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# STUDIES in INTELLIGENCE



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# STUDIES IN INTELLIGENCE

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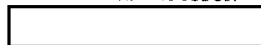
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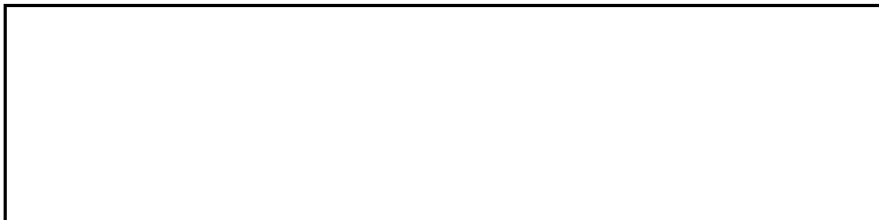
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An annual award of \$500 is offered for the most significant contribution to the literature of intelligence submitted for publication in the *Studies*. The prize may be divided if the two or more best articles submitted are judged to be of equal merit, or it may be withheld if no article is deemed sufficiently outstanding.

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Awards are normally announced in the first issue (Winter) of each volume for articles published during the preceding calendar year. The editorial board will welcome readers' nominations for awards, but reserves to itself exclusive competence in the decision.

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No Foreign Dissem

*Case histories showing how Soviet electronic R&D can point to future military systems.*

## CRYSTAL BALLS AND GLASS BOTTLES

William A. Gray

During the summer of 1952 American [ ] technical intelligence officers met near Frankfurt/Main with a German electronics engineer recently returned from Leningrad. This "Dragon" returnee<sup>1</sup> described in some detail a costly development project then under way in the Svetlana Works engineering department, where he had been assigned by the Soviets.<sup>2</sup> The project was to design a novel radar tube, unusually large, with a very high peak power output, operating at metric (VHF) wavelengths, and having a duty cycle (percentage of time active) several times higher than was then common practice for pulse radars. This first-hand report provided authoritative confirmation of information reported earlier by other returnees. The Germans thought the project quite ambitious, in view of the rather primitive technology then prevailing at Svetlana. It had a further meaning for us.

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Scientific and technical intelligence officers have always clung to the belief that any early tip-off on future military systems can be found

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<sup>1</sup> During 1945 and 1946 several hundred German electrical engineers and scientists were taken to the USSR and used, with the support of a number of technically qualified POWs, for R&D on behalf of Soviet electronics technology. By 1951 Operation Dragon had been established as an organized effort to elicit intelligence information from these and other German specialists as they returned to Germany. (For the application of Dragon to the German atomic scientists, see Henry S. Lowenhaupt's "On The Soviet Nuclear Scant," *Studies XI 4*, p. 13 ff.) Most of the electrical engineers proceeded without much delay to West Germany for employment in its rapidly growing electronics industry. Subsequently, attracted by the pay scale and other ideological features, quite a few participated in a third "brain drain," emigrating to the United States.

<sup>2</sup> The Svetlana Works was, and still is, a prestige engineering-manufacturing enterprise for electron devices. In the late thirties Svetlana facilities and technology were modernized with American contract support. In the winter of 1941-42, with Leningrad under siege, most of the plant was evacuated to Novosibirsk. After the war it was slowly rebuilt to its former preeminent position, though for some years its facilities were in poor shape.

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in appropriate aspects of selected R&D efforts, so that intelligence on adversary R&D can give our own planners and policy makers valuable lead time. Outside the field of national security, the validity of this concept has been demonstrated in the engineering industries, where competitive industrial intelligence has used it for several generations. Its potential in the U.S.-Soviet competition is perhaps best illustrated with respect to Soviet pulse power tube technology. The development of pulse power tubes is directly and uniquely related to radar evolution, since in general radar comprises the exclusive end use for these devices. And although military radars are subject to stringent security, the USSR is relatively free in publishing specifications for many classes of pulse tubes.

