications System. But doesn't it also have primary authority for broader aspects of telecommunication policy as national security?

Rosenberg. Yes, the NSC has a role in mobilization. Telecommunication supports mobilization, which is much broader than just the NCS. I tried to make a list of all the Legislative Branch committees — and you have to multiply each of these by two, to account for the House and Senate. Each has a major hunk of jurisdiction over this large amorphous thing called C^3I. There are the Commerce Committees, the Government Operations Committees, the Foreign Relations Committees, the Defense Committees, and finally the OMB of Congress, the Appropriation Committees. And while those of you who are students of the planning, programming and budgeting system may note that while authorizing committees over on the Hill may devise some well laid out master plans, by the time one of them gets through the Appropriations Committee it comes out looking like an entirely different camel.

Not to divert you from the story of C^3I, but several years ago I served as a legislative lobbyist for the Air Force on the Hill, and for four years in a row the Air Force was directed by the House Appropriations Committee to buy 24 A7Ds every single year, even though there was absolutely no requirement for any more A7Ds. It was an old fighter plane, and didn't do the job against the approved threat scenario; it just happened that

the part of Texas where the A7D is built is in the home district of Representative George Mahon, and he was the Chairman of not only the Defense Appropriations Subcommittee but the full House Appropriations Committee. I don't mean to pick on George. This happens throughout the ballgame. There are individuals who style themselves experts, like Harrison Schmitt, who could have done a better job on war than we did; he's also very busy reorganizing our space business. Brooks has his computer procurement policy, Van Deerlin restructures the Communications Act. Very candidly, we often see the Hill as 535 separate Presidents of the United States all trying to do the job of the Executive Branch. Thank God, we have a constitution which has been able to survive all the trials and tribulations of the past couple of hundred years. A lot of times the overlapping real responsibilities of these various legislative committees and the Executive Branch (I have not left out the Judicial Branch or the civil sector, including the FCC and common carriers and so on, on purpose), as well as perceived responsibilities, make the job of getting from point A to point B very difficult. Some examples of the kind of thing I am talking about will illustrate that, while a lot of people may not be happy with the state of affairs in strategic C^3I, a lot of others are happy, and believe we don't need to do anything, so it depends on which side of the problem you are coming from.

To illustrate the overlapping problem, we just went through a major exercise during the last year and a half to try to develop a national radio navigation plan. And NTIA, under its responsibilities in Executive Order 12046, felt that it had the lead coordinating role to put together this plan, which involved the FAA, the Department of Defense, the Coast Guard, anybody in government who has to do with radio navigation. OMB, on the other hand, since the Executive Order gives it the charter for procurement and "management policy," felt this was a management issue, and that it should be in charge. After two months of arguing, we ended up establishing a co-chaired interagency group under the NSC umbrella to put together a master radio navigation plan — which then began to bump into a lot of really tricky problems. People at NTIA looked downstream ten years and said, "Since the Department of Defense is going to have a family of satellites called the Global Positioning System with very high-precision velocity and acceleration data available for the fighting forces, wouldn't it be sensible to make all that data available to a whole host of other users?" One part of the State Department thought that was a great idea, seeing it as beneficial to our international relations that we could make this precision navigation capability available to the world — since in this dynamically changing world a key element of our foreign policy is to draw together other nations of the world to cooperate with us interdependently. On the other hand, the Defense Department was apoplectic, because this system's precision is supposed to help improve ICBM accuracy, SLBM accuracy, ability to drop conventional bombs on target, the foot soldier's ability to find out where he is on the battlefield — and the last thing the Defense Department wanted to do was radiate this communications information in the open to potentially hostile forces. There was tremendous struggling — and then OMB said, "Well, heavens, this system costs billions of dollars. The only way we are willing to field it is if you cancel Loran, Tacan, Shoran, Navan, all the other navigational aids — VOR, which all the civilian airlines depend on (and you probably couldn't even get insurance from Lloyds of London if you shut that down)."

