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**Collection/Office of Origin:** Science and Technology Policy, Office of (OSTP)  
**Series:** Bromley, D. Allan, Files  
**Subseries:** Administration Files

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**OA/ID Number:** 62027  
**Folder ID Number:** 62027-002

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**Folder Title:**  
Statement Before Senate Select Committee on Intelligence - 7/17/90

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# Withdrawal/Redaction Sheet

## (George Bush Library)

| Document No.<br>and Type | Subject/Title of Document                                                                                                                                  | Date    | Restriction | Class. |
|--------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|-------------|--------|
| 01. Report               | Statement by Allan Bromley before the Senate Select Committee on Intelligence on US Intelligence in Support of America's Economic Competitiveness (62 pp.) | 7/17/90 | (b)(1)      |        |

**Collection:**

**Record Group:** Bush Presidential Records

**Office:** Science and Technology Policy, Office of (OSTP)

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**Subseries:** Administration Files

**WHORM Cat.:**

**File Location:** Statement Before Senate Select Committee on Intelligence - 7/17/90

|                               |             |                             |           |
|-------------------------------|-------------|-----------------------------|-----------|
| <b>Date Closed:</b>           | 3/5/2010    | <b>OA/ID Number:</b>        | 62021-002 |
| <b>FOIA/SYS Case #:</b>       | 2005-0336-F | <b>Appeal Case #:</b>       |           |
| <b>Re-review Case #:</b>      |             | <b>Appeal Disposition:</b>  |           |
| <b>P-2/P-5 Review Case #:</b> |             | <b>Disposition Date:</b>    |           |
| <b>AR Case #:</b>             |             | <b>MR Case #:</b>           |           |
| <b>AR Disposition:</b>        |             | <b>MR Disposition:</b>      |           |
| <b>AR Disposition Date:</b>   |             | <b>MR Disposition Date:</b> |           |

### RESTRICTION CODES

Presidential Records Act - [44 U.S.C. 2204(a)]

P-1 National Security Classified Information [(a)(1) of the PRA]  
P-2 Relating to the appointment to Federal office [(a)(2) of the PRA]  
P-3 Release would violate a Federal statute [(a)(3) of the PRA]  
P-4 Release would disclose trade secrets or confidential commercial or financial information [(a)(4) of the PRA]  
P-5 Release would disclose confidential advice between the President and his advisors, or between such advisors [(a)(5) of the PRA]  
P-6 Release would constitute a clearly unwarranted invasion of personal privacy [(a)(6) of the PRA]

C. Closed in accordance with restrictions contained in donor's deed of gift.

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Freedom of Information Act - [5 U.S.C. 552(b)]

(b)(1) National security classified information [(b)(1) of the FOIA]  
(b)(2) Release would disclose internal personnel rules and practices of an agency [(b)(2) of the FOIA]  
(b)(3) Release would violate a Federal statute [(b)(3) of the FOIA]  
(b)(4) Release would disclose trade secrets or confidential or financial information [(b)(4) of the FOIA]  
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(b)(7) Release would disclose information compiled for law enforcement purposes [(b)(7) of the FOIA]  
(b)(8) Release would disclose information concerning the regulation of financial institutions [(b)(8) of the FOIA]  
(b)(9) Release would disclose geological or geophysical information



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|--------------------------|--------------------------------------------------------------------------------|---------|-------------|--------|
| 02. Letter               | To: Donald Riegle From: John Macomber<br>Re: Export Administration Act (3 pp.) | 7/17/90 | (b)(1)      |        |

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**Record Group:** Bush Presidential Records

**Office:** Science and Technology Policy, Office of (OSTP)

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EXECUTIVE OFFICE OF THE PRESIDENT  
OFFICE OF SCIENCE AND TECHNOLOGY POLICY  
WASHINGTON, D.C. 20506

April 23, 1990

MEMORANDUM FOR D. ALLAN BROMLEY

THROUGH: MICHELLE K. VAN CLEAVE *Reg*  
FROM: RICK E. YANNUZZI *Reg*  
SUBJECT: TESTIMONY BEFORE THE SENATE SELECT COMMITTEE ON  
INTELLIGENCE

You have accepted an invitation to appear before the Senate Select Committee on Intelligence (SSCI) on May 2, 1990, from 2:00 to 4:00 p.m.. The subject of the hearing is U.S. intelligence in support of America's economic competitiveness. The other witnesses for this hearing are Ambassador Michael B. Smith, former Deputy U.S. Trade Representative, and Mr. Lionel Olmer, former Under Secretary for International Trade, U.S. Department of Commerce.

Attached is the final draft of your testimony for your review. In discussions I've had with the staff they would like each witness to spend about 15 minutes presenting their testimony. The staff wants to reserve as much time as possible for Q&A's between the committee members and the panel. You have been asked to focus your comments on S&T intelligence in the context of economic competitiveness.

According to the staff at least two committee members appear particularly interested in the hearing -- Senators Danforth and Bradley. Judging by Senator Boren's speech to the National Press Club earlier this month (see attached newspaper clipping) I would certainly add him to the list of interested committee members.

On a logistical note the SSCI staff has informed me that we can expect Chairman Boren to be late to the hearing. Apparently, tardiness is one of his trademarks.

Attachments:

1. Proposed Testimony
2. Newspaper Clipping



# Boren Urges Intelligence Upgrades

By George Lardner Jr.  
Washington Post Staff Writer

The U. S. intelligence community must develop "new and different assets" and help keep the nation economically competitive, Sen. David Boren (D-Okla.), chairman of the Senate Select Committee on Intelligence, said yesterday.

"As the arms race is winding down, the spy race is heating up," Boren said in a speech at the National Press Club. "An increasing share of the espionage directed against the United States comes from spying against private American companies, aimed at stealing commercial secrets to gain a national economic advantage."

He said another sign of changing times was testimony before his committee in the past month by U.S. intelligence officials who said they are having "some real problems down at the operational level"

with operatives from other nations who have worked with the United States in the past and "once demanded our strong presence."

These people "are looking at us and saying, 'Why are you still here? We don't need you any more,'" Boren said.

American influence in the coming century, he said, is going to depend more on economic factors and moral leadership than military strength.

"We have had a strange and symbiotic relationship with the Soviet Union," Boren said. "The decline of the Soviet Union might lead to our decline as well."

Problems of U.S. intelligence in the Soviet Union will expand from finding out what happened at the last Politburo meeting to finding out "what is going on among the people" who will be electing a president five years from now, he said.

"We will also need greater human capabilities and personnel equipped with economic expertise" to keep

watch on foreign exchange rates, oil production levels and trade policies worldwide, he said.

In turn, he said, "We will be confronted with the policy question of how active our intelligence community should become" in serving U.S. business and commercial interests.

U.S. embassies should be turned into outposts "not just of American political influence but of American economic influence as well. . . We can no longer regard the commercial section [of an embassy] as something that ought to be in the basement."

Boren expressed alarm at the low numbers of American students studying abroad and he called for new exchange programs to help "internationalize the thinking of the next generation of Americans." Last year, he said, 356,000 foreign students came to the United States, but only 24,000 U.S. students went abroad. Students coming here from Malaysia alone outnumbered them.



# When "Friends" Become Moles

*American companies wake up to a new spy threat: U.S. allies*

By JAY PETERZELL

The dangers of Soviet military espionage may be receding, but U.S. security officials are awakening to a spy threat from a different quarter: America's allies. According to U.S. officials, several foreign governments are employing their spy networks to purloin business secrets and give them to private industry. In a case brought to light last week in the French newsmagazine *L'Express*, U.S. agents found evidence late last year that the French intelligence service Direction Générale de la Sécurité Extérieure had recruited spies in the European branches of IBM, Texas Instruments and other U.S. electronics companies. American officials say DGSE was passing along secrets involving research and marketing to Compagnie des Machines Bull, the struggling computer maker largely owned by the French government.