#### *The Tall King*

The importance of the story from Svetlana was the strong evidence it provided of a Soviet intention to continue with a major effort to develop and employ VHF radars—those with a wavelength on the order of one meter. The United States [redacted] largely as a result of wartime priorities and acquired skills, were emphasizing the development of centimeter wave (UHF) radars, discounting the potential of VHF on the grounds of poor resolution. The Soviets, however, had used pulse triodes<sup>3</sup> operating in the VHF bands in the majority of their wartime ground and naval radars, and now they were evidently being impelled by considerations of their own—perhaps their acquired know-how or the VHF's greater range capability and freedom from clutter—to mount a big development program in VHF radar technology.

The technical intelligence officers were thus aware at an early date of the continued Soviet interest in VHF radar. On top of these reports of the attempt at Svetlana to develop a superpower device for it came the introduction, between 1952 and 1954, of updated versions of earlier VHF air-defense radars, the P-8 and P-10. Then in 1954 a Soviet vacuum tube catalog (acquired with some difficulty) listed a pulse triode type GI-5B, the electrical and mechanical specifications for which corresponded almost exactly with the data provided

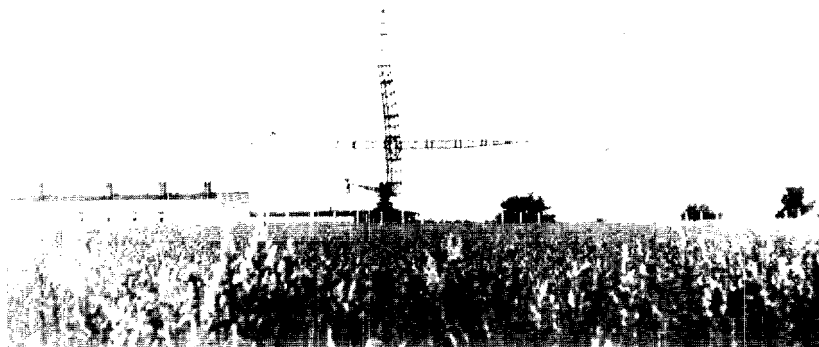
<sup>3</sup>The triode is an electron tube with three elements—the cathode and anode, say filament and plate, between which the electrons flow and a third element, say a grid, which controls the flow. The amplification is achieved by other means, externally applied magnetic fields and electric potential, in UHF and microwave power tubes, the magnetron and the klystron amplifier.

by our Dragon source from Svetlana. Apparently the long and expensive development job there had been successful, and the device was being put into production.

That surmise was confirmed by a team of East German electron tube specialists who visited Soviet facilities in 1956. A copy of their trip report revealed that the GI-5B pulse triode was in fact being produced in the Svetlana factory. Then a year or two later a team of American electronics specialists were invited to visit the USSR and, by coincidence, were able to examine in some detail the Svetlana production line for this tube. The important feature of their report was the observation that the production rate was extremely high for a specialized device of this nature; there seemed to be a crash program to meet a heavy immediate demand.

This accumulation of evidence now provided a firm basis for predicting that a new Soviet air-defense ground radar would be deployed shortly, that it would operate at a frequency between 150 and 200 MHz, and that its purpose would be the long-range detection of small, high-altitude aircraft targets. And so it was: in 1959, approximately five years after the GI-5B triode went into production and nearly ten years after its design project was started at Svetlana,

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The Tall King

the P-14 (Tall King) early-warning radar appeared in the Soviet air-defense network. As against published specifications for the tube's frequency, pulse length, and duty cycle—200 MHz maximum, 11 microseonds, and 0.0033 maximum—the measured values for the P-14 were 169-175 MHz, 8-12 microseonds, and 0.0025. The P-14 still remains the main extended-range early-warning sensor in the Soviet bloc air-defense system.

#### *The Hen House*

But Soviet R&D did not stop there. Abundant information acquired over the next two years, mainly from unclassified industry publications, showed that an extensive Soviet effort in product development had been established to provide still more advanced pulse power tubes for VHF radar service. In particular, two high-power triodes dating from 1958 and 1959 merited attention. These tubes, types GI-4A and GI-24A, had a close family resemblance to the Svetlana GI-5B, with a similar peak power and operating frequency. Both of them, however, were designed to operate at much greater average power, pulse length, and duty cycle and were water-cooled.