So you have the typical process: different perceptions of what is needed coming out of the various different elements of the government. The perfect example of this is the Defense Department's development of a wideband secure telecommunications system. A

single congressional staff member had been one of the few chosen people in government to receive one of the new encrypted narrowband communications systems. When he discovered its transmission quality, he said, "Why are you going to spend all of that money on wideband; narrowband will do the job." And he persuaded the members of his appropriations committee to zero out all the funds for DoD wideband secure communications capability.

It is important to understand that too many people in the Executive Branch focus on what goes on in the Executive Branch, and fail to understand that the real power is in the Legislative Branch. I have a great deal of respect for what Congress can and can't do to the best laid plans. Again, I strongly believe that budgets have a lot to do with the setting and driving of policy, rather than the other way around.

I have tried to give you some rambling background as to what amorphous bureaucracy looks like. One of my cohorts was trying to help me show pictorially how the Executive Branch, the Judicial Branch, Legislative Branch, all these bureaucracies interact and impinge on each other. The chart was so disgustingly complex that it was a mess. Yet it really isn't that bad, because there are statutory boundaries within which each entity must operate. You reach out and try to exert your power and influence and responsibility until you bump into that statutory wall; and when that happens you try to find support for change in the legislative process. You sponsor a change such as the one we are now sending to the Hill to exempt the CIA from certain aspects of the Freedom of Information Act. Where you find you haven't bumped into a statutory wall, you may have bumped into an Executive Order wall somewhere. In that case you may attempt to get a new Executive Order, like EO 12046. We spent the first 45 days of the Carter Administration reviewing some 350 active NSDM with interagency study groups, cancelling, modifying, or reaffirming them. This process goes on continually — trying to make sure there is a legal basis via a DoD directive, a NASA publication, a Commerce Department instruction, an Executive Order, and that the operation we are conducting is legitimate and sensible.

Now how does all of that general background relate to the problem of strategic C^3I, and how do we examine that problem in our organizational context? You recall I talked about PRM 10, the net assessment resulting in Presidential Directive 18, which established what we called a countervailing strategic posture. Some of its tenets were to assure national entity survival against an all-out nuclear attack — at least as well as the USSR could survive. It was interesting to see that kind of terminology creep into PD 18: "at least as well as the USSR." It goes back to the fact that it all derived from a net assessment, so that in one sense or another we were comparing ourselves with the other side and what it was prepared to do. With regard to our civilian population and the needs for continuity of government and constitutable economic structure, the countervailing strategic posture called, among other things, for assured survival and functioning of a competent, credible national command authority with minimum warning of nuclear attack at all plausible levels. It required that we insure initial survival, and either continuing survival or adequate reconstitution of a functioning strategic C^3I structure capable of war management indefinitely.

The interesting thing is how all this came about. None of us intended PRM 10 to modify any existing national policy or strategy. Now fortunately or unfortunately the Soviets, for their part, weren't constrained by any PRM 10s or by the way we run our government,

and over the years they have developed, fielded and exercised the doctrine, concept and capability of an enduring strategic war fighting force posture. They are not afraid of nuclear war; they are planning for it as a deterrent (hopefully), and they are exercising it. As part of our net assessment we saw that, while we have kept on talking about mutual deterrence in terms of our abhorrence of all-out nuclear war and estimating that mutually assured destruction will surely prevent either side from entering into any such madness, the Soviets, apparently, don't see it as madness.

One of our problems is the intelligence side of this equation: how do you tell the difference between capability and intent? Unfortunately the assets for which I am an advisor to the President sometimes just aren't that good. With all the technical and human intelligence capacity we have, with all the bright, analytical capability of the U.S. intelligence community, it is still very difficult to get into the mind of the Politburo policy maker in Moscow and find out what is his real intent. All we can do is keep an eye on the Soviets' field capability, watch their exercises, see what they practice — and understand that what they are practicing is a capability for protracting war over an extended period of time.

