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Intelligence Sources and Their Applications
Rae M. Huffstutler

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Intelligence Sources and Their Applications

Rae M. Huffstutler

Rae Huffstutler is Deputy Director of Administration of the Central Intelligence Agency. He has served the agency in various capacities for over 30 years, beginning in the field of economic analysis, but soon transferring to specialize in military intelligence. In this field, he has focused primarily on Soviet issues, including ballistic missiles, antiballistic missiles, air defense, and theater forces problems. He has also been deeply involved in analytical support for both the Strategic Arms Limitation Treaty and Mutual Balanced Force Reduction. In 1977 he became Deputy Director of Weapons Intelligence, and then was named Director of the Office of Soviet Analysis in 1981. He served as Director of the National Photographic Interpretation Center from 1984 to 1988, before being named to his current position.

Oettinger: Today we have the great pleasure of having with us Rae Huffstutler — you have his biography in the handouts from last week, and I trust you've looked at it. The only thing I want to add is that between the time we invited him and today, he became the Deputy Director for Administration at the agency. I had invited him to talk about intelligence generically, but perhaps with emphasis on examples of low intensity and special operations things rather than nuclear or theater, and perhaps thoughts about the impact, if any, on the Defense Reorganization Act. I also added that we're particularly interested in his appraisal of current and prospective collection, analysis, and education and training issues, and the latter turns out to be even more germane to his new responsibilities. Rae has agreed to be informal, interruptable, and questionable as he proceeds, so please do not let him get too far down the road without eliciting from him whatever clarification or arguments, or whatever, you care for. Please, Rae, it's all yours.

Huffstutler: Thank you. It's a pleasure to be here. I noticed in reading through some of your biographies that although one or two of you may have been intelligence users, it doesn't look as though there is anybody who's actually spent much time in the intelligence community. So as a prelude to my remarks today, let me begin by just tabling some

fairly simple definitions and ideas about intelligence sources and methods.

Basically, in the business of intelligence, you're trying to produce information, and you go anywhere you can get it. There's nothing particularly straightforward about where you look for information. In fact, we find it in some very strange places. But you can break it down fairly easily into several generic categories, and I think for the purposes of this discussion it will help to review those very quickly.

One is human reporting. This can be gotten from a wide variety of sources. This can be from a controlled clandestine source, someone who has been developed by an operational case officer. It can be an embassy official, who is reporting on conversations where his counterpart may wish the information to reach the United States. It may be from a traveler who's been doing business in the country, or who has for one reason or another been touring an area where you'd like to have information produced. It may be an attaché, or anybody of that character. I'm going to describe to you later on some of the different kinds of information you get out of these generically different sources.

The second kind of source that we use a lot is open source material: journals, newspapers, technical publications, television, news reporting, and so on.

Then there's a large block of information under the general rubric of SIGINT (signals intelligence). This again can be from a wide array of different sources, but fundamentally it's electronically transmitted. It's technical intelligence, and in one way or another it's got to be intercepted — picked off the line someplace — and processed. But it may be anything from intercepted conversations on telephones or microwave communications; it may be off computer lines; or it may be as simple as a telephone tap. It may be telemetry, which basically is a broadcast from a test vehicle, whether it's a missile or an aircraft, in which test data is carried down to a receiving station on the ground. It may involve as wide a variety of systems as aircraft, missiles, radars, or other kinds of technical — mostly military — systems.

Finally, there's imagery. That doesn't need much explanation. A predominant source, particularly for denied areas, comes from overhead imagery, but there's considerable collection done on the ground — by travelers, by attachés, by others — who are trying to get a shot of, say, a particular piece of equipment, or a particular building, or a particular plant, to satisfy a collection requirement. That comes back, and again, is processed, and read out, and reported.

So you have those four generic sources, and the value of each of those sources depends in large measure on the kinds of issues that you're going to address with an intelligence answer.

Here, if we can stop for a moment and break all kinds of knowledge down into political, economic, and military, what you'd find is that political analysis is dominated by human source collection. There's a liberal sprinkling of open sources. You do a lot of newspaper analysis, content analysis, and speech analysis. You've all seen the pictures of Lenin's tomb where everybody is lined up and you sort of take the pulse of the Politburo by looking at the pecking order on top of the tomb. Whenever a Soviet leader dies, for example, whoever's going to be chief of the funeral commission is going to be the next General Secretary. So as soon as they publish the name of the director of the funeral commission, you know whether or not your estimates have been right about who's going to succeed the deceased leader.

In economic intelligence you fundamentally rely on technical journals. Most of the information that you're going to look at to produce answers, whether the topic ranges from trade competition to balance of payments problems and so on, is going to come

out of technical publications that are collected all around the world. That is liberally augmented by intercepts from communications, bits and snippets that you might be able to pick up by telephone taps or by recorded conversations, that will tell you something about the operation of an economy, of a business, of a central bank, or of an economic policy. For example, if American negotiators want to have some background on the positions of various countries coming into the General Agreement on Tariffs and Trade (GATT), basically you will provide them position papers on all the major players. You'll call on the full array of intelligence sources to do this. Very often you'll find that human sources are very helpful on this, but an awful lot of the tabular data that you have to develop to show trends, to show impact, and so forth, actually comes out of open publications.

Finally you have what I'll call security issues, because it's really broader than military intelligence. By this I mean everything from the counting and location of foreign forces, to arms control policies, to arms control monitoring, to reporting on wars around the world. The last time I counted there were something like 22 wars in progress that I could name off the top of my head. Did you think this was a time of peace? We're reporting today on 22 major conflicts. Around the world they range from the Iran-Iraq conflict, which is a big one, to places like Ethiopia where the Eritrean rebels are causing problems with resupply and aid to the starving villagers in the Sahel. At any rate, conflict goes on day-in and day-out. To report, you're relying very heavily on technical sources.

So you come through a spectrum of, one, political, economic, and strategic security issues, which is dominated at the one end by human reporting, and moves very heavily into technical reporting. About three-quarters of the information that we get on security issues comes from technical intelligence. It is very heavily dominated by the technical systems and technical capabilities that the U.S. intelligence community has deployed over the past decade or two.

What do they give you? If you were to divide those technical sources basically into SIGINT and into imagery, what you get from imagery is what I'll call the anatomy of foreign military forces. At the risk of oversimplifying, it helps you to count, to locate, and to describe, and by watching the evolution of these forces over time, you can talk about trends and changes. But you look to SIGINT in order to get the physiology of these military forces —

to understand how they're organized, who is subordinate to whom, what the command and control apparatus looks like, why they are in the field exercising, and what it is they think they're doing. Finally, you have a very important — small, but important — component, that you get from human source reporting, especially in analyzing denied areas.

There are more denied areas in this world than you might think. You see, not too many years ago we used to think of the Soviet Union, the Warsaw Pact, and China as denied areas, except that there are Americans running around all over these places these days. But how many people have you met who have come back from northern Chad, or from the Bekaa Valley, or from the middle of Angola, or from northern Iran, or from a number of other places which are hitting the news — the Golden Triangle, northern Thailand, where they produce all the narcotics, and you run into the various private armies up there that are safeguarding the crops. Nobody comes back. These are areas that we tend to refer to as denied areas, which means, in effect, that it is very difficult to provide an American, or a citizen of our allies, or indeed any stranger, an opportunity to travel in these areas and be reasonably safe. Denied areas today are proliferating.

To report on denied areas, you depend very heavily on technical intelligence to describe the situation. But it is the availability of human source reporting that gives you the conceptualizing design for the evolution of military forces and the where-withal for action. Human source reporting allows you to understand the millions of pieces of SIGINT, and of imagery, and all of the puzzle pieces that are collected that eventually contribute to a full solution. So even though it's by far and away the smaller portion of the contribution in the security issues area, human source reporting is a terribly important one.

So that's really by way of background to set up further remarks, because I think you have to understand that one cannot just do away with certain of these sources and just rely on satellites or just rely on phone taps someplace and get out of the spy business, or get out of one or another of these businesses. The fact of the matter is that each supplies a unique source of information, and each, depending on the nature of the problem that you're dealing with, answers a particular kind of issue for you, and you've got to have them all together.

Oettinger: On this point about the human sources, you just said it's critical for understanding. In fact,

you may have gone further and said it's the sole source, and I wonder whether you might comment on the role of open source materials in that regard. It seems to me that that's another important and perhaps underexploited one.