A joint team of FBI and CIA officials journeyed to Paris to inform the French government that the scheme had been uncovered, and the Gallic moles were promptly fired from the U.S. companies. Bull, which is competing desperately with American rivals for market share in Europe, denies any relationship with DGSE. Last year the company made a legitimate acquisition of U.S. technology when it agreed to purchase Zenith's computer division for \$496 million.

U.S. officials say the spy ring was part of a major espionage program run against foreign business executives since the late 1960s by Service 7 of French intelligence. Besides infiltrating American companies, the operation routinely intercepts electronic messages sent by foreign firms. "There's no question that they have been spying on IBM's transatlantic communications and handing the information to Bull for years," charges Robert Courtney, a former IBM security official who advises companies on counterespionage techniques.

Service 7 also conducts an estimated ten to 15 break-ins every day at large hotels in Paris to copy documents left in the rooms by visiting businessmen, journalists and diplomats. These "bag operations" first came to the attention of the U.S. Government in the mid-1980s. One U.S. execu-

tive told officials about a trip to Paris during which he had made handwritten notes in the margin of one of his memos. While negotiating a deal with a French businessman, he noticed that the Frenchman had a photocopy of the memo, handwritten notes and all. Asked how he got it, the Parisian sheepishly admitted that a French government official had given it to him. Because of such incidents, U.S. officials began a quiet effort to warn American companies about the need to take special



ILLUSTRATION FOR TIME BY MICHAEL C. WITTE

precautions when operating in France.

While France can be blatant, it is by no means unique. "A number of nations friendly to the U.S. have engaged in industrial espionage, collecting information with their intelligence services to support private industry," says Oliver Revell, the FBI's associate deputy director in charge of investigations. Those countries include Britain, West Germany, the Netherlands and Belgium, according to Courtney. The consultant has developed a few tricks for gauging whether foreign spies are eavesdropping on his corporate clients. In one scheme, he instructs his client to transmit a fake cable informing its European office of a price increase. If the client's competitor in that country boosts its price to the level mentioned in the cable, the jig is up. "You just spoof 'em," Courtney says.

Most U.S. corporations could protect their sensitive communications simply by sending them in code. But many companies are reluctant to do this, even though the cost and inconvenience might be minor. One reason may be that the effects of spying are largely invisible. All the company sees is that it has failed to win a contract or two. Meanwhile, its competitor may have clandestinely learned all about its marketing plans, its negotiating strategies and its manufacturing secrets. "American businesses are not really up against some little competitor," observes Noel Machette, a former National Security Agency official who heads a private security firm near Washington. "They're up against the whole intelligence apparatus of other countries. And they're getting their clocks cleaned."

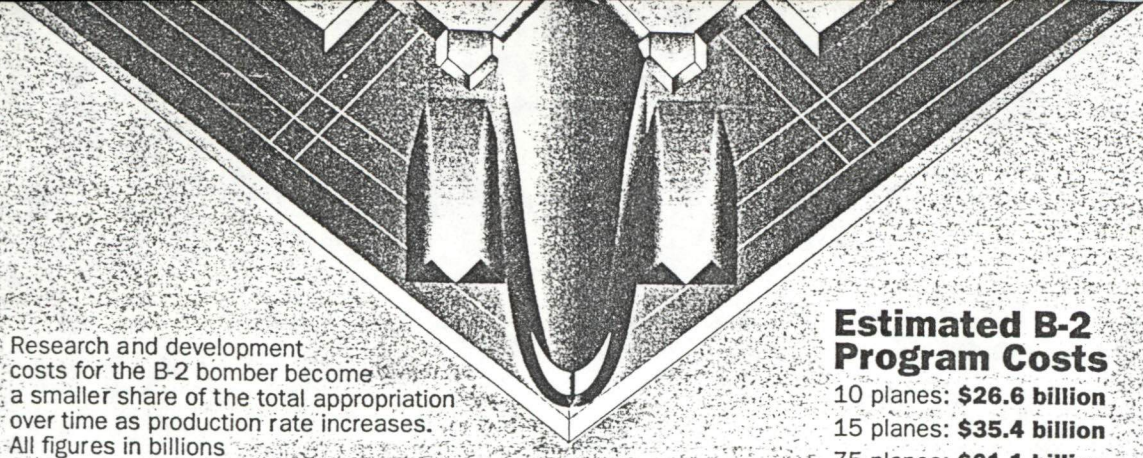
As U.S. national-security planners increasingly focus on American competitiveness, many of them fear that U.S. corporations are operating at a severe disadvantage. America's tradition of keeping Government and business separate tends to minimize opportunities for the kind of intelligence sharing that often occurs in Europe. "I made a big effort to get the intelligence community to support U.S. businesses," recalls Admiral Stansfield Turner, who headed the CIA in the late 1970s. "I was told by CIA professionals that this was not national security." Moreover, it would be hard for the Government to provide information to one U.S. firm and not to another. Yet if sensitive intelligence is shared too widely, it cannot be protected.

One thing the U.S. Government can do is make sure business leaders understand the threat. When the late Walter Deeley was a deputy director at NSA in the early 1980s, he began a hush-hush program in which executives were given clearances and told when foreign intelligence agencies were stealing their secrets. "He considered it a real crusade," a former intelligence official says. "If American business leaders could see some of these intelligence reports, I think they would go bananas and put a lot more effort into protecting their communications."

"It may not be possible to level the playing field [with foreign companies] by sharing intelligence directly" with their U.S. rivals, observes deputy White House science adviser Michelle Van Cleave. "But it should be possible to button up our secrets." That argues for much more use of secret-keeping techniques and far less naiveté on the part of American business as it enters the spy-vs.-spy era of the 1990s.

—With reporting by Christopher Redman/Paris

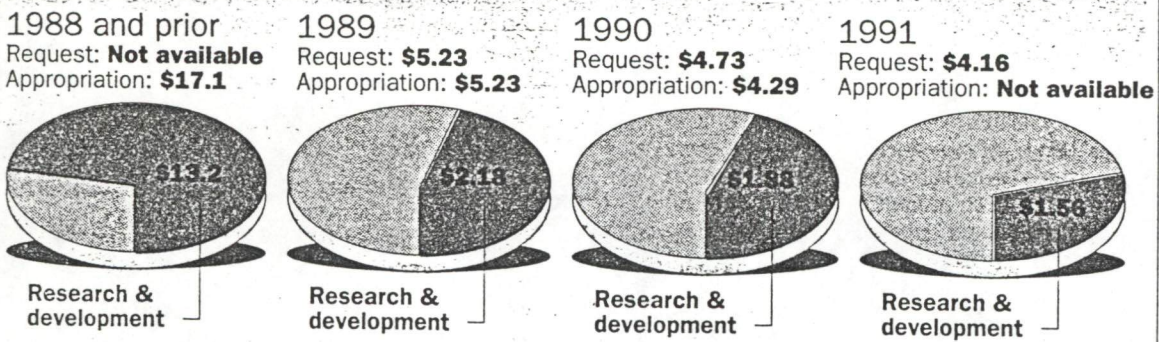




Research and development costs for the B-2 bomber become a smaller share of the total appropriation over time as production rate increases. All figures in billions

### Estimated B-2 Program Costs

10 planes: **\$26.6 billion**  
 15 planes: **\$35.4 billion**  
 75 planes: **\$61.1 billion**



Source: Department of Defense

Marty Baumann

## Price Per Plane Could Increase To \$1 Billion

By BARBARA AMOYAL  
 And PHILIP FINNEGAN  
 Defense News Staff Writers

WASHINGTON — Congressional failure to reach a compromise on B-2 funding could force a deadlock that would escalate costs and result in even more inefficient production rates than already proposed by the Bush administration, congressional sources say.