The problem that creates for us takes us back to the question about architecture. I am talking about the house itself and what is inside it. The architecture was developed back in the 1950s. The military (as opposed to the civil) side of C^3I has most of its foundation in a nebulous entity called WWMCCS — the World Wide Military Command and Control System. WWMCCS arose as a necessary communications command and control system to support spasm response to an enemy attack. And that is all it was intended for, because according to the prevailing view at the time, the world was going to end when that was over. (And interestingly enough, a big part of our problem with the Executive Orders and PDs and budgets and so on is that easily half the people I talk to are still convinced of that.)

Student. Half the people within your department? Or in the whole Government?

Rosenberg. No, I'm talking about the people who have an influence on our future strategic capability. I have had endless arguments with the chief counsel supporting the staffer on the House Appropriations Committee who advises the Defense Subcommittee on whether or not we should be spending the money to enhance the survivability and endurance of our capability — not to fight a war, but as a deterrent. In a recent report the Defense Science Board concluded chiefly that the way to prevent a war with the Soviets is to make damn sure they know we are capable of executing a long-term strategic nuclear exchange — that to exercise it, publicize it, make sure they know we have the wherewithal is the most viable way of preventing it from happening. I have endless debates with this very influential staffer who believes that it is foolish to think about anything other than a massive nuclear exchange and that's the end of the world. (We are transferring him to the Executive Branch of the Government. I am not kidding you! We are making him the new Assistant Secretary of the Air Force for Financial Management.)

Student. With respect to the words "at least as survivable as the Soviet capability," suppose the Soviets feel themselves survivable not solely with the United States but, say, vis-a-vis China. Does that influence our posture vis-a-vis the survivability of, say, Mexico? That is, what if both the U.S. and the Soviet Union are in perilous straits and the game belongs to China on one side and Mexico on the other?

Rosenberg. We were paralyzed in Iran, with all our strategic capability, and we still are. I don't want to avoid answering your question, but part of the problem of what we said in PD 18, as we discovered later on, was that that was the wrong thing to say. It's not necessarily survivability, and that was all part of learning how to communicate. One of the things you would think would be intuitively obvious to a casual observer is that, if you are talking about deterring a long-term nuclear exchange, endurance, not survivability, is the key. Reconstitution. Proliferation. Flexibility. And we discovered, in building this new language in the administration, that there was a big difference between survivability and endurance. To a lot of people that is just semantics, but to decision makers and implementers, people who have to go make happen what the policy wizards come up with, building a system that is enduring is entirely different from building a system that is survivable.

Student. Could you clarify the difference? I take it that you mean by endurance that it will last for a certain period of time against some specified threat, and then can be reconstituted within some specified time, while "survivable" means that you can keep talking on the radio no matter what is happening.

Rosenberg. What we have discovered is that the key to a really effective deterrent is a function that is endurable, rather than survival of a person or a facility. Worrying about whether or not the President lives or dies, or whether you can dig a hole deep enough in the ground to survive a direct three-megaton blast, is just not the right way to solve the problem. It is the function that has to endure through the long term, while survivability is associated with things. That is the distinction we are now coming to appreciate and are trying to articulate.

Student. But doesn't endurance require the survival of things?

Rosenberg. Well, you can have many facilities, many people, all capable of doing the same function. You don't care which one gets killed as long as one of them is left to execute the function.

Student. Then endurance is just survivability in greater numbers, a matter of redundancy.

Rosenberg. That's one solution. Reconstitution is another. That is, we know that, if there is a nuclear exchange, a tremendous number of our telecommunication nodes are going to be knocked out. Our telecommunications capabilities are going to be disabled during the trans-SIOP, the early stages of the Single Integrated Operations Plan. (We call the Soviet version of how we think they intend to execute a nuclear attack against the United States the RSIOP (Russian SIOP). We talk about the pre-SIOP state where you have warning and knowledge about what is going to happen so you can plan to do what you must do. The trans-SIOP state is in the midst of early exchanges, and post-SIOP is after a raid, or after a series of raids.) In the trans-SIOP period, when most of the initial exchanges will be taking place, there is going to be EMP blackout, brute force damage to systems, a heavy jamming environment and so on. But we have a massive communications capability throughout the nation, and surely there has to be some way to reconstitute its various fragments. There will be "islands" that survive, and some of them are going to