The second question, not unrelated to that, is that you indicated what was useful for political, economic, and national security kinds of things. But then you broke it down in a somewhat different way, for instance, that for denied areas, which cuts across political, economic, etc., lines. I wondered whether you might comment about other categorizations, for example, nuclear, theater, localized, in the same vein as to types of intelligence. If you're going to hit on it later, fine.

Huffstutler: No, no, fine. I think this is an appropriate place to start.

Basically, you have a great deal of difficulty reporting on political goings-on inside denied areas. Now you can tell where the Ayatollah is, and you can tell where the Revolutionary Guards are, and you can tell where the attack boats are, but it's very difficult to come by information as to what the internal succession looks like, how the imams are allied, which one has rising or falling support, and so on. That is because it is predominantly provided by human source information and it is so very difficult to get that kind of information in a turbulent place like Iran today. So that the quality of your reporting, depending upon the question you're asking, is going to vary enormously depending on what kind of sources you have available, and what you're going to have to rely on to get the answer. We have, I would say, outstanding coverage of what's going on in the Persian Gulf insofar as ships going back and forth are concerned, but we have a rather poor grasp of the stability of some groups like Hezbollah in Lebanon versus the control that they face from the Iranians. Knowing just, in effect, how the Syrians could manipulate that is very difficult to assess because it is very difficult to come by sources that can give you information on it.

We can tell where they all are, and indeed we can often tell what they're doing. But we can't tell what's going on behind the scenes. We can't make those political judgments as to stability, as to policy, and very often as to their next moves. So that if you don't have good human source information, you certainly don't have a crystal ball.

Student: What about the use of foreign intelligence — cooperation between foreign intelligence services which could have access to this information?

Huffstutler: Yes, we have extensive dealings with our allies and they're no better than we are. This is very difficult to get, as in the case of Iran. There are cases where people have access — foreign, friendly intelligence services, have access — and we trade information all the time. That's done routinely, and in fact there is sort of a big club between the Western democracies trading information that's of interest to policymakers in the various countries.

Student: Not to belabor the issue of Iran, but it strikes me as absurd that after 30 years of extensive intelligence involvement the collapse of one guy in power could bring the whole cart down at once. It's just absurd that there are no human sources left in Iran. On the face of it that makes a stunning critique of the CIA management of Iran.

Huffstutler: You had thousands of people killed. Anybody who was sort of middle class, western oriented, or western educated, left Iran or was lined up and shot. This makes a certain inroad into the sources and contacts that you might have had while you were present in that country. We don't want to relive Iran here, but what you saw was that there was no viable middle class. The rise of the Shah and the modernization of Iran were done through a process which put great stress on the traditional Shiite beliefs and power structure. In fact, the mosques lost their ability to hold the land and to deal with the profits, and hand out favors from the mosques. That's part of what the inroad was that the Shah was making, and when he disappeared a whole class disappeared with him, and anybody left around was basically exiled or shot — they either got out or they didn't get out.

Student: So all our sources were in that one class?

Huffstutler: No, but a lot of them were. It becomes terribly difficult to go in and operate with them, even later, if you don't have free access. One of the problems of dealing with human sources is that you have to go in and find them and recruit them and have them agree to report to you. If they're too frightened or if they're too hard to get to, it's very difficult to develop sources. The other part of it is that even if you have them, they've got to find some way to talk to you. So that reporting, getting questions to them, getting answers back, is actually quite a piece of intelligence tradecraft. That is a very highly developed field in itself — how you talk to sources. It's very difficult to do. You can pick a lot of places that present this kind of situation. It happened in Iran, it happened to a degree in Lebanon, it's happened in Iraq, Syria — these are

all police states with very powerful central police organizations, and it is very difficult to recruit and run agents in there.

Oettinger: Isn't there another element as well on that? This may be trivial, but things become more difficult as the scale of operations diminishes. It's one thing to get sources inside the Shah's government, with stability, and so on, but if there is some splinter group that's operating on a family basis or similar scale, how the hell would you get at them? It seems to me that that's another inherent problem, even if nobody gets shot or got shot.

Huffstutler: It is. It's a lot like breaking into the Mafia. If you watch some good drug movies, this is a lot like trying to break into a drug ring. These are small groupings, the people are personally known to each other, and fundamentally you've got to have an agent who is recruited from within if you want to learn anything. When you've got to have someone that can work his/her way in, and provide you information, it takes a long time to do. It sometimes takes 10 years to develop the right kind of agent access to the information that you want. You can't just put out a sign and say, "If you want to work for the CIA, apply here." I'm being facetious, but even if you could, there's no guarantee at all that the person who applied would have any information of any interest to you. You see, you don't want just any information — there are particular kinds of information you want and just finding people with access to that information is terribly difficult.

Student: I expected you to say or point out that a lot of this happened right on the heels of the post-Watergate cleanup, or whatever, washing of the Augean stable of the CIA, so that the CIA's resources were extremely limited right at the time. That's what we were led to believe about Iran.

Huffstutler: No, that wasn't the problem. The problem was a lot closer to the fact that we were waved off the Shah and told, in effect, to get out of the Shah's business.

Oettinger: I think that if you wanted to get some background, in your question on Iran, Bill Miller's comments* in one of the earlier years are helpful. Look under William Miller and you will find an account of that. In a number of ways he looked rather deeply into those questions.

*See William Miller, "Foreign Affairs, Diplomacy and Intelligence," in *Seminar on Command, Control, Communications and Intelligence, Guest Presentations, Spring 1982*. Program on Information Resources Policy, Harvard University, Cambridge, MA. December 1982, pp. 165-181.

Student: When I was asking about Iran, I thought it was a more general question about human intelligence assets which were depleted severely in the seventies. That's what I meant.

Huffstutler: Yes, the case officer corps was drawn down, but we still had operations going worldwide. But the real issue here is that when you have a massive internal change like that then you've got to scamper to get the sources who have access to the new group. And if at the same time the gate closes on American, or Western, or foreign access, then you have a very difficult problem and it doesn't matter whose intelligence service you're in.

Oettinger: While the effect you describe exists, many of those people were classmates of mine who went into the CIA in the post-World War II, Korea, etc., era, and tended to be focused on Eastern European and Soviet affairs, and so on, and my sense is that whatever effects that might have had on targeting those areas probably had very little to do with the places you're talking about when you're saying it's very difficult. Is that reasonable?

Huffstutler: It is. The focus of most U.S. intelligence was the Soviet bloc up until about the mid-1970s. Then it really was pushed rather quickly, and rather broadly, into the Third World areas. That takes time to build up and, to the extent that you had cataclysm before you could build the network, you were left without any sources.

Oettinger: Open sources, as the background for understanding. To my taste you over-stressed the role of human sources.

Huffstutler: Well, I was talking security issues when I stressed the key role of human sources in putting together the keys to using technical sources. If you were to take any survey of agency sources as to value, open sources come out on top as the most widely used, just generally. What you find is that you can follow a lot of events. Certainly in the western world, any place where you've got a relatively free press, and you've got a government which reports to the people, open sources are terribly valuable.

If you get to an issue like security affairs, and you get to a country like the Soviet Union, open sources have a peculiar use, but not a very broad one. I'll give you an example. During the time of the missile gap, the late 1950s to the early 1960s, the United States had a terribly valuable clandestine source named Oleg Penkovsky; I'm sure you've heard of him. But the reporting from a guy like Penkovsky was terribly valuable because he was producing for

us documentary debates from a Soviet serial magazine called *Military Thought*, and this was a kind of thought-provoking debate paper that was circulated around the general staff. What you had were the contending ideas that would shape tomorrow's Soviet military forces. So you could understand what the ideas were that people were fighting about. To be very brief about it, Krushchev at this time was trying to reduce the size of the conventional military forces and go with an advanced missile-based, nuclear-based force, partly because it was cheaper and partly because he needed to release manpower to handle Soviet agriculture. But what he was hitting was that every member of the Soviet general staff was a ground pounder — every one of them in effect was an Army general. So there was a tremendous debate internally. That went on for about two years. There wasn't a peep of this in the press. You could read the press every day, and there wasn't a peep of it until it was settled, then you got some rather broad general announcements. But if you didn't know what the argument was, you would never have known exactly what was meant by the rather general pronouncements that you found in the press.