These features indicated intended application in systems which involved large fixed ground installations and sophisticated data-processing to cope with targets at very long ranges. By early 1963, accordingly, it was possible to foresee that Soviet defense system projects could be expected to include

large fixed ground VHF radar systems operating at frequencies between 150 and 200 MHz, employing high average powers and megawatt peak powers at high duty cycle, for use at extreme ranges against small high-altitude targets. At least two different projects appear probable, with parameters compatible with antimissile and antisatellite system requirements.

At this point the technical intelligence officers ran into a familiar occupational hazard of their craft—unsolicited advice from experts who knew better. U.S. tests in the Pacific had demonstrated that high-altitude nuclear explosions are likely to black out radio propagation in the lower frequency ranges. This was sufficient proof for the “experts” that extreme-range antimissile radars in the VHF band would not be practical and that the Soviets could therefore not be planning any such systems to operate at frequencies below 500 MHz.<sup>4</sup>

<sup>4</sup> For the effects of this long unresolved disagreement, see David S. Brandwein's “Interaction in Weapons R&D,” *Studies* XII 1, p. 18 f.

The Soviet decision-makers, however, not having the benefit of this advice, continued with their program; and in 1967 the now famous Hen House antimissile and antisatellite radars began transmissions from their operational sites. Their operating frequency lies between 154 and 162 MHz, compared with the published values of 150 and 177 MHz for the GI-4A and GI-24A triodes respectively. They use long pulses, pulse compression, and frequency scanning, with sophisticated data processing. The duty cycle of one group is 0.027 and that of the second 0.05, compared with published values of 0.03 and 0.05 for the two pulse triodes. Assuming that it is the GI-4A and GI-24A pulse power triodes they are using, these complex defensive systems first became operational approximately seven years after the introduction of their tubes.

#### *Back Net*

Although the USSR has been far less free in disseminating technical data on radar power tubes in the centimeter wavelength bands, useful intelligence information can be obtained. In 1964 a Czech electronics expert emigrated to the United States. Some years previously both he and his director at Tesla had made business trips to Soviet facilities working on magnetrons and klystrons. From him we learned specific details about some multi-megawatt pulse magnetrons designed for operation in the "18 centimeter" band that were in production by 1957 at a Moscow factory.<sup>5</sup> He also described a multi-megawatt klystron amplifier development that had started in Moscow in 1957 and was well under way at Fryazino during 1961.

At the time of our discussions with this Czech engineer, only two relatively low-power Soviet radars were known to operate in this wavelength region. Neither was a likely candidate for the large magnetrons described. Clearly, a new Soviet high-power centimeter wave ground radar could be expected imminently. In 1965 the Back Net air defense radar was confirmed to be just that. Operating at several frequencies between 1700 and 2400 MHz, it is the newest unit deployed at Soviet Bloc ground-controlled intercept stations

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<sup>5</sup> The "18 centimeter" band would cover approximately 1600 to 2400 MHz. In the United States this portion of the UHF frequency range, although used for communications services, has not been used for radar.



The Back Net

and in addition is being installed as the target acquisition radar for the new Soviet long-range surface-to-air missiles.

As a final word, one must keep in mind that analyzing selected products of the Soviets' R&D is useful to give a broad index of their technological capabilities for designing new military systems. In the narrower sense of predicting their deployment of particular systems, the opportunities for this approach are limited and the batting average is bound to be low. In the field of pulse power tubes here discussed, two very significant trends in Soviet radar *capabilities* are apparent from what we have learned. First, centimeter wave radars employing frequency-controlled klystron power amplifiers rather than magnetrons can be expected; to date, no known Soviet radar makes use of this sophisticated design that is important both for defense against electronic countermeasures and for better accuracy in measurements. Second, the techniques for precise control of signal phase and frequency values which increase the flexibility and quantity of target information in the Hen House type of system may be used at any operating radar wavelength whenever military requirements justify the expensive complication.

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No Foreign Dissem

*Precision measurement of the operating parameters of uncooperating radars.*

## QUALITY ELINT

William H. Nance

Most of electronic intelligence is devoted to the intercept and analysis of radar signals in order to locate radar sites and establish the general characteristics of radar systems. This type of Elint, usually called "radar order of battle," has proved to be of great value in the Viet Nam air war, where the U.S. Air Force and Navy both conduct large-scale Elint operations in support of air strike missions.