With the legislative options narrowed as a result of Defense Secretary Dick Cheney's April 26 decision to cut the B-2 stealth buy from 132 to 75 planes, congressional sources say compromise legislation intended to prolong B-2 production at lower annual rates could jack the price of the \$815 million bomber to well over \$1 billion per copy.

Opponents of the B-2 bomber

## U.S. Mulls Industrial Spy Role

*Intelligence Agencies Would Share Commercial Information*

By NEIL MUNRO  
 Defense News Staff Writer

WASHINGTON — U.S. intelligence agencies may be asked to gather industrial information about foreign competitors and provide it to U.S. defense firms and other companies, sources say.

Sen. David Boren, D-Okla., chairman of the Senate Select Committee on Intelligence, told *Defense News* last Wednesday that he expects a policy to emerge in the next few years that would task intelligence agencies with collecting commercially valuable information.

Such a policy would change dramatically the charters of intelligence agencies and open debate on how information should be fairly shared with U.S. companies.

This prospective new task may already be included in a classified

study being prepared on U.S. intelligence priorities in the 1990s, said one official, who declined to elaborate on the study's contents.

Foreign intelligence agencies already collect and distribute information to national companies, many of which are partially owned by the government, said one former intelligence official. "It is a fairly routine thing," he said.

However, industrial data gathered by U.S. intelligence agencies, such as the Central Intelligence Agency and the Defense Intelligence Agency, are not shared with U.S. companies, sources say.

"The spy race is heating up ... against commercial targets in the United States. More and more ... espionage is [being used] to steal our private commercial secrets for the sake of national economic purposes," Boren told an audience April 3 at

the National Press Club in Washington. "We are going to have to think about the role that we want our own intelligence service to play in terms of protecting America's economic and commercial interests around the world."

The intelligence agencies are already working to defeat espionage directed against U.S. economic and technological targets. But such efforts should be complemented by the use of information for the benefit of American companies, experts say.

Although the intelligence agencies collect much secret information, they also collect a great deal of public information from newspapers, scientific papers and other sources, said Michelle Van Cleave, assistant director for national security affairs in the White House's Office of Science and Technology Policy. "At present, it is not integrated or exploited to support the private sector ... we should look at better ways of doing that," she told *Defense News* last Thursday.

The government could use computer systems to make available openly gathered information, she said. In turn, the com-

## Planned E May Not L Of Italian V

By ALESSANDRO POLITI  
 Defense News Correspondent

ROME — Although the Italian Parliament took a decisive step last week toward approving new arms export regulations, government and industry sources here are uncertain that new rules will boost Italy's sagging foreign sales.

The new regulations were sought by defense manufacturers concerned that Italy's cumbersome rules for gaining export licenses would put them at a disadvantage when European trade barriers are eliminated in 1992. The measure could be passed by the first week of June, according to Italian Sen. Michele Achilli, chairman of the Foreign Committee.

While the new regulations are intended to simplify the regulatory process, in some cases gaining export licenses will be more difficult. Because Italian companies have been

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See SPY, Page 35



# U.S. Agencies May Draw Industrial Spying Activities

SPY, From Page 1

puterized information would be reviewed and analyzed by private research companies, she said.

Such computerized analysis of unclassified information might yield information that normally would be classified, said F. Reese Brown, editor of the New York-based *International Journal of Intelligence* and *CounterIntelligence*.

However, distribution of secret or classified information gathered by the intelligence agencies is a much more difficult matter, sources said. "Once you've got the information, who do you give it to? ... Ford, General Motors, Chevrolet or Oldsmobile?" asked Ken Levitt, a spokesman for Boren.

Moreover, many U.S. companies are partially owned by foreign companies, Van Cleave said. "How would it be disseminated without at the same time giving advantage to foreign competitors?" she asked.

Protecting secret intelligence-gathering methods would also be difficult, especially if foreign intelligence services were able to monitor the information that the U.S. government was disseminating, she said.

Also, the government's intelligence agents might be reluctant to take personal risks for the benefits of American companies, she said.

Although the Pentagon's intelligence agencies are likely to op-

pose any involvement in economic intelligence gathering, the intelligence units in the Departments of Agriculture, Treasury, Commerce and State could contribute to economic intelligence gathering, Brown said.

Experts disagreed on whether the Central Intelligence Agency (CIA) would welcome the new role. In a speech on April 27 to the Jefferson Club at the University of Missouri, Columbia, Mo., William Webster, director of the CIA, said, "It is the job of intelligence to examine what is occurring, the forces at play, and the ways that action taken abroad can affect our national security. With a clear understanding of the playing field, policymakers can better determine where it is not level as far as U.S. interests are concerned."

To improve the intelligence agencies' ability to help formulate U.S. economic policy, the government should increase economic expertise in the foreign embassies and other areas of government, Levitt said. "In that vein, we have to be prepared to give our intelligence officers the skills to analyze economic information," he said.

But industry's effort to protect their own secrets must be stepped up, Van Cleave said. "Our private sector could do a better job of protecting information" against foreign intelligence services, she said.

# Israel Moves to Reinstate For German Information

ISRAEL, From Page 4

the contract funds would go to the German firm Krupp Atlas. Of the money, \$40 million would go to Loral and \$60 million to Krupp. Some \$20 million of that amount — all FMS funds — would be for royalty and licensing fees to Krupp.

U.S. government officials and industry executives fear that if Israel is able to broaden its exceptions, other countries may follow suit. Already, industry sources report that Egypt is interested in seeking an exception so it also can spend \$10 million with Krupp for combat information systems for its Romeo-class submarines.

If Israel spends the money on non-U.S. systems, it also would weaken the arguments of foreign aid supporters at a time when the aid program is facing increased criticism.

As Pell wrote in a May 8 letter to Israeli ambassador Moshe Arad, "Those of us who have sought to maintain political support for the military assistance program always find it useful to point to the fact that, with certain specific exceptions, Foreign Military Sales funds are used only to support the sale of American systems."

Pell also wrote that in the case of Israel, it is understood that directed offsets [the ex-

penditure of U.S. funds to non-U.S. contractors] are used to support Israeli subcontractors only and that the specified funding for advanced weapons is to be spent in Israel.

*"Those of us who have sought to maintain political support for the military assistance program always find it useful to point to the fact that, with certain specific exceptions, Foreign Military Sales funds are used only to support the sale of American systems."*

Sen. Claiborne Pell

Israel has been allowed to spend its funds on non-U.S. goods since 1987. At that time, it was permitted to spend \$300 million of its \$1.8 billion in U.S. military aid on Israeli goods and services. Israel was in the midst of its Lavi fighter project, and wanted to spend the money on Israeli systems for the fighter.

At that time Israel also enjoyed the unique benefits of directed offsets under which Is-

# Troop Levels and Aircraft Ceilings Among Remaining Arms Talk Issues

CFE, From Page 4

with his counterpart, [Soviet Foreign Minister Eduard] Shevardnadze, and hopefully the Soviets will arrive in Washington with some additional thoughts for us on how we can move forward with conventional force reductions," Cheney said.

Cheney was in Brussels for a meeting of NATO's defense ministers to discuss the re-

any limits on German troops be negotiated under CFE.