So in pinning down something like Soviet military doctrine, the open press is not very much help. It's some. They'll usually tell you when the debate is ended. So if you get a look at it only from time to time, that is, you can only pinch one of these documents every six months, you will get an indication from the open press that, in fact, the debate is ended, that it has been resolved one way or another. But you'll never find out what the real issues were and you'll never find out what the real debating points were from something like a controlled press — like *Pravda*, *Izvestia*, or *Red Star*.

At the other extreme, though, if you want to know what the Italian government is going to spend on NATO all you've got to do is pick up their White Paper. The government publishes it. Most questions that you're going to get from countries that have an open press and responsible government, you can read about in the newspaper. You don't have to collect anything. If you wish to know what anybody in NATO is going to spend in the coming year, you can pick up the newspaper and read it.

Oettinger: One comment for students to note — as you put this in context and as you read things for your research papers, and so on, what you're hearing is not exactly run of the mill in this sense, that when talking about sources, most people tend to be

lobbying for one kind of source or another as if they were exclusive, and they aren't. And you've given us a rather extraordinary ecumenical talk about the relative values of different kinds of sources in different kinds of areas. This in my opinion is very unusual in expositions that tend to be zealous for one viewpoint or another. I much appreciate your doing that, because it's extraordinary. I think if you look at Rae's biography you'll see why. He's been around in a number of areas. That, in and of itself, is unusual in the ordinary career and at some point you might want to reflect on that and then talk a little about education and training.

Huffstutler: Actually I'm going to turn to something like that next. There's another way to look at intelligence sources and methods, and here I want to talk about primary and secondary sources for technical collection in particular, but it is not limited to technical collection because even with open sources, the way they're normally collected and disseminated is by organizations like Foreign Broadcast Information Service, which you get here. They're the ones that are going out and reading the provincial newspapers in wherever the areas of interest are — Thailand — translating it for you, getting it back, getting it compiled, and getting it published and out to a rather large audience. What it takes, you'll notice, is, first, some requirements that tell them what the topics of interest are and then some extraordinary skills of basically scanning what's available in the open press — whether that's newspapers, or magazines, or whether it's the result of broadcasts, television broadcasts, and so on. That's all brought back, translated, and reported.

Secondly, if you have a COMINT (communications intelligence) intercept, what you have is an analyst who may be tapped into some sort of radio conversation, or some sort of telephone intercept, and perhaps it's encrypted. So he's on the phone line and he's got to figure out who's talking to whom. The first way to do that is to try and get the thing decrypted, and that is a science all its own and that's one reason why the National Security Agency has probably the world's largest bank of computers and probably the most mathematicians you'll ever see in one spot. That's a major business. They decrypt it, they translate it, by going to the databases they can tell you who usually uses this line, what number it is, what ministry it might go to, what office it might go to, and they might be able to tell you that so and so is probably this person who's associated with a certain kind of project or other,

and he's talking to somebody else and they may be talking about delivering the goods in April.

But if you were to receive an encrypted message directly, it would look like just a squiggly line, right? But instead you get a report in English that says, "Joe was talking to Sam and he said that the goods will be delivered in April, and they're probably talking about the delivery of some PT boat that Joe's organization is under contract to provide to Sam's organization." But all that, that's processed intelligence. Original sources.

How do you get data out of a picture? Do you think you know how to do that? (I should have brought one of my vugraphs.) The fact of the matter is, you've not only got to know where you're looking (do you ever stop to think about that — that's an art in itself) instead of just having a piece of imagery with a bunch of clouds on it thrown down in front of you — you've got to know where you're looking, you've got to know what you're looking for, you've got to know what it is supposed to look like. You may very well have followed it over time. By using the databases that you've built up over the years, and the lore, as it were, of the imagery analyst, you've got the ability to identify a particular facility that is under construction. Most military installations, for example, certainly in socialist countries, tend to be standard designs. If you see these things built once, say at a test range, or in the field, you can virtually tell what they're going to build on some of these installations by the time they clear for the footings. Because you have known ratios for the footings, you know how far apart they are, and you know where it is, and you may know something about the surrounding area — whether there's going to be power going to it or whether there's a road going to it or whatever, and you're able to say, "Well, gee, that's a new big radar installation, I can tell because I can see the footings down here for the substation, and I know that the spacing on these footings is the same spacing that's been used in other large radars on the periphery of the Soviet Union."

These are original sources, and the intelligence community is one of the few places that really deals deeply with original sources. But the same thing is true with the case officer — the person who goes out and finds someone who can give him the answer to a problem. He's got to know how to speak a language, he's got to know how to operate in what is often a hostile environment, he very often has to pass for something that he isn't, otherwise he's going to get kidnapped or become a hostage or get

shot. He has to be able to identify the right people and he's got to be something of a psychologist and a salesman, and make these people want to tell him the information that he's seeking. All of these skills, the development of primary sources, involve extensive training. And you'll find that intelligence is one of the largest training areas I think anywhere.

My recollection is that when I look back after my first 20 years or so in intelligence, I had been in full-time training about 15 percent of the time that I'd been in the intelligence business. You spend a lot of time getting trained whether you want it or not. That's simply because problems keep changing and you've got to acquire skills to deal with new problems.

As a result there's an enormous demand for languages, for a full array of skills, and many of the basic skills come out of the academic world — languages, math, physics, and so on — but then a lot of them don't. You can't show a person how to be street smart in Beirut. Maybe you could find some American cities where you can show them that, but you've got to be quick. You know what they say about pedestrians — there's the quick and the dead. In Beirut that's what there are — there are the quick and the dead. You have extraordinarily dangerous situations. You've got to have people who can pass for native, and who know what they're doing, and basically cultivate these skills.

They are your processors, your SIGINT processors, your imagery analysts, your case officers, they are people dealing with primary sources and amassing that information.

What happens then is that it all goes together in front of a production analyst. That production analyst basically is dealing with secondary sources. Production analysts do, I will suggest, much as you do in graduate school. They go to the library and get what somebody has written about other topics. They may get some reporting that's already been translated, or messages that have been decrypted and translated and so on. But these people have a very special skill to bring to bear on that information. They must first integrate it, assess it, decide which of it is true, and which of it is not true, and go through an analytical process that all of you know as developing the hypothesis and changing it when it doesn't fit the evidence and then sometimes you'll find with a changed hypothesis that you throw out some of the information that used to look like evidence, but now is now longer germane, and you go through this until you approach the answer. Then that answer has got to be cast in terms of the

impact on American policy. That is a special skill. It used to take me 10 years to train a senior military analyst, after he had his M.A.

A lot of people who are in the analytical community don't understand that difference. You'll find very often, certainly in American intelligence, that the production analyst thinks that because everything comes together on his desk that somehow he's a higher form of analyst and that the people who are able to decode, decrypt, translate telemetry into relationships about missile propulsion, chamber pressures, and so forth, are somehow a lower form of life. But without those people your analysts would be sitting there like the Maytag repairman — they would have nothing to do, because there's almost nothing that's going to come to them in original form that they are equipped to deal with as production analysts. So what you have is a stratified intelligence community and all the pieces have to work together.

Oettinger: A quick comment, because in the course of what you just said, it seems to me there are a number of contradictory elements that are hard to reconcile. This is a favorite theme of mine, trying to identify balances between desirable things that are all so desirable, but also irreconcilable. I've heard you say several times about primary/secondary that one can't do without the other, and yet they're not the same thing to me. They tend to polarize and to stratify. Skills, sharply honed skills, and generalists are essential, but if they're not together, then, as you pointed out, if you don't know where the hell to look, you can't exercise your specialized skills, but the only way you know how to look is to be a generalist, but you can't be a generalist without the input from a skilled guy and so there's a tension there.

Then the other one has to do with why, even if all those things weren't present, you have a tendency on one hand to want operational security and therefore keep these things apart, yet at the same time if you keep them too far apart, then all of this business of feeding together and one helping the other won't happen. Yet if you get too damn much compartmentation, too much operational security, then you'll also have operational ineffectiveness. It seems to me that I may be putting a lot of weight on this, but in everything you said, those are key balances.

Huffstutler: Those are all balances. Those are very real contradictions and they are very real balances that have to be struck — I mean compartment-

tation versus sort of dropping all compartments. You have a very difficult situation, particularly in Washington, where if you aren't careful about compartmentation, you're going to lose your source in a snap of the fingers. He's going to pop up, be quoted in the newspaper, and he's going to be dead. I've seen it happen, and it can happen within days of an article hitting the press.