Another category of Elint receiving wide recognition in the intelligence community is called "precision parameter measurements." This technique involves either the measurement of radar signal characteristics to a very high order of accuracy or measurements to determine something about a radar's operation that will reveal its detection and tracking capabilities. Of greatest importance are measurements which will reveal a radar's vulnerability to electronic countermeasures.

As advanced radar systems with complex modes of operation have been evolved to achieve greater range, accuracy, and immunity to countermeasures, electronics intelligence groups are being pressed harder and harder to develop equipment and techniques for meaningful measurements of their parameters. Rather large-scale research programs are being carried out to develop special receiving and recording systems, and these often incorporate electronic computers to process the vast quantity of information bits in a typical radar signal. Studies of technical and operational feasibility are also undertaken to devise methods of deploying these systems in collection operations.

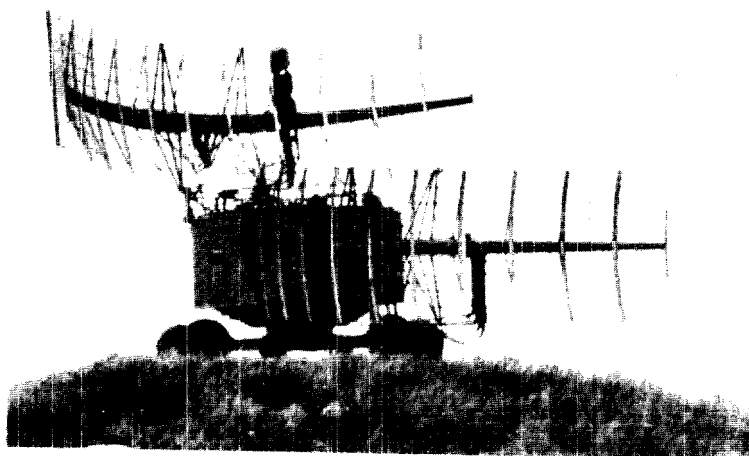
In 1962-63 the CIA Office of Elint expanded its program of precision measurements to determine the vulnerability of reconnaissance vehicles and to develop equipment for electronic countermeasures. This program has been highly successful in a variety of projects, developing a number of new approaches to the collection of electronic intelligence. One of the most interesting of these is the technique for accurately measuring the radiated power of an operating radar and

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describing the fine-grain structure of the radiation pattern. A simplified review of this power-pattern technique, although it represents only one facet of the precision measurements program, should give some insight into the technical and operational problems encountered and some idea of the accomplishments of the program.

*Power Measurements 1957-1967*

The first serious attempt to measure the radiated power of a radar for intelligence purposes was made by CIA in 1958 on the Soviet early-warning radar known as Bar Lock. The Bar Lock was a new version of the Soviet multi-beam S-band<sup>1</sup> family of radars which had undergone a rapid and widespread deployment in East Germany and other areas peripheral to the USSR. Intelligence indicated this new radar was deployed to detect and track the U-2 aircraft which were just beginning to make deep penetrations over the Soviet Union.



The Bar Lock Radar

Estimates of the Bar Lock's radiated power output, based largely upon photographic evidence, ranged as high as 5 megawatts peak pulse power from each of its 5 transmitters. With 5 megawatts in each beam the Bar Lock would have had ten times the power of previous similar radars and would have significantly improved the

<sup>1</sup> 2 to 4 GHz, or 2,000 to 4,000 megacycles per second.

detection and tracking capabilities of the Soviet air defense system. To meet this threat to the U-2, those responsible for the reconnaissance program demanded firmer information on the Bar Lock's power output and radiation pattern coverage.

A laboratory that provided scientific back-up to the U-2 program assembled power-measurement equipment, crude by present-day standards, and installed it in a C-119 aircraft. With little advance testing, a series of flights was made through the air corridors to Berlin, where Bar Lock signals were easily intercepted. The resulting power measurements at various vertical angles in the antenna pattern were not of high accuracy because of uncontrolled errors in the equipment. The data did indicate, however, somewhat less than one megawatt of peak power for each Bar Lock transmitter, and this was later confirmed by other sources. Although not entirely successful in power measurement, this project suggested solutions to many technical problems and opened the way for follow-on developments.