have real productive power. One of the tasks, if that is the solution in an architectural sense as opposed to redundancy, is to figure out ways to ensure that we can link them by means of a viable interface and internetting capability. We had a horrible example of the statutory structural barriers not too long ago, in an exercise where we couldn't find the reserves because two computers from two different services didn't talk to each other properly.

So in parallel with one Presidential Directive and countervailing strategic posture, a lot of real things were happening which started getting the attention of the leadership policy makers. Early in the administration President Carter became the first President ever to fly in an Airborne Command Post. He said, "I don't understand what good this multimillion-dollar affair is. You say we are going to buy six of them? Well, why not two or three at the most?" He was immediately struck with its mammoth size, the fact that it can't stay in the air forever, that it is not nuclear-hardened, that a 747 takes a runway capable of withstanding very considerable loads. We all fly on 747s and L-1011s, but you would be surprised how few airports in this country can take the landing loads of the 747; and when you stock it full of computer equipment and electronics the way the Airborne Command Post is, you can imagine the tremendous load. When the President questions the viability of such a thing, it leads to a very interesting exercise. A couple of weeks later, Dr. Brzezinski got on the telephone and called the man you all have heard about who carries the little briefcase with all the codes inside, and said, "This is an exercise. I am the President of the United States. We have just gotten warning that a raid of nuclear warheads is en route to the United States. Get me out of here. This is an emergency exercise. We are going to war." The helicopter that is supposed to be on alert at all times, to land on the White House lawn and whisk away the National Command Authority, almost got shot down by the Secret Service. (By the way, this was kept secret for quite some time until it got blown in the newspapers, which is the only reason I am able to tell this story. I think we were ashamed of the horrible state of readiness we were in.) The sum and substance is that the exercise of trying to evacuate the National Command Authority and set up his communications was a nightmare, just a complete disaster.

More or less in parallel with all this the President did become very interested in recognizing and exercising his responsibilities as the Commander in Chief of the Armed Forces. To my knowledge, as long as I have been in Government, I know of no other President who actually has conducted SIOP exercises. Jimmy Carter has. He has participated in a series of what we call CPXs, communications command and control exercises, in which there is an end-to-end runthrough with different scenarios where the Commander in Chief is in communication with the unified and specified commanders — the commanders-in-chief of forces in Europe, the Pacific, the Atlantic, and CINCSAC, who is responsible for executing the SIOP by directing the assets of the SLBM, B-52 and Minuteman forces. The President actually went through these exercises, and probably the most telling experience they all had was a scenario the Red planners (as opposed to the Blue planners) developed, in which the Soviets laid down an RSIOP at our critical C^{3}I nodes. It was a combination of sabotage and depressed-trajectory SLBM attacks against such things as our early warning satellite ground stations and our early warning radars. The exercise ground to a halt. And we learned that a very important feature of the deterrent posture is to be very flexible, and not just plan a system against an "approved" threat scenario. As I said early on, we know a lot about the enemy's capability, but we know little about his intent; so we had better be prepared for a variety of encounters.

Student. How far do we generally play this SIOP game through? Just through the first strike? Or do we continue through possible nuclear warfare beyond the integrated operating point?

Rosenberg. The exercises to my knowledge have gone only through the trans-SIOP period.

Student. Do we know whether the Soviets play this kind of game beyond that?

Rosenberg. We know they do. They don't play that kind of war game in real time, they move the clock. And we do the same thing; we can't afford not to. One of the problems with exercises is that they are terribly expensive. That is why people don't like to exercise; they don't have enough money in their budgets to spend on it. It's a very key problem: unless you exercise your assets and capabilities you really don't have an effective deterrent, because the other side knows how competent or incompetent you are, and how well you can swing from peacetime normalcy into a crisis or be prepared to go to war. There are parallels in business, which must handle crises all the time — this is just the general noise level to them.