Or you'll find that you may be getting some absolutely super communications intercepts because you're able to get into communications in a way nobody ever dreamed was possible. What you've got to remember is that the reason that you're in there is because nobody ever dreamed it was possible. So we spend a lot of time figuring out how to get in in a way that nobody ever dreamed was possible because a lot of these systems are heavily safeguarded. But basically, in the intelligence collection community you're the burglars, and what you're after, by and large, is classified in virtually every country that you're dealing with — not in the United States — but it's classified and held by the country that you're dealing with. So the American policymaker wants to know, for example, whether the Soviets have a certain level of missiles in their inventory, and the Soviets, for some reason, think that's none of our business. Basically, they're not going to hand you this information on a Freedom of Information Act request. You're going to have to go in and steal it.

So there is this problem, you've got to have a sharing of the information — it's done pretty well. Most of your production analysts who are at the center of these problems are cleared for virtually all of the information that is relevant, and they are expert in their fields, and after a bit of training they're also able to operate generally within that field. We do have narrow specialists too. We have guys who manufacture microphones that you put in your olive, and so forth — we have specialized people too. But by and large on the analytical side, you have people who are expert in their field, but they know the field broadly and they know intelligence sources and methods and they run the trap lines. They know the people at NSA. They know the people on the operations desk. They know the people in the State Department. They know the people in the press, and you find that an awful lot of folks trade information on what's going on in those areas in order to overcome these kinds of problems. However, where sensitive sources are involved you simply are very careful about how much you describe these sources.

If you describe them too specifically, you're going to lose them and it's a constant problem.

There are a number of balances that have to be struck and I would even go a step further and say that by and large intelligence is an inefficient business. If the answer were available by calling your local university, you would pick up the phone and have your Middle Eastern expert tell you what the answer is. Normally the questions that come to intelligence are questions that are either arcane, or those where there's no easy way to get an answer. That means you've got to go out and use intelligence sources and methods to get it. Once you start doing that you're going to great expense and in a way it is very inefficient. It may take you years. Take, for example, the missile gap; we had to become a space agency to crack the missile gap.

Student: You were describing the career paths and I wonder if you could talk a little bit more about the organizational psychology of the intelligence business, and since there are so many different organizations involved, each individual one. What kind of people rise to the top? If you're in it you obviously have certain heroes of your field, of your organization. Are they the flamboyant types, or are they the ones who sort of keep their necks low to the ground? What kind of people are the heroes? What kind of people might want to be an incentive to the people inside the business?

Huffstutler: The place is a zoo. It depends on what you're doing. If you keep low to the ground, you're never going to be a good case officer. If you're too flamboyant, you may not be an old case officer. If you're not careful, you're going to get fired as a young analyst. You've got to be precise, you've got to be thorough, and you've got to be deep in your analysis. You don't always have to be right. We don't get rid of people for not being right. But the fact of the matter is that it depends on what end of the business you're in. We have people who have rather narrow specialties, and who sit all day long and do something like telemetry analysis. They've got the stuff on the scope — I don't know if you've ever seen any, it looks like worms on a CRT — but that's the source of a good bit of the engineering performance data on high performance weapons systems.

At the other end of the business you've got to have somebody who can get out, who can mix, who can walk right up to someone that he wants to meet, and engage him in conversation, and make the per-

son love it. You can't recruit somebody who won't talk to you. There are all kinds of people. I mean to tell you, it's a zoo.

Student: But the people who rise to the top..?

Huffstutler: Are all kinds.

Student: So there'll be a telemetry expert as a DCI (Director of Central Intelligence), or something like that?

Huffstutler: We never had a telemetry expert as a DCI, but the fellow who's the Director of Science and Technology is a telemetry expert and the fellow who is the Deputy Director for Intelligence right now is a Far Eastern area expert. Bob Gates, who's the Deputy DCI right now, is a Soviet area affairs expert. The Inspector General is a former Soviet case officer type and so is the current Deputy Director for Operations, and you saw my biography. I could never have predicted I was going to end up where I am.

Oettinger: This is somewhat exceptional. Even the roster you just announced, with the exception of the Deputy Director for Science and Technology — you understand the reason of science and technology — the others are more generalists in the liberal arts and those kinds of folks, whereas at NSA, for example, you do not find the generalists, the liberal artsy folks, at the top; they tend to be technical types. So there is necessarily some degree of institutional bias.

Huffstutler: Yes, I think that's right. Folks at the top of NSA — and I would say here, not the military commanders who may come in from more general intelligence backgrounds, but the senior civilians — normally have either one of two things. They either have a technical background in communications, or they've got an analytical language background. Anna Kara Christie, for example, who was Bobby Inman's deputy, was a Soviet area expert, and the fellow who's leaving now is technical — Dick Lord.

It's hard to say. It depends on what agency you're talking about, at what time, and fundamentally people come up the line and they get the more senior positions because they can deal with the problems that come with senior positions. I think it's more temperament than it is training that gives you that background — training helps, believe me, I'm not downplaying training. But I mean it's not any particular academic discipline that you would have taken at the university which 25 years later is going to determine how you come out. Rather, it's your

temperament, your ability to deal with certain kinds of issues which tend to become, as you become more senior, large organizational issues. Some engineers are very good at that, some are not. Some political scientists are good at it, some are not.

Student: I would like to ask a general question about the balance of intelligence on one side and foreign service on the other. You mentioned on the same level operational case officers and embassy people — diplomats. It seems to me that now, today, we live at a time, at a stage in the United States where the positions are becoming lowered. It's true in many western countries. In France it's very obvious that it is very difficult to alter the diplomatic foreign policymaking process. In that sense, it seems that intelligence value tends to grow because, as you say, you have to furnish analysis, it comes to the intelligence people to state what in fact is important in foreign policy, to process the information. Isn't there a problem where these intelligence people are being trained to collect intelligence and process intelligence, but they're not professionals of foreign policy? Do you see a danger there? What is your reflection?

Huffstutler: My personal view is that intelligence officers should neither advocate nor defend policy. But over the past 15 or 20 years you'll find that in the United States intelligence officers have gradually gravitated toward the middle of policy discussions. There is a simple reason for that — it is because usually if you're going to deal with a foreign policy issue, somebody wants to know what the facts are, what is the situation, and that in effect is what your intelligence professional is trained to give you.

Understanding the situation makes wise policy possible, but it does not guarantee wise policy. What you find as often as not is that intelligence is one of a large number of factors that are taken into consideration in making foreign policy, and sometimes the facts of the situation are totally ignored. That depends on the time, the administration, who the policymaker is, what part of the world you're talking about — you may have an assistant secretary in one area who is superb and you may have an assistant secretary in another area who's a blockhead. It just depends on the luck of the draw. What you'll find is that today's policymaking organization has intelligence people right at the heart of it, but they do not advocate the policies. And that's easy. You may think that that's hard to do, I'm telling you that's easy to do, because policymaking agencies are very jealous about their prerogatives, and they

don't want your opinion on which option they should take. They just want to know the facts so that they can go back and select some options. They don't want your opinion on what the policy ought to be.

Student: But in reality that's not the case at all, when you see the intelligence community trying to make policy.

Huffstutler: What do you have in mind?

Student: The Iran-Contra affair.

Huffstutler: Let me point out that that was not the intelligence community making that policy.

Oettinger: It seems to me that's an excellent counter-example. You're not going to identify either the Vice President or Oliver North, or any of those folks, with the intelligence community. Bill Casey — no. I was going to ask you earlier, when you made the point about where the people get promoted from and you asked about the Director of Central Intelligence, about the question of presidential appointees. Whether that's a career post or a political post is really sort of up to the boss. I think our guest's responses were directed more to the next level, which tend to be career people. I would not regard Mr. Casey as an intelligence professional wherever his background started. He may have started off in the OSS, but he was the President's campaign manager and was quintessentially a political appointee, as one can imagine, regardless of whether his professional background included some intelligence roles. He chaired the Securities and Exchange Commission, and did God knows what else. So Casey is in essence again a counter-example. The guy happened to be head of the CIA, but he was the President's political man and nobody had any illusions about it.

Student: The question is not about individuals but about organizations, and you said yourself, that's a personal decision. But in the Iran-Contra case the State Department was largely isolated from the presidential decision and it seemed to reflect the lower position in terms of organization by this committee of the State Department, compared to the NSC, to the intelligence community. And this is a triumph for you?