In 1963 a contract was let with a major electronics laboratory for research on the technical problems of precision power-pattern measurement and for the development of measuring equipment. Before the end of the year a prototype system was flown against the acquisition radar for a U.S. Nike Ajax and produced good results. At the same time the procedures to be used in overseas deployment were being simulated and studied, and a special laboratory was set up to process and analyze the unique data to be collected. The first two overseas deployments took place in 1963 against the Soviets' Tall King radar in the Far East and Fan Song in Europe, and both were successful. The appended Table lists the projects that followed, producing precision data on the majority of the radar types used in the Soviet, Chinese, and North Vietnamese air defense systems.

#### *Antenna Pattern Measurements*

The total radio frequency power fed to a radar antenna is essentially determined by the type of output tube used in the transmitter, the characteristics of the pulse train, and the losses by attenuation in the system. The function of the antenna is to concentrate this power in the desired direction, and its ability to do so is called *gain*. The relative distribution of the energy in all directions is called the antenna radiation pattern, generally consisting of a main beam plus side and back lobes. This antenna pattern and the level of power



radiated are critical parameters in establishing the performance of the radar. These parameters are priority requirements for intelligence and ECM purposes.

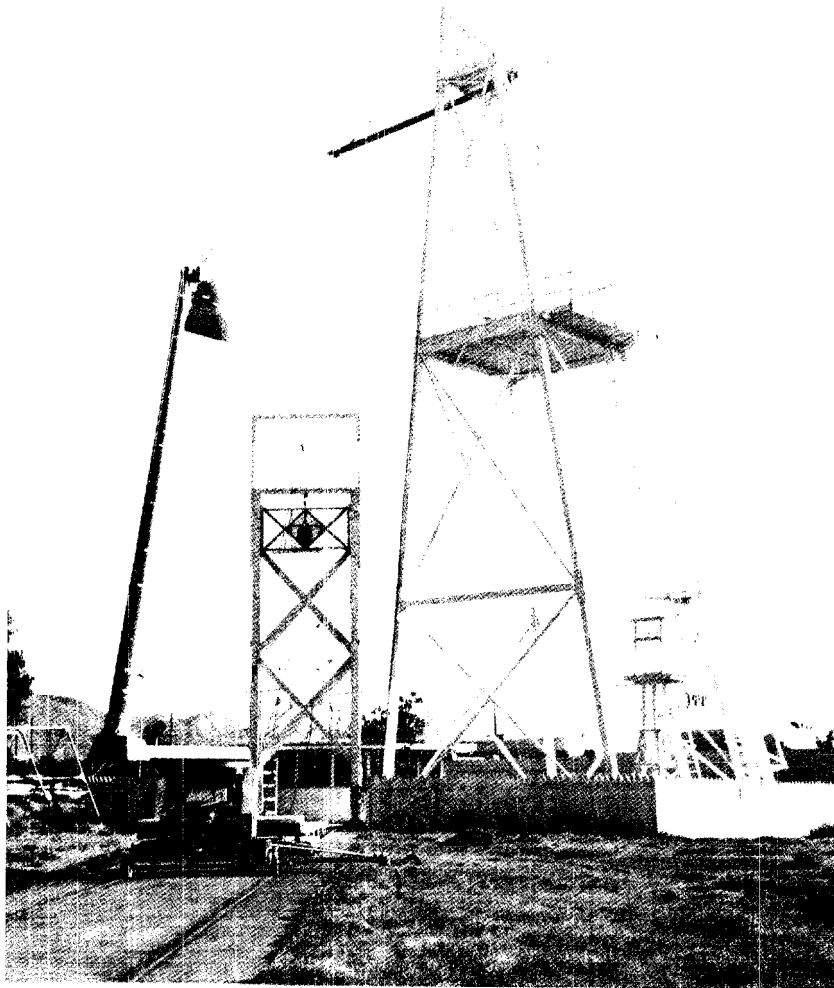
The accurate and comprehensive measurement of a radar antenna pattern is a tedious process even for the designer. Test ranges with elaborate instrumentation are necessary to insure that the finished antenna has a beam of the desired shape and that the side and back lobes are properly suppressed. Moreover, the patterns seen on the test ranges are not always maintained in operational use, because environmental and ground effects at the site can make significant changes in the pattern.