"The only way to do this on the German side is in the framework of CFE as part of an overall cap on troop levels in Europe," said a West German official in Washington.

However, West German diplomats have suggested that a compromise might be reached by promising the Soviets further European troop cuts as part of CFE, either

indicated a willingness to reduce their own troops stationed in Germany, as have the Belgian and Dutch governments.

U.S. officials and NATO diplomats are optimistic that the stalemate over CFE and German unification can be solved at the May 30-June 3 superpower summit in Washington.

Aside from discussions on conventional forces, Baker and Shevardnadze discussed

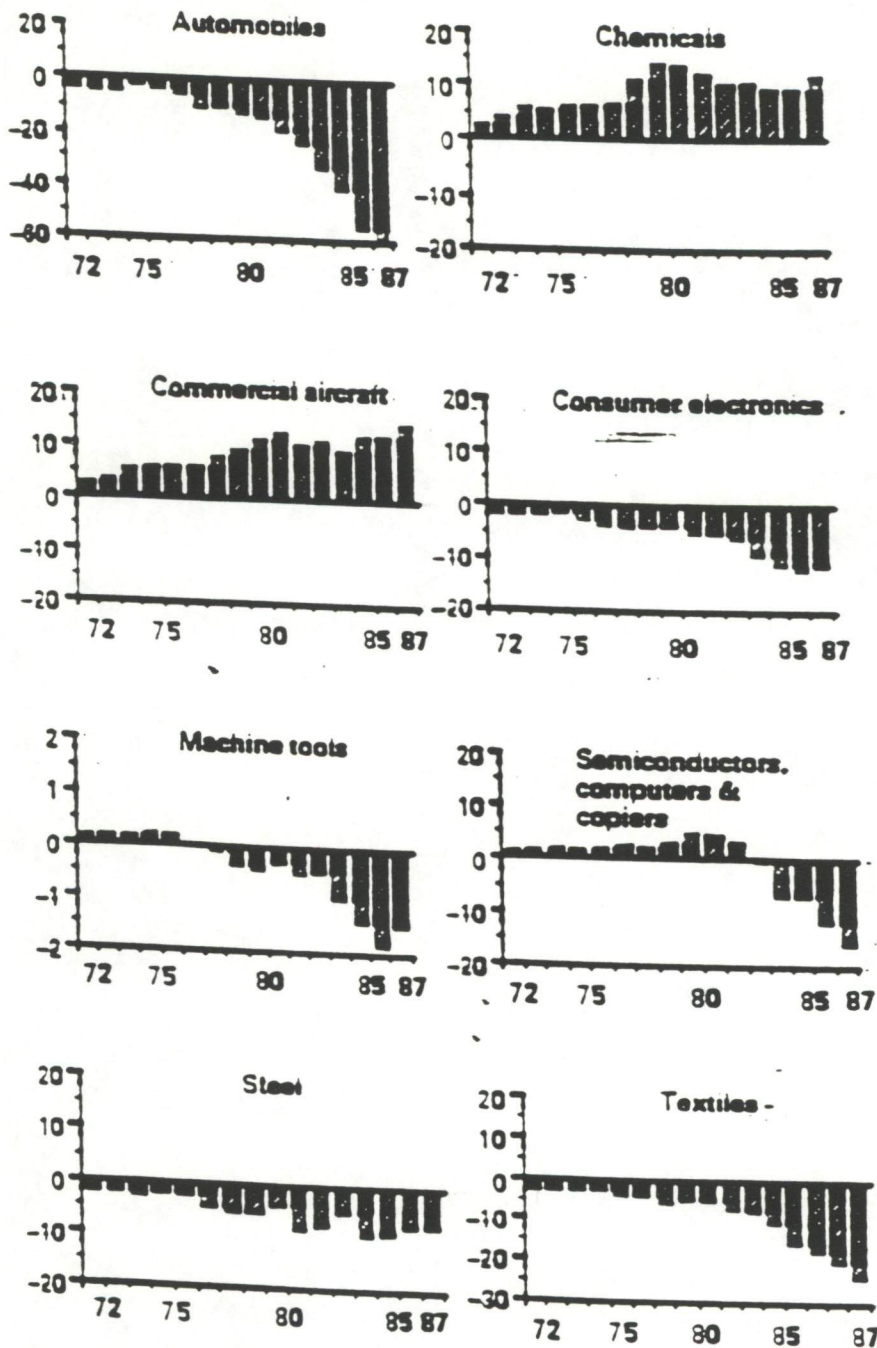
# British Hope Problems With Sea H

AMRAAM, From Page 3

RAAM production might reduce costs. Lowery added that the entire timeframe of the program might be stretched, and that all of these options would be considered by the defense ministry this year.

The Defense Committee had earlier heard from other defense ministry witnesses that instrumented AMRAAM missiles for

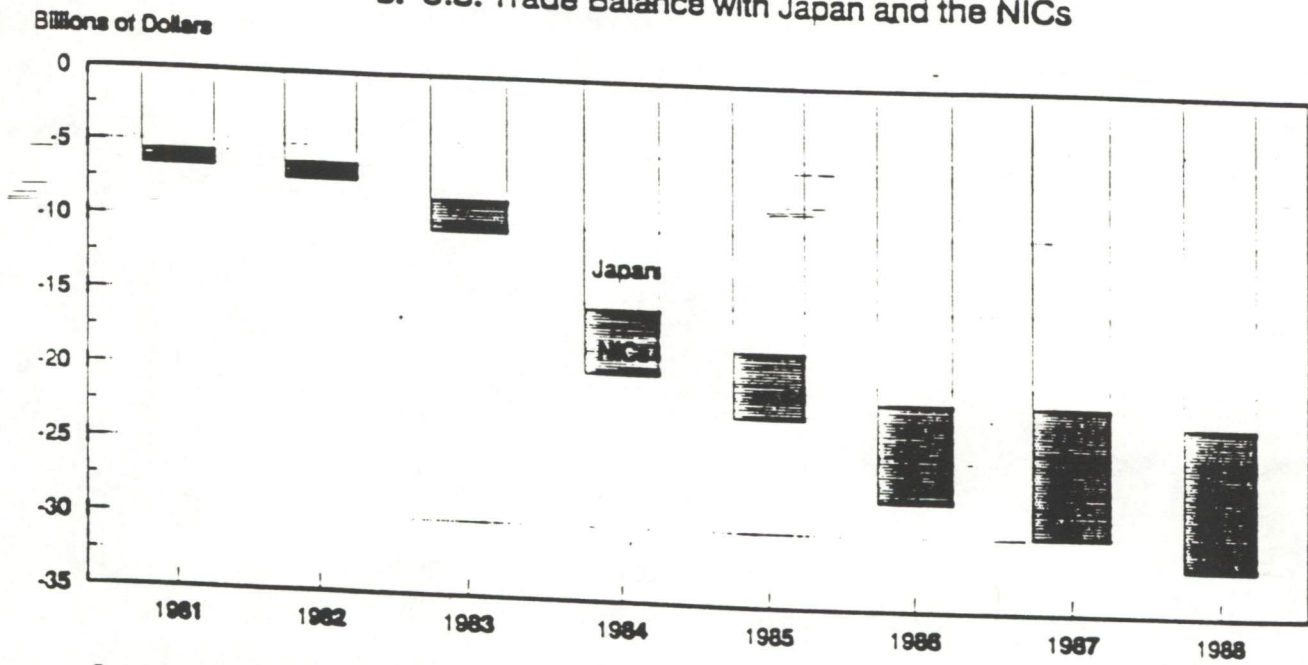




**Figure 1.4 Trade balance in industries studied**  
 Trade balances are in terms of billions of current U.S. dollars. Source: Data made available by the U.S. Department of Commerce, International Trade Administration, Office of Trade Information and Analysis.