Huffstutler: That varies from year to year. That depends on who's in charge and that depends on who's in the State Department, and it depends on whether or not the President asks for a policy and he can get some support. There's a lot of resistance in the internal government. You probably discern

from time to time that the President may want to do something and it may very well be that the professional foreign service officers, or whomever, don't want to do it. Then he'll turn somewhere else.

Student: I always thought organizational matters counted on the relationship of the various intelligence agencies with each other. How does the CIA get along with the DIA? What do they think of each other's work? And how do they all relate to NSA and whomever else? I'm sure it's not completely harmonious.

Huffstutler: Well no, it never is. I think you would regard it as competitive. The only organizations with analytical capabilities of any serious magnitude — now here what I'm talking about is the finished production that goes in to the policymaker — are the Defense Intelligence Agency and the Central Intelligence Agency. Most of the other agencies are to one degree or another involved more in collection and processing, and what I call pulling data out of primary sources. So NSA, and to a degree the various components of the imagery community, are all components which feed the central analytical functions.

Outside of that you have a large number of departmental centers — Navy Intelligence, Army Intelligence, Air Force Intelligence, and so on. Primarily what they're doing is responding to their own principals on subjects of interest to the service. For example, they might participate in a national estimating process on what's coming in the Middle East. But by and large it would be unlikely that those organizations would have much depth in all of the regional disciplines. They might have a very good Middle East man in Naval Intelligence, that's quite possible. It's unlikely that they would have the same depth across the board on political, economic, or regional matters, that you have in the DIA or the CIA. So your principal estimating organizations are those two and they more or less carry the national estimating functions.

Everybody plays at the same table, however, whether they have much capability or not. For example, the State Department INR is relatively small and it functions predominantly these days as the staff to support the Secretary. It does not have very many people to put on research organizations to go out and start uncovering new basic data, for example, about future prospects for economic growth in Angola. You'd never get a question like that answered in the State Department. You would get it answered in the CIA, and you'd probably get it answered in DIA.

Everybody sits at the same table. We're all part of something called the National Foreign Intelligence Board, where we write a national assessment, a national estimate. Everybody gets his word in. The majority position is contained in the text, and the minority positions are reflected in footnotes and it is all set down. It's a workaday kind of relationship.

Now there is analytical competition — you know, we're right, you're not right, we're usually right, not always right but usually right, you're hardly ever right. You get that kind of feeling between analysts who have been long-time competitors on some sort of account and individuals are trying to prove that their batting averages are best. But between agencies, it's kind of workaday. The fact is, say your piece, and let's write this estimate for the policymaker. We're trying to convey some information to this person, so let's go down the situation and explain to this policymaker what the basics are, where the pressures are coming from, what these pressures are going to lead to, and we will write identical text to the extent that we can do it to show that person the extent of the consensus.

Now, as soon as we stop the consensus, we'll give you one group that believes this for the following reasons: one, two, three, four, five. The other group believes this: one, two, three, four, five. The purpose of this is to take some of the risk off the policymaker. This may sound strange to you. Why does the policymaker turn to the intelligence community anyhow? He's going to deal with some sort of policy. He's going to deal with Nicaragua, something inflammatory. He's going to deal with South Africa and Angola. He's going to deal with Israel and Southern Lebanon and the Palestinian West Bank question. And what he would really like to have is somebody else to take the heat for what the facts of the situation are. That person is the DCI. So he can say, "All right, give me the facts in the case." The intelligence community meets and lays them out, the Director signs it, and then the policymaker basically can fashion a policy and it's predicated on this analysis being right. If it turns out that those facts are wrong, he can say, "But my intelligence community had a failure."

So politically what it does is that it shares the heat for the policymaker. We describe, he proscribes, and it shares the heat. Otherwise he's got to try to take the entire responsibility for fashioning a policy on a very complex situation where there may be no answer anyhow. Anybody who's tried to deal with the Palestinian issue at some point has got to believe

that this is in the laps of the gods. Nobody can think of anything that will settle that.

Oettinger: This is another place where there is an inherent balance problem, inherent instability, and that's to the extent to which things happen as Rae described them, it does help this decoupling or ass-covering or whatever for the policymakers, but also then produces just facts or multiple options, etc., and then those have to be reconciled and something pulled out of that. Now the image of the President of the United States, or the Chairman of the XYZ Corporation, doing this all by himself is an absurdity in that there is not enough time in a day, so what happens, of course, is he gets staff. And then he gets a staff which, like the National Security Council's staff, itself then comes to compete with the folks that Rae has just described. To go back to an earlier example, the Oliver North, etc., situation is a good example of an extreme of going toward too much staff role in this kind of a situation, at which point that implodes. You tend to downgrade staff, you then put the burden back on the departments, you start getting wishy-washy broad option kind of things, and you say, "Oh my God, I can't cope with it," and you build up staff again.

If you look at the history of the relationship between the decisionmaker, and I don't care who the hell it is, whether it's the President of the United States, or the Ma and Pa or something or other store, you see this kind of back and forth. It's an area where there are no set answers because the dynamics of what Rae has described set up an inherent instability, and so you have back and forth.

Huffstutler: Yes. That staff function is the NSC function. And the NSC on any issue, whether it's, "What do we say to the press on Chernobyl?" or whether it is "Do we support the UN resolution or veto the UN resolution against Israel on the West Bank?" comes in to an NSC process, in effect, where these options are developed by the NSC staff to forward to the President.

Oettinger: Or in the case of France, whatever the facts may have been on Chernobyl, the French position was that the fallout stopped at the Rhine.

Student: If I may, I don't want to center on Iran again but on the Middle East in general. Viewing your counterpart in the Soviet Union here — how well do you think they understand the Middle East as a whole, since due to their proximity in location to Afghanistan, Syria, Saudi Arabia, just the Middle

East as a whole, how well do you think their assessments are developed?

Huffstutler: It's hard to say. I will tell you a couple of things. My guess is that they're sure no better than we are because they basically have a couple of characteristics which we don't have. They do have excessive compartmentation. The intelligence components within the Soviet Union do not share data. They send it all up to the Politburo staff, that's where it goes. So it comes together at a point that is outside the deliberation of the intelligence organizations.

That would be like putting all your raw data into the NSC staff and then they get to pick what's true. Of course, they have huge staffs in the USSR — we're talking about the world's biggest bureaucracy. The other thing, though, is that they do not operate well in the Middle East, and the decisions that they've made there are at best ham-handed and generally unsuccessful. If you look at them today trying to figure out how to keep both Iran and Iraq happy while they're trying to sell tanks to the Iraqis and keep the Iranians from complaining about it, you'll see that they're no more successful than anybody else.

If the proof is in the policy that you observe, I would say that like all the rest of us, they have their problems discerning what's going on in the Middle East and trying to make any sense of it in terms of a long-run policy. It's just an unstable place.

Student: You don't think their proximity gives them any advantage?

Huffstutler: None. It gives them leverage, it does not give them insight.

Oettinger: We've diverted you way back from — you're still on page one. We're conscious of the advancing time.

Huffstutler: Yes. Let me jump down here and say that if there's one major source of pressure for change in the intelligence community operations today, it's the advent of mobile military systems. You may or may not have heard much about mobile systems. But the fact of the matter is that modern reconnaissance, coupled with long-range accurate standoff weapons, have put all the fixed targets at risk. What's happened is that in the past decade or so, mobility has become a military imperative. It goes well beyond the issue of missiles. On the one hand you have certain forces that have always been mobile to a degree — aircraft, ships, and so on. But during the 1960s and 1970s you had the rise of large land forces that were mechanized, track or

wheel mounted, and capable of great movement. One of the reasons for that was the advent of nuclear weapons.

From the 1950s, warfare has had to change because of the fact of nuclear weapons, and that to amass — build up forces — and then break through, which is the time-honored way to penetrate defensive lines, simply makes you a nuclear target in the second half of the twentieth century. In order to keep from being a target, you've got to move continually. So not only were land forces, air forces, naval forces, and now strategic missile forces made mobile, but we find that, outside of the superpowers, Third World areas are also procuring mobile forces. Countries like Iran, Iraq, Libya, Syria, and a host of others acquire modern military equipment which is inherently mobile because it's produced by the large industrial powers. So this is a proliferating problem that goes well beyond mobile missiles, but what you hear about mostly is mobile missiles.

What happens is that you have got to change the basic architecture of the intelligence community to deal with this new dimension of issues. Let me give you a couple of examples.