Student. You mentioned before that budgets drive policy. What drives budget? You talked about the "approved threat" scenarios and things like that. Does doctrine drive budget to some extent? Or is doctrine a function of a policy that comes out of the budget, and do we develop doctrine to fit what we've got?

Rosenberg. Perhaps I've overemphasized the statement that budget drives policy. It's an iterative process, and I assure you that Jim McIntire and John White, the Director and Deputy Director of OMB, are key participants in the overall formulation of U.S. policy. They are not green-eyeshade people who worry about nothing but the immediate dollar. However, a key Carter Administration goal is to arrive at a zero deficit budget. That's part of our overall grand national strategy to get this economy well. I don't pretend to know a lot about that. But the motivations that drive the large OMB staff are different from those of most of the rest of the bureaucracy. They know they are going to have so much income and so much outflow in the next fiscal year, and each Associate Director is given a target figure. The people who work under them get their grade cards written on how well they can analyze the budgets to shave off excess fat and fit into that figure. So there is, in a sense, a larger strategy, and that is the economic well-being of this country.

Student. Where does our strategic doctrine vis-a-vis the Soviet Union fit into this? Is the doctrine: "This is how much money you have; this is the system you are going to have to get because this Congressman wants the business;" or: "Some powerful entities in the Army or the Air Force want these systems?"

Rosenberg. All of the above is true.

Student. To what extent, then, is doctrine a function of real threat versus imagined threats to fit particular needs?

Rosenberg. I'd say it's the interactive process among all the leadership in the government that helps us head in the right direction — all the intelligent people at the top who weigh all the various inputs.

Student. Could you discuss the idea of endurance as a gain by redundancy, and the idea of centralization versus decentralization, especially when it comes to strategic forces, nuclear forces, and the command authority which uses the strategic C^3I?

Rosenberg. There's a strong desire for intense centralization and authority; only the President or the National Command Authority is supposed to be able to execute the SIOP. Let me try to go through some of the lessons we have learned, and where we are going, and I think part of the answer to your question will come out of that.

We have talked about the exercises the President went through. At that same time something occurred that struck our leadership as ominous: a heightened, renewed effort by the Soviets to demonstrate their anti-satellite capabilities. They were conducting exercises with a physical interceptor capable of destroying certain kinds of satellites. We also know that they are developing other kinds of capabilities. Since much of our C^3I is spaceborne, that heightened the concern of the leadership. The state of world tension, the dynamics of the changing world, brought all these things together.

Remember that the original responsibilities of the NSC and the NSC staff are to analyze such issues and problems. Dr. Brzezinski sent a couple of his staff out to do an assessment of the connectivity between the National Command Authority and the warning systems, and our ability to execute the SIOP. That trip was a real education for the NSC staff members involved, and they recommended that Dr. Brzezinski himself go on the same trip to our strategic nuclear and warning facilities. The Deputy Secretary of Defense and the Chairman of the Joint Chiefs of Staff went along. Remember, now, that the Deputy Secretary of Defense, by authority of a DoD directive in a prior administration dated 1971, is the WWMCCS architect, responsible for making that amorphous thing support our strategic deterrent.

A capping incident was what the administration saw as a true demonstration of aggressiveness on the part of the Soviet Union — recognizing, with some hesitation, the reality that real power is not as important as perceived power. (Remember the conclusion of the Defense Science Board that a demonstrated capability and willingness to do a job with certain assets is a very important deterrent to a potential aggressor.) The administration, then, really turned the screws on the defense community, got FEMA to start worrying about the endurance of function related to mobilization of industry, manpower and other resource mobilizations and the continuity of civil government. There has been a series of mobilization studies conducted by the National Security Council trying to make sure that the various entities in the government that have a role in mobilization actually set up implementing regulations to be prepared and to exercise these capabilities. Their awareness of all these problems has never come home to roost in the Congress, where the House Appropriations Committee Survey Investigation Team did a year-long study on the inadequacies of the U.S. command and control communication systems. The House Permanent Select Committee on Intelligence did companion studies on what needed to be done to enhance the endurance of our intelligence capability to support this kind of concept. This meant finally turning away from a mutually assured destruction philosophy, even

though, as I say, about half of those in influential positions in the government still don't fully understand that.