### B. U.S. Trade Balance with Japan and the NICs



Source: *United States Trade: Performance in 1988*, U.S. Department of Commerce, International Trade Administration, September 1989.



## **INTERNATIONAL ECONOMIC COMPETITION**

**Charge to PCAST:** Examine aspects of competitiveness in which science, technology, and engineering play a major role and, where appropriate, suggest Federal action that could enhance competitiveness. Product rather than basic science competitiveness is to be emphasized.



## **ELEMENTS OF COMPETITIVENESS**

- 0 Internal competence and actions of individual firms.
- 0 Regulatory, tax, and financial environments in which firms operate.
- 0 Availability in the environment of new scientific and engineering knowledge.
- 0 Environment supportive to improvement of existing product.
- 0 Availability of technical labor force.



## **INTERNAL COMPETENCE AND ACTIONS OF INDIVIDUAL FIRMS**

How well do firms manufacture, how well do they support, use and manufacture R&D, how well do they train and motivate their employees? Largely beyond the purview of government action.

**REGULATORY, TAX AND FINANCIAL ENVIRONMENTS  
IN WHICH FIRMS OPERATE**

Cost of capital and tax structure, particularly depreciation rules, and such items as R&D tax credit.

In the legal area, there exist traditional issues relating to anti-trust, as well as the newer issues of product liability and intellectual property.



## **AVAILABILITY IN THE ENVIRONMENT OF NEW SCIENTIFIC AND ENGINEERING KNOWLEDGE**

The kind of knowledge that historically has launched whole new initiatives, produced radically different materials or powerful new instruments. Really new manufacturing processes could be included here.

## **ENVIRONMENT SUPPORTIVE TO IMPROVEMENT OF EXISTING PRODUCT**

Less of a matter of really new scientific knowledge than of taking the next engineering step, a step usually aimed at product. Can be a question of adapting existing knowledge to a special product situation or of transferring existing knowledge to a firm that could use it. Examples would include research on existing process or manufacturing, or improved materials.



## **AVAILABILITY OF TECHNICAL LABOR FORCE**

**Training and orientation of scientists and engineers as well as technically competent people for a production environment.**

## **POSSIBLE PCAST COMPETITIVENESS ISSUES**

- o Effects of U.S. tax policy, trade policy, and regulatory framework on investment in industrial R&D? In overall competitiveness?**
- o What are the real effects of U.S. capital costs on investment in industrial R&D and in plant and equipment?**
- o What should be the U.S. objective in the semiconductor area? Is this an area where we must retain significant manufacturing capability and market position?**



0    What roles should the Federal Government take in encouraging consortia such as SEMATEC, MCC and NCMS? What should be the criteria for Federal involvement?

0    Are our universities adequately preparing engineers for careers in commercial manufacturing?

0    Is there a continuing need for DARPA? Could criteria be developed to make a Civilian Advanced Projects Agency a focused, effective competitiveness catalyst?

0    Are the policy and decision making processes of the Federal Government (the Administration and the Congress) appropriately structured to respond to the modern challenges of technology and manufacturing competitiveness?

- 0    **What role can Federal laboratories play in the industrial competitiveness arena? What expectations here are realistic?**
- 0    **How effective have state and local industrial competitiveness programs been? What should be the nature of the Federal/state partnership here?**
- 0    **Have the diverging interests of our financial and manufacturing sectors adversely affected U.S. manufacturing competitiveness? If so, should there be and is there redress?**
- 0    **What are the 2-4 most important short-term and long-term initiatives the private sector and the Federal Government should be undertaking to improve our global competitiveness?**



## **SOME ADMINISTRATION COMPETITIVENESS INITIATIVES**

### **FISCAL YEAR 1991**

- o **Reducing the tax on capital gains to spur entrepreneurial activity.**

**The Administration has proposed restoring a capital gains tax differential such as existed before the Tax Reform Act of 1986.**

- o **Making the research and experimentation (R&E) tax credit permanent to reduce uncertainty.**

**Under the current law, the R&E credit is scheduled to expire on December 31, 1990. The Administration proposal to make the credit permanent would permit businesses to expand without fearing that the tax laws will suddenly change.**

- o **Protecting intellectual property through international negotiations.**

**The Administration is aggressively pursuing improved international protection of intellectual property. Negotiations on intellectual property rights are being conducted in the World Intellectual Property Organization and in trilateral talks with the European Community and Japan, as well as in the Uruguay Round of GATT.**

- o **Reforming product liability laws to restore balance to the tort system.**

**The Administration supports the adoption of uniform product liability standards across the 50 States. The proposed changes to product liability laws would maintain incentives to produce safe products, but would restore balance to the tort system and reduce uncertainty - particularly for new products.**

- o **Removing barriers to research, innovation, and development.**

**The Administration has proposed legislation that would make it easier for companies to enter joint production ventures by requiring challengers to prove such ventures would harm competition. The legislation would also eliminate punitive treble-damage awards which have made it lucrative to discover antitrust violations in almost every activity of business.**

- o **Developing advanced technologies to meet government and civilian needs. Some specific advanced technologies that receive support from more than one Federal agency are:**

- **Robotics - The budget provides \$192 million to six Federal agencies for support of robotics R&D. The focus of this R&D is on the development of systems that are more autonomous and capable of interacting with changing and uncertain environments.**



- **High Performance Computing** - The budget provides \$469 million for Federal support of R&D focused on high performance computing. This activity includes the full range of advanced computing technologies as well as the systems and applications software, networking, and underlying research and human resource infrastructure.
- **Semiconductors** - The budget provides \$537 million for research on: semiconductor materials; development and application of semiconductor materials to meet agency mission needs; and, support of R&D on semiconductor manufacturing processes. The largest single Federal program is DOD funding of \$100 million per year for SEMATECH.
- **Superconductivity** - The budget provides \$215 million for superconductivity R&D. Programs in five Federal agencies deal with both high temperature and low temperature superconducting phenomena and materials.
- **Advanced Imaging Technologies** - The budget provides \$118 million for advanced imaging R&D. Advanced imaging systems include interactive graphics, high definition displays, advanced signal processing, and advanced digital switching technologies.
- o Improving productivity and the quality of life through biotechnology. The budget proposes \$3.6 billion for biotechnology R&D in pharmaceuticals, foods, agriculture, waste management, and energy.
- o Developing technologies for improved transportation. The budget proposes funding for transportation R&D of \$1,527 million. Federal programs are focused on aeronautics, highways, mass transit, railroads, maritime, water, aviation, and other transportation areas.

- 0 Promoting alternate sources of energy. For conduct of energy R&D programs in the Department of Energy, the budget proposes totaling funding of \$2,450 million. Federal programs cover a broad spectrum of energy technologies including solar, renewable, conservation, nuclear fission, nuclear fusion, fossil energy, and supporting energy sciences.
- 0 Enhancing industrial productivity and development of standards. The budget proposes \$198 million for the National Institute of Standards and Technology. R&D in fundamental measurements and standards provides the foundation for U.S. industry, commerce, and science to achieve levels of accuracy and compatibility required to support technological development, efficient processing, process control, and quality assurance. Special activities include R&D on in-advanced manufacturing technologies. In addition, the Advance Technology Program provides grants to industry-led consortia to support development of generic, pre-competitive technologies.
- 0 Creation of the Precision Manufacturing Technology Program by the Department of Energy to provide U.S. industry greater access to the extensive manufacturing technology, expertise, and facilities available within the Department's Defense Programs weapons complex.
- 0 Establishment of Regional Manufacturing Technology Centers. The budget provides \$5 million for this program. The approach is to reduce the barriers faced by small- and medium-sized manufacturers in adopting new technology by: creating awareness, providing up-to-date, practical information and expertise, and supporting implementation.