If you want to do arms control monitoring, basically what you've got to do is count mobile missiles. We have an INF (Intermediate Nuclear Forces) Treaty — that's going to be hard enough — by the time we have a START (Strategic Arms Limitation Treaty) it's going to be a lot harder. Why? Because the INF Treaty prohibits whole classes of missiles, so that to see a missile of that class is to have a de facto violation. The START, if we get one, is going to allow a certain number of missiles, and therefore, you have not got a violation just by seeing it. Instead, you've got a very tough statistical problem to prove that yes, you've covered all deployment areas in a short enough time that you couldn't be double counting or missing anything, and that in fact, when you've counted up, there's every reason to believe that there's a violation. That's a different kind of problem, and the Senate, which is looking for much more assurance than they're going to get, is not going to be as happy with that kind of answer as they are with the fixed site counting where we can say, "We can assure you that there are 1,100 or 1,200 of these and no more, because I've looked in all these other places and there's nothing there, so that as of the 30th of July this is the number." But with mobiles you can't, because it looks like an anthill. You've got to catch all these things in a short enough time — with synoptic coverage — in order to freeze the numbers.

Then the next step is, you cannot guarantee that someone hasn't hidden a bunch of them in a barn someplace, because you can't deal with that kind of negative question. You can't deal with an allegation that says, "Can you prove that there aren't another hundred of these manufactured and somehow hidden in an unconventional way?" We can't do it. It's a very difficult issue to deal with.

So what you have, and it's ironic, is that the more we get into arms control agreements with mobile systems, a larger level of trust is required, because your technical ability to monitor the agreement is going to deteriorate. In 15 or 20 years, we may figure out a way really to monitor very well, but in the time of this administration, this is a tough problem.

Student: What you're telling me is that conventional arms control in Europe, for example, is a really iffy proposition, that unless and until we have large demilitarized zones, which isn't going to happen in my lifetime, I suspect, it's going to be really tough to have a regime you can have faith in.

Huffstutler: START is for ICBMs and long-range missiles. The conventional issue is really a different order of problem and I'll give you what's probably an unconventional answer. I don't think you have to do anything about them. If you can get an agreement to bring down the levels it would be good, because less is better. But the fact of the matter is that Europe represents the most stable situation in the whole world. The second thing, and I said it earlier, is that nobody can mass conventional forces the way they could in 1914 or they run the risk of having them blown away. Nobody is going to take the chance that you'd never do it and put all his forces out there, and if you don't mass them that way you're not going to break through NATO defenses.

Student: You're saying that we don't need conventional arms control, which is not quite the answer to the question that I really asked.

Huffstutler: All right. The answer to whether we could have it is that we've tried 14 years now and we haven't made the first step. We started MBFR (mutual balanced force reduction) negotiations in 1973, and in fact Jim Croke and I did some work leading up to trying to describe those forces and develop some metrics by which you can measure the input of what the drawdown was. We haven't made one bit of progress on it, and the prospects are not good now, and indeed they're worse, because they're going from bilateral — I mean we haven't made a step between the Soviet Union and the

United States — to multilateral negotiations, which almost guarantees that nobody will even get a proposal on the table that anybody agrees to. I'm not predicting anything soon. It could happen, but I wouldn't predict it soon, but by the same token it's not a situation that I see as unstable. I don't think that's as worrisome as the one we're not looking at.

I'll ask you, in the time that you are professionals in your fields, will there be a nuclear war? All right, you think about that for a second, and it doesn't matter what your answer is. Because if your answer was predicated on a U.S./U.S.S.R. exchange you're suffering from a mindset that is mirrored in the entire country because the most likely nuclear war is between Third World countries like Iran and Iraq, or with Colonel Khadafy shooting back at us after we bomb his house. All of the superpower balances that we think we understand are going to be absolutely irrelevant when you start getting Third World countries that are terribly anti-American, and driven by things that we can't cope with like Shiite fundamentalism, and we're defenseless against a missile attack.

Oettinger: Could you use that as a springboard, since it seems to be especially apt given where you've come from in your own career, from this focus on U.S.-Soviet and what that implies for intelligence, command and control, to the shading down toward the Libyan level, Iraq-Iran level, and ultimately down to the Mafia or single Lebanese family level.

Student: I have a question along these lines. We spoke earlier about the transition from the focus on the Soviets in the Southeast to more Third World and I guess it's kind of organizational. What changes have the CIA or the INTEL community had to go through in general to meet that new mission, and also, if you had your dream of being able to change the INTEL community right now, what would you change to make that mission more meetable?

Oettinger: Sounds like it's a good way to spend the remaining half hour to deal with that range of things.

Huffstutler: OK. I'll tell you some of the things that I think are going on, and they arise out of this whole problem of the mobile force in the field, particularly because it involves Third World areas and because it is the one that is of the most direct interest to most force commanders in the field. Most U.S. force commanders are not that much taken up with targeting big nuclear systems. Most of them are trying to figure out what's over the next hill.

Most of them in effect need tactical intelligence. It is the targeting of the nuclear systems that will bring the technology to deal with tactical reporting.

What happens right now is that all of this information is sucked up on what we call national systems, it goes to Washington. It's processed in Washington and it's basically turned back out into the field. Some of it is turned around very quickly, but nonetheless it runs through Washington. What's going to be happening and what's got to happen in the future, if you wish to target, is that it cannot stop in Washington. It's got to go from collector back out to the field command which is charged with targeting those forces. In the first instance that's going to be the Strategic Air Command (SAC), dealing with intercontinental range weapons. But that architecture is going to allow you, in effect, to bring that information from the collector, through and out to the field for analysis in the field, much more quickly than has ever been the case in the past.

Student: Does that mean that the military is going to have a bigger role as far as providing intelligence on the Third World, or would it be easier to do it some other way?

Huffstutler: The military has an enormous role right now. Probably more than three-quarters of the people in the intelligence community are in the military components, maybe higher than that. So there's a tremendous capability out there right now. SIGINT is dominated by military collection. A lot of some of the more exotic collection is dominated by military collectors. No, they have a large role right now.

What I'm talking about basically is that this kind of collection, processing, and reporting function, instead of stopping in Washington with the finished product going out, has got to go directly out to the field, because of the timeliness issue. You can't have the delay: when you have forces that can move within hours, you've got to have information about those forces turned around and moved directly out to the field. It's that time pressure that's going to force the new architecture in the intelligence community which gets this data out to field commanders. That's the architecture that's going to be much more useful, I think, than the current one, to people who are dealing with low intensity combat, people who are dealing with conventional combat, and so on.

Oettinger: Let's stop there for a minute because I think in these last two minutes you've raised ques-

tions that could occupy us for the rest of this semester very easily. Students should keep them in mind also when Kingston, Tuttle, Lockwood, and Breth get here. Your answer that the military have a significant role right now to my mind is accurate up to a point, but the role is often as agents for some of these things that flow up to Washington and come back down again. And there is, in fact, it seems to me, a mammoth tension allied to the point that had already been made, that my, yes, we're doing this work, but it's for national things and then it comes back down to us only after it's been through this, and we may not even get access to it because by that time it has been merged with some other things, etc., etc. As opposed to the question, hey, it's my assets and I want to use this stuff to do my local thing. Then you say, yeah man, but the information that you need for doing this thing right here may not be obtainable by assets under your control, it may be under somebody else's control, and if you get too damn localized then you will deprive yourself of 16 other things that you might've gotten, and while they come through Washington now, they've still got to come from someplace else, and how the hell do you organize that? It seems to me that you open up there the heart of the set of questions that are implied by your comment that things need to be reorganized. I think that part is quite true. The question is, how the hell do you do it?

Huffstutler: Well, it's starting.

Oettinger: It reopens some of the most basic and almost insoluble disputes about structure and its relationship to performance.

Huffstutler: That is all true, and what's made these problem virtually intractable in the past is that the rare good has been the collector. The thing that's different is that today the rare good is the processor-analyst. We have an era coming where we're going to be able to collect more than we've ever had in the past, and that's going to allow all kinds of people to be able to put in requirements and get them serviced. The choke point is going to come with the analytical effort — the readout, getting information out of it — and it's simply beyond Washington to be able to cope with all that. The right thing to happen is to have that pushed out into the field commands, if it is, say, a CINCPAC requirement. An example I like is a Navy requirement because I think it's clean and tidy. Forgive me if I oversimplify. Right now, every day, we look at Soviet ports for national indications and warning (I&W). One of the things that we're charged with doing is avoiding Pearl Harbor repeating itself and

so we look at Soviet ports almost every day. What we're trying to answer, for example, at the National Photographic Interpretation Center (NPIC) is, are the Soviets generating forces to go to war? In order to answer that question we'll look at some ports, we'll look at some ground military bases, we'll look at air fields, we'll look at missile bases, we'll look at a wide variety of things, we'll circle through the force and we'll say, "Nope, everything is at standard readiness."