The objectives of Elint power-pattern measurements are to obtain precise data on the maximum beam power, the total radiated power, the antenna gain, and variation in gain (side and back lobe distribution) around the antenna. This requires the use of an airborne measuring platform to avoid ground effects and to make measurements at various angles of elevation. In theory, the Elint approach is the same as that used on the antenna test range; the power density is measured and then converted to radiated power on the basis of the known geometric relationship between the radar antenna and the measurement system. In practice, the Elint operation has all of the problems encountered on the test range plus additional ones intrinsic to intelligence collection; the target radars are non-cooperative and may not radiate at the time and in the direction desired; all of the instrumentation to measure power density and locate the aircraft's position must be carried in the aircraft. These handicaps increase the number of potential sources of error which must be eliminated, minimized, or calibrated.

The primary sources of error for power density measurements lie in uncertainties in the gain of the receiving antenna, losses in the transmission line, characteristics of the receiver, and the sources used for calibration. Errors in the geometric data may be associated with the position, altitude, and attitude of the aircraft, the location of the target, atmospheric conditions, or ground effects.

#### *Special Equipment*

The design of the measuring equipment is centered upon the need for very accurate measurement of individual pulse amplitude and the use of calibration signals from laboratory standard power meters.



test range for antenna design. The verticle boom on the left holds the  
mock-up nose section of a C-97 aircraft.

During collection operations provision is made for the accurate calibration of the receiving antennas, the transmission lines, and the receiving and recording systems with respect to attenuation losses or other errors which may degrade the data. A description of the laboratory-type receiving equipment, calibration sources, and data encoders would be comprehensible only to electronic specialists. A brief discussion of antenna problems, however, should give some idea of the development work behind power-pattern measurement systems.

The pattern of the receiving antenna is critical because the angle at which the energy arrives is constantly changed by the movement of the aircraft, including its roll, pitch, and yaw. In order that the precise gain of the receiving antenna may be known and used in the calculations for absolute power, it is highly desirable to have smooth

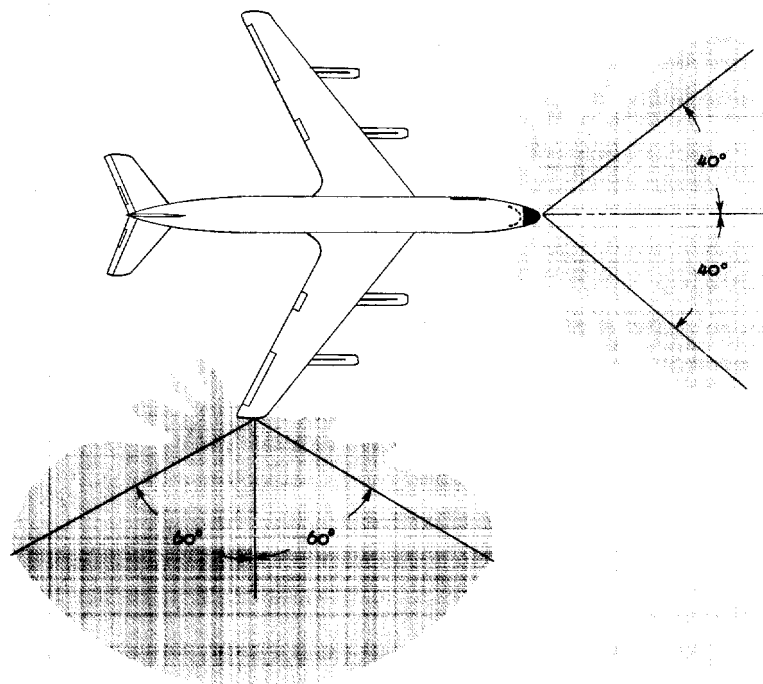


Figure 1. Typical omnidirectional patterns possible from aircraft-mounted antennas (above 1,000 MHz.)