# The Need To Know

BY LEO CHERNE

**T**he primary purpose of intelligence is to avert war by flagging dangers to national security. The second role of intelligence is to help us make the wise judgments needed to retain our military, political and economic strength against the many threats to each of these. And some of these dangers will grow in the years ahead.

We are living in a world in which interdependence increases more quickly than we are able to assimilate its significance. That interdependence involves manufacture and trade, commodities and credit communications, vital resources and ideas. It also stimulates tensions between nations and instability within them. The technological developments that have revolutionized world banking and the transfer of credit result in consequences requiring prompt and accurate assessments. The United States depends increasingly, even for vital sources of military strength, on capabilities and resources that are diminishing within its borders and increasing elsewhere.

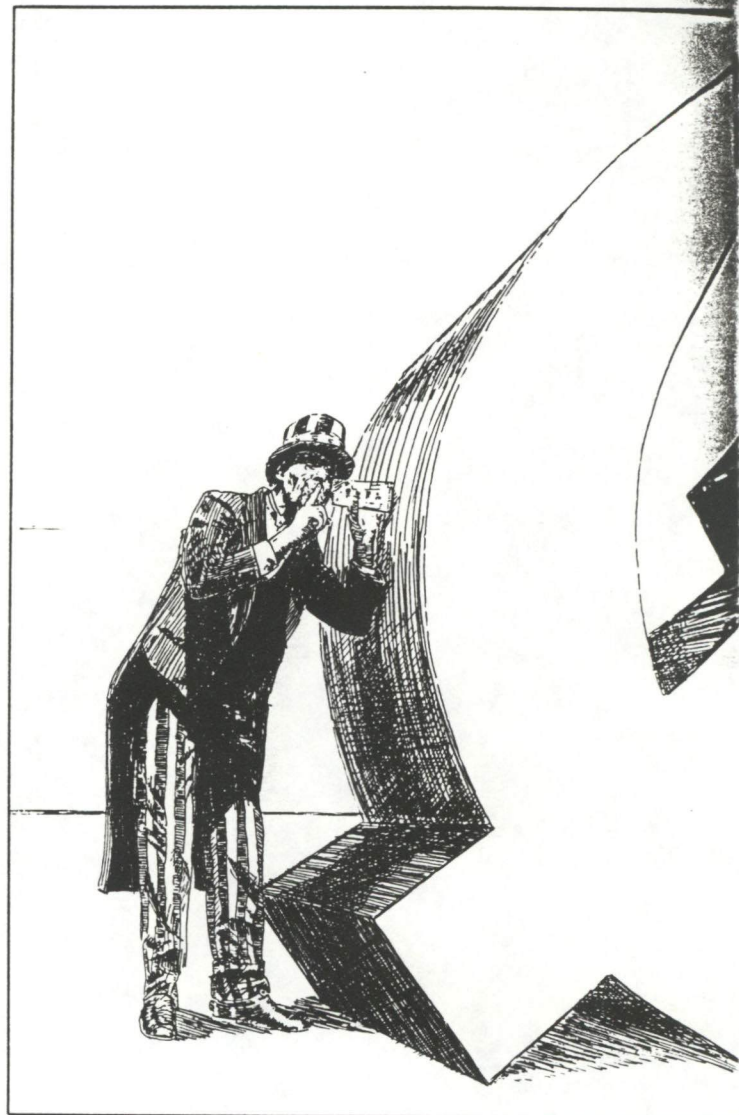
The difference of intelligence in the democracies and the Marxist-Leninist states is that the normal purpose of Western foreign intelligence is to buttress stability, make change as unturbulent as possible and protect the democratic order.

The KGB's role is almost the precise opposite except within its political domain. Its function is to generate and exploit turbulence. "The worse, the better" is an old Russian nihilist maxim that aptly describes the thrust of Leninist intelligence activities wherever stability exists. The Soviet intelligence apparatus is inherently the provocateur, the merchant of disorder, the magnifier of social, economic or political weakness or distress.

One of the requirements for the late Eighties is to confront the fact that there are those intellectuals who are blind to an adversary that prohibits ideas. Peacemakers exist who are uncritically ready to serve a perpetual war-making machine. Journalists develop myopia

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when confronted with a system that prohibits the freedom of the press. Civil libertarians are slow to criticize a system that most completely obliterates civil freedoms.

It is said that Marxist-Leninism as an ideology no longer exerts the appeal it once did. Nevertheless, each of the previous paradoxes remains and is now expressed not by yesterday's adulation of the war-maker, the USSR, but by a constant and undiminished opposition to those who would keep the Kremlin's dangerous propensities in check. In short, *we*, not *they*, are the enemy.

## The Ambiguity about Hostility

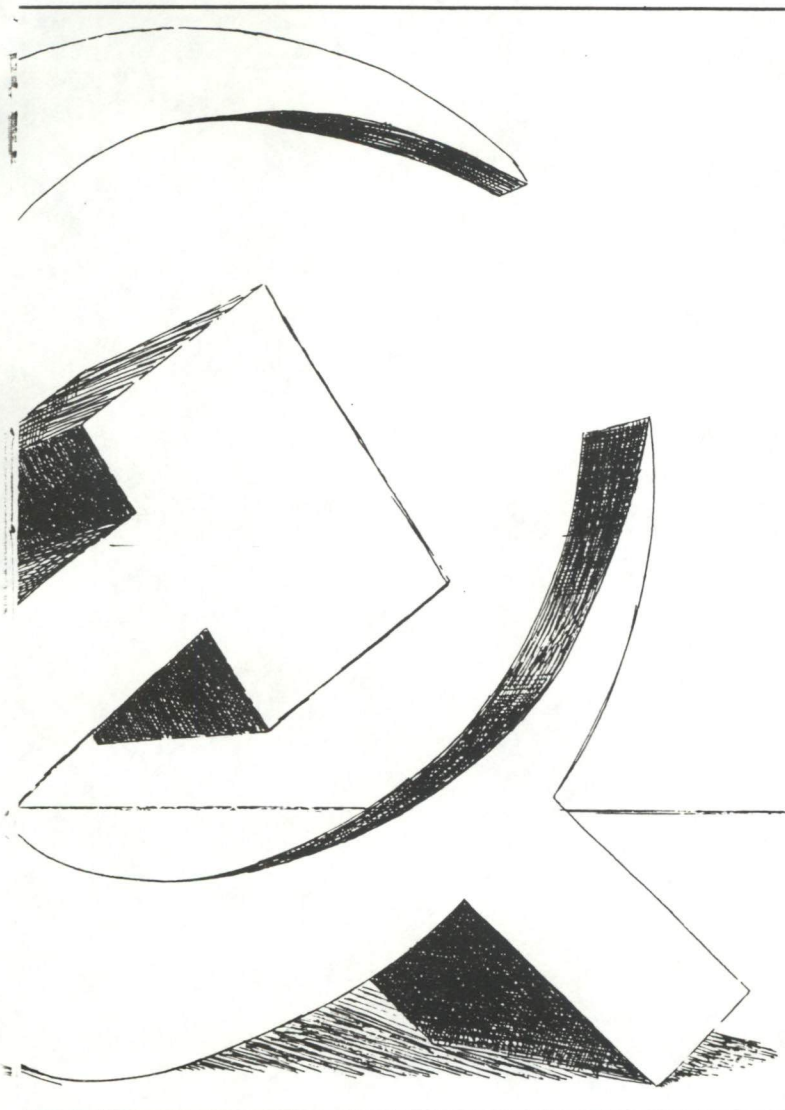
Today's and tomorrow's societies differ in critical respects from the international military environment that essentially ended with World War II.