The problem is all the players and the structure involved. There's the WWMCCS system, which is the tool by which we get tactical warning of impending attack. We get an assessment. The options of the National Command Authority to execute a retaliatory strike are part and parcel of the WWMCCS system. The authentication process itself, to assure that the National Command Authority, whoever it may be, is the legal executor of the system. The actual strike and post-strike assessments are part of WWMCCS too, and that's where we begin to run into problems, such as how you do post-strike assessment. Assuming that you are going beyond a spasm response, where are the reconstitutable communications? Where are the command and control entities to run them? We have bought, as part of the WWMCCS system, eight running nets, 108 command and control centers, 60 computer systems and 85 communications nets. We face the problem of how to reconstitute them.

But even WWMCCS is only a piece; intelligence is another very essential piece. If I don't know where the empty silos are in the Soviet Union from whence the missiles came, I could expend an unnecessarily large percentage of my force and my deterrent at random — and we haven't even talked about that. But part of the need to look at the endurance of these functions is that after these nuclear exchanges (God forbid they ever happen), we must make sure we don't find ourselves in a position where an aggressor still has a secure reserve force of such magnitude that he can hold our governmental system hostage because he has blinded us — decapitated our ability to conduct military operations and run a civil entity called government.

The problem in intelligence is that it grew up under the philosophy: we are a peacetime operation; when the bell goes off we have a long leave. Very little of our national intelligence is survivable. And there are different perceptions of what's important and what's not. The Director of Central Intelligence, under Executive Order 12036, is the head of the U.S. intelligence community. He is responsible for the national intelligence budget; he is responsible for developing programs against the set of requirements levied on him by the National Security Council Policy Review Committee, which acts as a consumer union to set the priority for what we need. And the perception is that military operations support is, by and large, not as important as peacetime intelligence functions.

So you end up in disputes like the one we went through recently, where the Secretary of Defense had an asset that was under the control of the DCI, and the DCI controlled the budget. The Secretary of Defense was the line manager of the operation, and the assets were strategic reconnaissance aircraft, RC-135s with signals intelligence gathering capability. The DCI, in the context of what he thought important, felt he could justify eight of these aircraft to support peacetime national intelligence requirements. The Secretary of Defense insisted that he had to use aircraft to go in for post-strike damage assessment. (The aircraft have certain capabilities essential to being able to tell what is alive and what is not alive in Soviet command and control capability after a raid.) And he had a requirement for 12 aircraft; he insisted he really needed 18, but (back to the budget influence) he could only afford 12. That dispute was resolved by the President, who took the program out of the intelligence budget and put it in the defense budget. That's an example of the conflicting perceptions of what's important in this whole game and what is not. Intelligence has the serious problem of being focused on peacetime needs to provide stra-

tegic warning. Again, it's that historical problem of not having ever addressed an enduring war fighting capability.

Student. When the President took out the eight aircraft and moved the whole system over to the Defense Department, did he reduce the CIA's or the intelligence agencies' budget by a comparable amount of money for running those eight aircraft?

Rosenberg. Yes. He put the money over in the Defense Department and they got the 12 aircraft.

Student. Just a matter of curiosity; it's a great way to stick your stuff off on someone else's budget.

Oettinger. What you said a moment ago goes deep into mindsets. The notion that military intelligence is tactical and strategic intelligence is for peacetime is almost built into the words themselves. But changes over the last couple of decades have put a link between strategic and tactical, and have almost made those words useless. This is something that lies so deep in people's consciousness that even talking about it is difficult. Yet it's crucial to keep it in mind.