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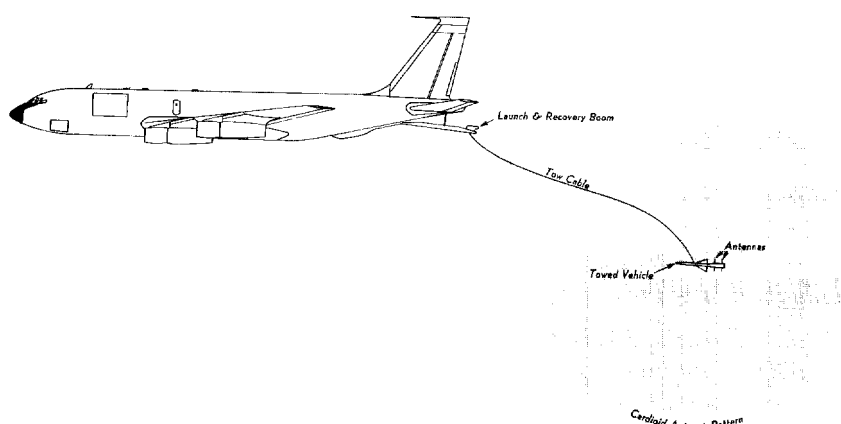


Figure 2. The towed, antenna-carrying vehicle used for power-pattern measurements below 1,000 MHz. The RC-135 aircraft has a special A-frame boom structure for launching and recovering the vehicle in flight. The specially developed towing cable serves as the RF transmission line between the antenna and the receiving system in the aircraft. It also carries the electric cable to control the vehicle from the aircraft.

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omni-directional receiving patterns, with equal gain over a wide sector. Airborne omni-antenna patterns are difficult to achieve because of interference from the aircraft structure, whose complex shape breaks the pattern into sharp peaks and deep nulls. A special test range was established for this program to find interference-free locations on aircraft surfaces which would yield patterns with smooth contours. Mockups of complete aircraft nose sections and wingtips were tested and in some cases new antenna elements were developed.

When the desired patterns were obtained the antenna elements were carefully transferred from the mockups to the real aircraft. Even with these meticulous efforts good patterns could be developed only for the higher frequencies and only off the nose and wingtips of certain aircraft, as shown in Figure 1. This limitation has often been a handicap in collection operations.

In the radio frequencies below 1,000 MHz, where some important Soviet radars operate, it proved impossible to produce good patterns

from antennas mounted on the aircraft. To solve the problem at these frequencies a new phase of research was begun—the development of aerodynamic antenna-carrying vehicles to be towed behind the aircraft. Antennas mounted in these vehicles could be designed to produce a smooth cardioid pattern with the one sharp null pointed toward the towing aircraft. This null eliminates interference from the aircraft, leaving patterns that are ideal for power measurements. Although the towing of the antenna greatly increases the complexity of the system, it has proved to be a good technical solution to the receiving pattern problem at the lower radio frequencies. A typical configuration is shown in Figure 2.

The collected data consist of measurements of pulse amplitude taken from different portions of the radiation pattern as the radar antenna rotates, or scans, and the aircraft moves through the pattern. Measurements are recorded digitally, reduced, and read out on continuous-chart paper rolls which display the varying amplitudes making up the pattern. The chart paper format is of sufficient accuracy to allow antenna specialists to make direct measurements from the display. Successive scan patterns together with geometric and other calibration data, as shown in Figure 3, are processed by computer to make up three-dimensional radiation patterns.

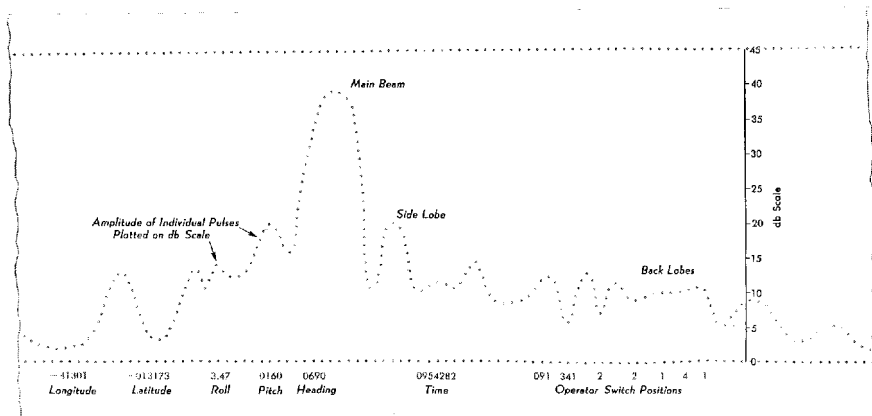


Figure 3. An example of the chart paper roll readout of the antenna pattern data.