Among the 42 current conflicts involving 4 million people engaged in wars, rebellions or civil uprisings, few nations have declared war upon another. This ambiguity about hostility today places a particular premium upon effective intelligence.

The massive lethal power possessed by the great nations—and most particularly the United States and the USSR—has had a still inadequately understood effect upon warfare. Smaller nations are infinitely more free to take belligerent action than are the two muscle-bound giants.

This does not mean that the United States and the USSR adapt to this reality similarly. The belligerent propensities of smaller





nations all too often involve the interests of the superpowers and, somewhat less often, the participation of a superpower by means short of war. How, where and why such indirect intervention occurs is a crucial difference. So, too, is the freedom or eagerness with which such indirect action occurs.

The Soviet Union has pressed to the hilt the use of proxy nations to perform its purposes, content to rely on the fear of wider war to keep the United States largely paralyzed.

Within this rubric, we have seen the growth of a new form of war—terrorism—supported, if not spawned, by nations virtually secure in the absence of risk to themselves. Such involvement is invariably supported by the Soviet Union and its client states, while joint action to punish those who unleash terror is shunned by U.S. allies.

There will be no more difficult task for intelligence in the years ahead than to penetrate the small, fanatical groups that perform the terrorist acts, groups utterly without moral restraint and that hold the innocent in complete contempt. But that intelligence task becomes a nearly impossible one unless there is a better understanding that terrorism is itself simply another form of warfare.

One of the most penetrating and accurate descriptions of the true nature of terrorism was contained in a statement from a conference on "State Terrorism and the International System," held by the International Security Council in Tel Aviv. Sixty prominent

senior statesmen, active and retired military officers and national security specialists from 12 countries convened to consider the character and extent of state-sponsored terrorism. Among their conclusions, the following are particularly penetrating:

The problem indeed is not just loose, gang-like incursions. It is terrorism—state-sponsored, state-supported, state-condoned, and even state-directed. Tyrannical and totalitarian ideologies have now subscribed to a new gospel of violence as an instrument of political change. A "radical entente" presently spearheaded by five militant states (Syria, Libya, Iran, North Korea and Cuba) is making coordinated efforts—by themselves and with others—to undermine the power and influence of the United States and its allies. Here the well-documented role of the Soviet Union is to provide the professional infrastructure of terrorism including money, arms, explosives, recruitment and training, passports, infiltration and escape routes, transport, communications, safe havens, control officers and more. Taken together, these constitute an elaborate international network of support systems for terrorists.

This is not to suggest that the Soviets push the buttons and that their hand is always, directly or indirectly, in play. None of us subscribes to that kind of oversimplification. But where they do not initiate it, they encourage it. The destabilization and subversion have a pattern which serves Soviet interests, and this must be faced by leaders of the Free World even if, for the moment, it is not high on the official diplomatic agenda. Both lives and liberties are at stake. We must learn more about what we are dealing with—and do more about it.

Meanwhile, the Soviet Union has pursued twin objectives since the end of World War II: to separate the United States and Western Europe and to mount a relentless, sophisticated and surprisingly effective propaganda campaign to persuade the world that peace is the Soviets' true purpose and that the risk to that peace resides in Washington, not Moscow. And the Soviet Union has perfected the manipulation of proxy bodies essential to the propagation of that all too widely accepted fantasy.

A great danger to stability is surprise. It is the vital attribute of terrorism and aggression. Intelligence is our only available instrument to keep these disasters in check.

## Means and Ends

Terrorism provides the clearest spotlight with which to illuminate the true purpose of intelligence. Critics of U.S. intelligence efforts virtually never extend their distaste to include intelligence designed to alert the nations to impending terror or to identify the terrorist perpetrators once they have struck. Yet in no respect is the function of intelligence, whether analytic or clandestine, different when applied to the frightful consequences of terrorism than it is when applied to other international hazards, some of which involve the threat to life and human safety that are infinitely greater.

Intelligence will be increasingly important with each passing month of these years ahead to protect not only freedom, security and stability but to enhance the safety and stability of all the nations that seek to avert war and cultivate their own growth with minimal risks to their own tranquility. It is here that the rapid growth of interdependence is especially relevant. Following are listed a few of the major dangers in which intelligence is an indispensable tool.

A decision was made by a handful of men that led to an oil price



reduction by more than a third in less than a month. The life and death of nations and their economies will rest on how low that price falls. Some nations will benefit. Others face unmanageable social and economic turbulence. The consequences to the United States are many and varied. A number of U.S. banks may be in jeopardy. Some industries and many localities face serious hardship. And even as others momentarily remain unaffected or even benefit, an economic fire storm may overtake all of us. Only wise, and sometimes swift, government policy provides the possibility of moderating these consequences. Policy formation will be at least partially blinded in the absence of effective intelligence.

A number of less-developed nations are now indebted to banks and government and international institutions by more than \$900 billion. It is less the debts than the consequences that flow from their payment or nonpayment of the interest on those debts that hold a world economy in thrall.

It is unfortunate that many of those now in debt are countries that only recently adopted democratic governmental forms. Political and social instability in those countries can swiftly snuff out that recent progress. The danger may be as close to the United States as its southern border.

The meeting of the five leading finance ministers of the industrial nations illustrates the urgency of cooperative international policy if these shoals are to be navigated. Intelligence is an indispensable mapmaker of the charts needed to navigate these shoals.

This is the age of high technology married to the information age of microchip, supercomputer and the new sophisticated robots.

Labor-intensive industries will continue to die or adjust, move their operations to countries that suddenly enjoy comparative advantage or merge with successful foreign competitors.

There are virtually no U.S. automobiles made entirely of U.S.-made parts. The five leading Japanese car makers are now operating on U.S. soil. Television brings to every home in the United States the \$3,990 blessing of the Yugo, and South Koreans will make their automotive presence vivid indeed with the \$4,995 Hyundai.

There are all the makings of international tension in these facts of disappearing U.S. manufacture and growing U.S. manufacturing unemployment. And the mix is one that threatens the growth of protectionism. And all this is the grist of governmental policy that depends on accurate and early intelligence.

Some of the best work on this process of structural change is being done by the analysts in the Central Intelligence Agency augmented by expertise derived from conferences, many of them unclassified, with businesses, universities, think tanks and others.

## The Age of Information

Most observers who have studied the structural change referred to believe we are entering the greatest threshold of destabilizing change in the history of man—greater than the change set into motion with the birth of cultivated agriculture, greater than the industrial age that followed, greater than mass manufacture, greater than the birth of the service economy that now provides more than 70 percent of U.S. jobs. We have entered the age of information, and we will wander through it blindly unless effective intelligence is an instrument that helps shape prompt, effective and peaceful policy. Without it, there is the greater certainty of turbulent, divisive and dangerous economic conflicts.

The focus on intelligence requirements for the balance of this decade may leave the misleading impression, especially in areas

involving the dramatic economic difficulties we are likely to face, that the intelligence community is, or should be, the sole source of the information and judgment required for wise and timely government policy.