Rosenberg. I want to try to recap here. I want to stress the massive problem of the civil government operation and, as I mentioned briefly before, industrial mobilization, control of the market, manpower mobilization, civil defense, disaster control. The problem is that we have an archaic thing called OEP Circular 9100.2 that sets up a skeletal organization and regional civil control centers. At the maximum, when fully operational, that results in 23 sites being operated: the NMCC, the National Military Command Center, the alternate National Military Command Center, a couple of airborne command posts. Let me tell you, the Soviets have plenty of reentry vehicles to target all 23 of those assets. And that is the problem. We have been looking at the hardness and protection of large staffs; we have been worrying about the survival of the President — instead of protecting the National Command Authority and assuring that the capability will be there and that the communications links are there for all the successors exercising that capability — assuring that they can execute their responsibility when called on. We have designed a C^3I system that was built for peacetime operations as a spasm response. We have realized we have to change our focus for mutual assured destruction.

Equally important to this evolving philosophy and its architecture is the use of the information. I am sure you have read many articles that say WWMCCS is a disaster, or C^3I is terrible. I neither advocate nor oppose that statement; but I will say that those systems are only as good as the way the decision makers use their information. I assure you that Afghanistan was not a surprise to the policy makers in the government. We had intelligence that told us what was going to happen long before it happened. The point is that the decision makers have to know what they want to do with the data they are going to get. So I can build a multibillion-dollar WWMCCS or C^3I system, but it will be only as good as the people who are going to use the information that goes back and forth through it.

There is another very important thing we are learning: we have got to focus on endurance and survivability of functions, not of individuals. I repeat: the few facilities we have

just can't be built hard enough or deep enough in the ground; they can't provide enough protection against damage in any sense, given the state-of-the-art accuracy of high-yield nuclear weapons, to assure that they are going to survive. So we have got to start looking at how we are going to make the functions endure. And we feel the best way to approach that is through combinations of proliferation, redundancy, and reconstitution, without trying to ensure the survival of large staffs.

We are going to have to combine functions. For instance, we are going to have to get over the perceptions of the military that the military operations NMCCs are theirs and they don't want any damn civilians invading their operation. And the civil authorities' reluctance to have anybody from the Joint Chiefs of Staff sharing a small mobile van with them because they are afraid he will take over. That kind of problem has to be worked out. And we are going to get there by means of smaller, more mobile capabilities that don't require very large investments.

Finally, I talked about "approved threats." We can play the game all we want about what we think the Soviets or somebody else is going to do, but it is very dangerous, and I think our leaders should not try to build capabilities solely against an approved threat that some Red force planner has come up with. There is no such thing as an approved threat, because we don't know what's in the minds of the opposition and what is going to trigger them under any given set of circumstances. So flexibility has got to be the key.

We think we have arrived. We think we finally realize what needs to be done. I would like to quote to you from some very important Presidential guidance that sets the stage very firmly for what's to be accomplished: "The preparedness measures outlined in this national plan for emergency preparedness are essential. They must be fulfilled. As President, I pledge that those responsibilities of the Federal Executive Branch will be carried out, and I urge the Chief Executives of state and local governments, the leaders of labor and industry . . ." and on and on ". . . to fulfill their particular roles." Part of this policy states that the nation's telecommunications resources will be available for use by the government in a time of emergency, contingent on the nature and extent of the needs of the public welfare for continued service. In addition there would be a civil unified communications system for use by the Federal government under any conditions, normal or otherwise. It is of the utmost importance that the telecommunication system's network and capability be preserved to the greatest degree possible during any national emergency.

The President summed up succinctly one of the nation's important communication objectives in this directive when he stated that "The objective of the communication program is to create a communications system capable of surviving attack and adequate to conduct and coordinate federal, state, and local Civil Defense activities." The date of that is September 25, 1968. And so the wheel keeps turning, and we keep going round and round searching for the end.