But the Navy has a different problem. Over and above having to report on indications and warning, the Navy is interested in finding out when ballistic missile submarines leave port. And the closer to the exact moment that they can get, the easier it's going to be for ASW(antisubmarine warfare) forces to rendezvous with those forces and find them at sea. At the national level, we could tell them if war was imminent. But the Navy has a quite different and quite valid requirement to carry out its mission by rendezvousing with forces. They may want to look at this 10 times a day. I don't want to look at it 10 times a day. I could look at it three times a week and tell you whether they're going to war. You just don't pack a valise and go off to war. You have 12 million men in uniform. They don't sneak through the leaves without making any noise. It takes a while to pack the beans.

But the fact of the matter is, it is the advent of a large volume of intelligence that's beginning to flow like rivers, which means that those requirements which are now handled in Washington ought just to go directly to the Navy. At the national level you should continue to look at a broad sample of forces in order to make a determination of the general readiness of forces, but for what I'm now calling tactical targeting purposes, whether it's shooting at mobilized ICBMs in the field, or finding the ballistic missile submarines as they leave port, or keeping track of special units as they leave their casernes, that ought to go directly to the commander and be processed locally. That's a new architecture. That's a new program, and that's big money.

Student: My question regards that whole concept. Last February a small program at DARPA (the Defense Advanced Research Projects Agency) was initiated, called LightSat, and it essentially looked at that same architecture of providing low resolution optical imagery for the battlefield commander, for the Navy, in fact. That program still goes on, but it's the communication satellites instead, and I was wondering, how did that get switched from an im-

agery-oriented function to a communication function when we do have this dire need?

Huffstutler: The dire need is not going to be filled with low resolution imagery. The problem is you've got to hit a certain threshold in order to give the needed information. You've got to get to a certain level of detail, otherwise, everybody would be analyzing Landsat. But if you've looked at low resolution imagery, the fact is you can't tell anything. If you get into something that is not ships in port, if you get into something that is Libyans in Northern Chad, you don't have a prayer of finding any of these guys on low resolution imagery. What you do need is the ability to pass a lot of data to the field, and you don't have the bandwidth today to pass it.

Oettinger: That makes it a hard problem, because, going back to his Navy example, maybe it's all local stuff, but you wouldn't even know where the hell your own ships or the other guy's are without some global positioning satellite or something like that. So this balance between the local, and the global, and the national, and the tactical is one hell of a problem. Talk about balances — that is inherent in everything that he said. It opens up the whole problem.

Huffstutler: This is tomorrow's nightmare, okay? On the one hand, it's technically possible to do this. On the other hand, we don't have the money for it, and we haven't settled the political issues of who's responsible for what. Let me just give you a couple of examples. At NPIC, for example, we've got the national database of imagery that goes back into the 1950s, and we've got most of this on line. We've got a relational database. It's one of the largest historic databases on line in the world. If you want to know the rate at which the T-62 was proliferated through the Soviet forces, you can go back and find out which units it went to and in what sequence and so on. You can, in effect, make projections about how fast a new piece of equipment will go through the forces.

Now, the problem is, when you've got a query from the field, they query the national databases. But now you're going to have a system where we're going to send imagery directly out to CINCPAC, directly to EUCOM, directly to other places, and now it's going to be exploited out there. Who has the database? Who's responsible for quality control? Who has access rights to the database where the Navy's mission is to find those SLBMs, and they may very well mix special Navy security clearance data in with the imagery readout, and they don't

want you to have that, although they wouldn't mind your having the imagery readout.

Oettinger: One additional layer to complicate that, because you send this to EUCOM or CINCPAC or whatever, who the hell are these people? It's some guy who's on a two-year tour of duty, and just before retirement, who is commanding forces that are fielded by the Army, the Navy, or the Air Force using their budgetary resources, and they know they will be around the day after tomorrow after this guy has finished his tour of duty, which brings us back to the linkages which may have seemed obscure to you as to why I keep insisting on Goldwater-Nichols and the defense reorganization of joint operations, because that problem that Rae has laid on the table cannot be addressed outside the context of what is the relationship between EUCOM, or CINCPAC, and forces under his command.

Huffstutler: That's right, and who gets tasking rights? Who gets to order the collector to collect? You have a legitimate need. You have a decentralized community now that's more decentralized in its use of what we'll call national assets than it has been in the past. National assets are these big technical collectors. The community is more decentralized in its claim on national assets than it ever has been in the past. Who gets the tasking rights? And how do you decide the priorities?

Student: Just let me get back to your account of the architecture changing, when you discussed that whole framework for the architecture to start to shift so that now the information goes back to the field units so those operational commanders get tactical intelligence. It seems to me that also you have a kind of controversy there. On one hand it seems that they're fighting the last war. You described a large buildup so as to prevent another Pearl Harbor from happening. But you indicated earlier by the same token the Third World countries are the area of concentration where, indeed, any conflicts that arise that might involve nuclear exchange will come from rather than between the Soviets and the United States, which will require the attitudinal changes in how we view the use of that intelligence to coincide with the architecture you're talking about. Is that, in fact, occurring? Is that mindset changing or we're not fighting the last war?

Huffstutler: No. What you're hearing from me is personal opinion on this. If you walked around and asked, "What's American doctrine?" it's that we're going to fight the Soviets.

Oettinger: This guy's way out. What we're hearing here today is extraordinarily important and significant, because you will not see it anywhere else. And it almost doesn't matter whether any particular observation that is raised may be correct or incorrect. It is the fact that it raises questions about stuff that is standard doctrine and that badly needs rethinking. Let me add one other sort of layer on this which may at first come to a mild disagreement. It's that the cheap resource, the plentiful thing, is input and the bottleneck is analytical. I would say that's true up to a point, because we're also entering an era where sophistication in electronic measures, global measures, has had a 40-year run — a rather unusually long and good run.

The countermeasures business is also blooming. People learn how to hide things. We hid a training camp for the Son Tay raid. It didn't do us any good, but we took very careful precautions to make sure the damn thing couldn't be seen by overhead satellites. People are learning how to do that. The whole system that's been built up over the last 40 years is one whose underlying premises may not be valid anymore, and I think Rae's raising questions here is of extraordinary importance.

Student: Going back to arms control, there's a growing debate in Washington that there's over-reliance on technical collection systems, so much to the point that they sometimes dictate policy. For example, that's what happened in 1973 with a reliance on NTM (national technical means) to verify a level of arms control agreements. My question is, would you please comment on this, and also, given these ways you called deception methods — maskirovas — the Soviet Union uses, would you say that that reliance on technical collection systems is a bad policy because of these institutionalized ways of deceiving our overhead satellites, our reconnaissance systems, and anything else?

Huffstutler: No easy answer to that. Because you can't answer the question in terms of technical systems. You really now have to break down and say, "What kinds of technical systems?" On things like telemetry, that's very difficult now because of encryption, but it's easy to encrypt. That's a very difficult issue now for the United States because that was the source of a lot of engineering data on some of these advanced weapons. But we're working on other things, and they don't know how we're going to do this. The intelligence business is getting out there one step ahead. That's a denial problem. Denial/deception, okay? That's a denial problem —

encoding and encrypting telemetry is a denial problem.

On the deception problem or concealment problem, there are some ways to deal with that, and the fact of the matter is, it's made things a good deal more difficult for us and it translates directly into analytical time. If you have a large force that you're looking for, and you've got to try to count this thing and you've got to try to get it at one point so that you know that you've got an accurate count, you may have to go through and measure the crown of every tree. You may have to look at last month's imagery and compare it with this month's imagery and measure the crown of every tree. That's what we had to do to find Libyans who were supposed to have left Chad, because the camouflage that they used was splendid. You may think that place looks like a sandbox, but it doesn't. It took us quite a while, in effect, to reestablish the order of battle. We knew they hadn't left. We knew they were there, because nobody came out, but they all just disappeared. It took us some considerable period of time to figure out where they all were. We were literally measuring the crowns of trees, because they'd chop a tree and put it down over the tank, put three or four of them around, and you had to compare yesterday's imagery with today's imagery to find out what had changed in the trees in the desert, in order to find out what was being done. So it translates directly into time. It's harder to do, and the confidence goes down. But by the same token, there are a lot of ways to defeat camouflage and concealment. And we defeat them every day.