It is clear that in specific fields and on a number of the potential difficulties lying ahead, the U.S. Department of the Treasury, State Department, Federal Reserve Bank and Department of Commerce have specific responsibilities, and they are assisted by sophisticated sources of information available to them. Contributions made by the intelligence community to those key government agencies are on the one hand supplementary and on the other indispensable.

Not only must each of these instruments of the federal government seek to improve their own sources of advanced knowledge and judgment, not only must the intelligence community make a



unique contribution to that input, but it may well be that the greatest contribution required in the interval ahead is one that addresses itself to more effective coordination of intelligence sources without which the policy responses may prove inadequate or late.

## Tough, Indispensable

There are other very specific intelligence tasks that will be of increasing importance for the balance of this decade. Some of them are altogether new. Regrettably, almost none of them are easy. Yet they are indispensable.

Among the urgent tasks for intelligence will be to fathom the means by which the Soviet Union intends to derive the benefits of the information age while withholding from its managers the technology and the freedom to use it, which are essential to eminence in the revolutionary structural change taking place.

Linked to the challenges of the information age, a host of intelligence questions emerge from the convulsive demographic changes taking place in the Soviet Union. These changes are shifting the balance of population to the Muslim republics and away from Russia, where its government, industry and education are concentrated. By what means can these ethnic tensions in the European and Asian USSR be exacerbated?

Is it possible that the Soviet Union had chosen to buy and steal the high technology it requires because those means of acquiring the most advanced technology are easier and cheaper than inventing and producing their own high-tech breakthroughs? Their technical ability is surely not the total impediment.

The spreading high-technology capability in the Third World creates an increased difficulty in averting transfer of sensitive technology to the Soviet Union. And this, too, will complicate the task for intelligence.

This new environment suggests still another need that partially involves both intelligence and the continuous planning for industrial mobilization that is the Defense Department's responsibility.

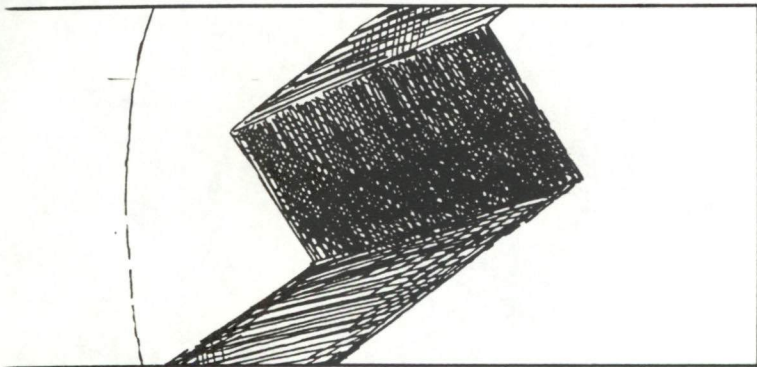




That question is, how do we manage our economy in an emergency when we are increasingly dependent on strategic materials, facilities and processes in other nations that may or may not be amenable or reliable when needed?

There is still another intelligence question regarding the periodic difficulties in securing participation by U.S. allies in one or another of the international difficulties we confront. Perhaps the most striking illustration of this question is why nations that have suffered the destruction of life and property by terrorists far more than the United States appear quite unwilling to associate themselves with the United States in any action to redress state-sponsored terrorism.

Do we really understand why this is so? Are we altogether clear why neutralism and unilateralism play as large a role as they do in



Europe? May not the distaste for the United States among many Europeans exist because they correctly perceive the Soviet danger and correctly judge that they cannot moderate that danger, while the United States, by opposing the Soviet Union, would involve its allies in a risky and costly hazard they are not prepared to assume?

Can we win the war of systems if we cannot win the war of ideas or are unwilling to pay for what it takes to do so? The Soviet Union spends far more to jam VOA, BBC, Deutsche Welle and Radio Français than the West spends in efforts to reach the Soviet Union. Are there means that have been neglected?

Among the pressing tasks facing intelligence for the balance of this decade is the redefinition and legitimization of covert action, unless of course we are prepared to accept the notion that covert action is legitimate if used by the Soviet Union, its client states and the states that sponsor terrorism, but unacceptable as a U.S. counterforce. We are no longer in Henry Stimson's world where "gentlemen do not read others' mail" or George Kennan's world where "if covert action cannot be kept secret, it must not exist."

And closely linked to this, a fresh assessment must be made of the consequences of sharply limiting the presence of the KGB on U.S. soil. The Soviet Union's pervasive capabilities for telephonic eavesdropping enjoy immunity among us, and they operate from key urban locations. How can genuine symmetry be achieved in the privileges the Soviet Union enjoys in the United States and those they accord Americans in their midst? This is a major challenge that will continue to bedevil U.S. intelligence.

If the Soviet Union is long permitted to enjoy a field day in the United States, it should be noted that they have not had uninterrupted success in many of the world areas under their influence. We must better understand what is producing Soviet distress among its clients elsewhere in the world and particularly in Africa. That distress varies, but it has included Egypt, Somalia, Mozambique, Grenada, South Yemen and Tanzania. There are now several ongoing insurgencies fighting against Soviet-backed Marxist regimes;

the wave of the future is not assuredly theirs.

Do we periodically subject our most certain conclusions and cherished conceptions about our adversary to remorseless reexamination? For example, are we too ready to assume that the Soviet Union's economic problems significantly diminish the continuing danger to security represented by Soviet power and will?

It is clear that the tasks ahead for intelligence are both different and greater than any intelligence community has previously confronted. There will be many problems in dealing with this painful reality. Almost all of them are affected significantly by the public's misconceptions, let alone repeated evidence of media hostility. There are bureaucratic and budgetary problems. There are problems that flow from the very nature of a democratic state and some that flow from the particular culture of the United States. The United States has a remarkable tendency to look at the mirror when it considers its adversaries, and mirror-imaging is the curse of accurate intelligence.

The United States must also ask: can U.S. intelligence be as good as it must be as long as U.S. knowledge of foreign languages and cultures remains as poor as it is and is handicapped further by the disinvolvement of centers of learning, research, science and technology, some of which shun "contaminating" contact with the world of intelligence?

In conclusion: a prophecy and a challenge. One is unavoidable, and the other as yet unmet.

Less than 50 years ago, the United States, unlike England, had no need for economic intelligence. Whatever intelligence the United States had was focused on the capabilities and intentions rooted in dangers it perceived to be military.

During the remainder of the decade, the greater threats to stability will flow from economic, social, cultural and political hazards. Do not misunderstand. It is not that the military dangers have receded. They have changed their character but are painfully with us. But a new panoply of dangerous troubles creates urgent intelligence needs in the years immediately ahead.

## The Challenge

Now the challenge! The actors in this new international drama are not only governments, but include industries, labor unions, universities, banks and stock and commodity exchanges.

Intelligence has thus far been essentially limited to informing other government sectors. The United States imposes understandable limits—and they are sharp—to keep the world of foreign intelligence and U.S. domestic life apart. The United States also has its antitrust laws. It does not, as the Japanese do, have an instrument like MITI that performs some of the coordinating and judgmental functions for Japanese industry.

Yet, how does the United States meet the manifold challenges of the Information Age? How does it share essential intelligence with the private sectors of society, the sectors upon whom tomorrow's eminence depends?

And even were that intelligence to be shared, there remains the central problem that exists even in the most urgent governmental use of intelligence—how to make effective use of the information. By informing a man about to be hanged of the exact size, location and strength of the rope, you do not remove either the hangman or the certainty of his being hanged.

All that intelligence can do is seek to concentrate the mind sufficiently to reduce the chance of unanticipated crisis or, more hopefully—and less likely—avert it altogether. ●



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