Student: Is it an issue of technical reliance?

Huffstutler: The technical reliance is going to depend on the nature of the system. Relying on technical collection is the only thing that you can put in the treaty, because the Soviets are not going to agree to allow agents to wander around and talk to people. But they have allowed on-site inspection.

Oettinger: Let me try to underscore something else here on this theme of mobility that Rae has raised. I think it's crucial, and it isn't just literal mobility. It is the fact that everything human is dynamic, and that the notion of any static solution is sort of nonsense. Yet, there persists the idea that you field a system, you put something in place and the problem is solved, or that we can somehow solve the lead time in arms. All you can buy into the economic realm is the notion that you've got maybe a one-, two-, three-, or four-year lead time, or lag time, over Japan, the Soviet Union, whom-

ever. Analyzing problems in terms of what's your timing is an absolutely vital element, and yet I dare say that most analytical thinking in the literature is static, with the notion that here is what we feel is the solution to this economic, national security, or whatever problem.

In a period where everything is moving, whether it's the Japanese economy or the Libyans in the desert, or whatever, this notion that you're dealing with mobility is, I think, an absolutely critical idea that Rae is raising for us.

Student: What impact does the space program fiasco, the rocket exploding, have on the satellite technology in keeping up with what people are doing?

Huffstutler: It hasn't been good.

Croke: Someone asked earlier, who are the heroes? It seems to me in your usual humble way you didn't answer him. I'd like to try if I may. The same way you mentioned it was a zoo down there, heroes come in different flavors at least. They're different animals. Some operational types who made their reputation. Someone after World War II, who wrote the book on Greece and Iran. If you read newspapers you can figure out who they might have been. They became a kind of folk hero inside the agency. There's a set of what I call gurus, who are top-rated analysts in whatever their field is — they might be experts in a certain technical field, in building satellites, or physicists, or engineers — who have built a reputation inside a community for being able to get vast projects done on time and for working, as opposed to reading a newspaper about everything that happens in this agency.

Then there is a certain set of heroes who are very unsung. I don't know whether the fellow who was assassinated in Beirut, Buckley, who caused Casey so much distress, would be among them, but they don't hand out the normal medals.

That's true of a lot of people who get killed in the very patriotic sense. These aren't just mercenaries who run this business. They don't come all in one form. Our policy is a lot different from a lot of others in other countries because they do come in so many different flavors. You find people who are retired, or resigning because they don't agree with what's happening. You can't find that in a lot of other foreign governments. I think that's important to recognize because in so many ways the bad press that is given to the community is unfair. Everyone makes mistakes, but they can't speak for themselves. You can't ask them, "When were you

successful? Which government did you overthrow recently?" It's not a fair question.

Oettinger: I don't want to interrupt the discussion too much, but we only have a few more minutes. Let me thank Rae for his absolutely tremendous presentation and discussion. Now having said that, let's continue until we have to leave.

McLaughlin: Let me get in my two cents' worth. I guess I'm still worried that even if we decide that the primary threat is not Armageddon, or at least that particular Armageddon, what do national technical means do in all this brand-new technology and architecture, how relevant are they going to be in fighting the kind of war we're most likely to have to fight? I heard a contradictory statement made that maybe the collectors were not the shortage, in the long term. And then we started talking about you have to be tasked on these collection systems, or who tasked them, and for a while to come we're going to worry about having enough collectors out there that not only every theater, but every corps, or any numbered fleet can control these assets. That was a long, rambling question, but any comments on how we help this in the future?

Huffstutler: Whether or not intelligence assets are going to help you on various kinds of conflict depends on the level and the nature of the conflict. If it's big and it involves formal forces and it has equipment and it has communications, we can do a lot. We can do a lot with national technical means. If it's Bandoleros, and everybody's carrying a pistol, and they live in their villages and come out at night, and they don't talk on radios, and they're all wearing black pajamas, for example, and they're in remote areas, and they don't use equipment, then it's very, very difficult for U.S. intelligence to give you much help in pinning down where the enemy is. It really depends on the nature of the conflict. But the lower the level of intensity, the more you're into police work and out of intelligence — out of this kind of intelligence.

Oettinger: Which brings up a question we've already raised about what happens when intelligence, in this sense, flows into police type activities. We've talked again today about the interfaces among the services, but what about the interfaces between the military and the police, institutionally, conceptually, and otherwise? We've got to keep coming back to it throughout the semester.

Student: I just was wondering about your idea of kind of moving towards more distributed information. I guess in the Vietnam War control over the

whole thing kind of happened out of the White House. It's a question of in peacetime then everyone will have all their information, but if a crisis ultimately happens, are people in the White House going to say, "Great, there's a crisis; now, bring all the information here and we'll make the decisions, because we don't trust you since you're only in the Navy for two years." How much of that happens?

Huffstutler: I think that as a practical matter, that's not what happens. Nobody can handle the rivers of information that come into Washington. You can't imagine how much data comes in 24 hours a day, seven days a week. What happens is that you have national systems preempted by national policymakers. In the past, that's been part of the problem with supporting forces in the field. They couldn't get their requirements in, because the Secretary of State said, "I want to know this tomorrow. I want to know on Korea whether China's going to come in. I want to know on Vietnam whether you've got deliveries down the Ho Chi Minh Trail," or something like that.

Oettinger: The technology is sort of neutral on this. In principle you can zoom in or zoom out as you wish. The politics of that gets hairy as hell. If you look at Dick Stilwell's accounts in our *Proceedings* and those by Jack Cushman,* you will find that by the time of the Korean tree cutting incident — and Stilwell's account of that is wonderful — you learned to take countermeasures as compared to what happened in Korea early, so as to make sure that the White House and those folks didn't get much access. So in terms of these organizational gains

McLaughlin: I disagree with the way you framed that. The White House had learned that after Thailand, *Mayaguez*, they didn't want to be sitting in real time on that anymore.

Huffstutler: Wait a minute. I'll make an allegation. The entire United States government can handle one crisis at a time, and that's why we handled Suez and we didn't handle Hungary. But the fact of the matter is, if you're going to handle the *Mayaguez*, you can't handle anything else in the

*See Lt. General Richard G. Stilwell, "Policy and National Command," in *Seminar on Command, Control, Communications and Intelligence, Guest Presentations, Spring 1982*, Program on Information Resources Policy, Harvard University, Cambridge, MA, December 1982, pp. 115-146; and Lt. General John H. Cushman, "C³I and the Commander: Responsibility and Accountability," in *Seminar on Command, Control, Communications and Intelligence, Guest Presentations, Spring 1981*, Program on Information Resources Policy, Harvard University, Cambridge, MA, December 1981, pp. 95-118.

war. White House policymakers can handle one issue at a time. That's it, period. So if you're fighting a war, you're going to be free and clear on everything but the one issue they're looking at.

Snyder: I wanted to ask for some advice for people who deal with the intelligence community. You spoke earlier about when the analysts get to work and they sit around the table and they provide an estimate, and everybody gets their oar in, and if they agree it's kind of one sheet, and if they don't, it's a couple of footnotes. From the policymaker's point of view, he really wants to know the options about the situation. Is there a great pressure in the intelligence community to come in with an integrated single view, even though there may be several views, or is there more of a force to be separate? In other words, when you get an intelligence estimate, are you getting the whole picture, or are you getting the least common denominator picture?

This is an important insight, I think, for people from the outside.

Huffstutler: At various times you've had both. When you wrote for Dr. Kissinger, he liked you to feed him back what he wanted to hear. He was not a very liberal man. Most other people though, in effect, want to know how far the consensus goes. And they're not looking to you to frame their options. They're looking to find out why you've argued that things go as far as they do, and then what the rationale for the changes are. And that's about all they want from you in the intelligence community, and most of the time that works pretty well. If you're asking is there a politicization of intelligence in order to get views out that support the administration, I would say generally, no. I know of some instances where there has been pressure for that, but in the 30 years that I've been there, I've seen about two, and that's not bad.

Oettinger: Thank you again, very, very much.