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*Collection Operations*

Ideally the flight path for power-pattern measurement is a radial path from the horizon to directly over the radar site. If the radar

antenna is making 360-degree scan rotations the radial flight will yield continuous measurements around it at increasing angles of elevation. This provides data from which the complete three-dimensional radiation pattern can be described. Such flight paths, of course, are not often possible; sometimes the data are limited to elevations of 15 degrees or less. Fortunately, the lower angles of a radar pattern are of greatest importance for intelligence; that is where target detection and tracking begin.

Each of the deployments shown in the Table was the result of months of preparation, which included calibration and installation of the equipment, detailed planning of the mission, operator training, and the coordination of a multitude of technical and operational matters. The radar types were selected on the basis of intelligence priority and the particular target sites on the basis of air access, with preference to isolated areas where other radars would not offer interference. The location of the site was known beforehand; the target signals were identified by direction-finding equipment which was part of the airborne system. During collection runs the aircraft's position and attitude were recorded by special navigational instruments so that the exact geometric relationships between the radar and the measurement system would be known. Several of the projects were completed in fewer than six missions; others required more than 40 to get the desired results.

The power-pattern measurement program has been carried out with the full cooperation of U.S. Air Force organizations, which have furnished the aircraft and crews and have also given the extensive support required for airborne reconnaissance operations. The flight missions have been conducted for the most part within the framework of world-wide peripheral reconnaissance programs carried out by the Strategic Air Command and other USAF elements. Exceptions to established flight restrictions and security rules have been necessary on only a few occasions.

As of this writing the most recent deployment was that listed as Project See Top, in which a C-97 aircraft flew over the Gulf of Tonkin to make measurements of the SA-2 Fan Song radar during U.S. air strikes in the Haiphong-Hanoi area. The antenna patterns recorded were used in the development of guidance systems for new anti-radiation missiles designed to home on and destroy target radars.

Table  
 Power/Pattern Measurement Projects

Project Code Name	Deployment Dates	Aircraft Used	Target Radar	Frequency Band	Location	STR No.
Field Day.....	Jul-Sep '63	C-97	Fan Song.....	S, C	Cuba, E. Germany...	1-65
New Breed I.....	Jul-Aug '63	RB-47H	Tall King.....	VHF	Sakhalin.....	2-65
New Breed II.....	Jul-Aug '63	RB-47H	Spoon Rest A..... Knife Rest B.....	VHF VHF	Sea of Japan.	
Iron Lung.....	Oct '63	RB-47H	Spoon Rest A.....	VHF	Cuba.....	4-65
New Breed III.....	Sep-Oct '63	RB-47H	Tall King..... Spoon Rest A.....	VHF VHF	Arctic above USSR....	2-65
New Breed IV.....	Jan '64	RB-47H	Spoon Rest A..... Knife Rest B.....	VHF VHF	Arctic above USSR....	2-65
Winesap I.....	May-Sep '64	C-97	BG07/BG06..... Fan Song A, B, C, E	S, C	E. Germany.....	—
Iron Lung I.....	Jan-Sep '64	RB-47H	SCR-270..... BKEH, KNB BK08, BKDQ Tall King	VHF	Yellow and East China Sea.	5-65
Iron Lung II.....	Feb-May '65	RB-47H	BK08, BKEH..... SCR-270 Knife Rest B Spoon Rest A & B Tall King	VHF	Yellow and East China Sea.	8-65

Table (Continued)

Project Code Name	Deployment Dates	Aircraft Used	Target Radar	Frequency Band	Location	STR No.
Winesap II.....	Jun-Aug '65	C-97	Flat Face.....	L	E. Germany.....	2-66
Lead Off.....	Aug-Sep '65	RB-47H	Back Net.....	S	Black Sea.....	1-66
High Pitch.....	Jan-Mar '66	RB-47H	Bar Lock..... Big Mesh Token	S	Sea of Japan..... Yellow and East China Sea.	4-66
Low Pitch.....	Sep '66	RB-47H	Bar Lock..... Big Mesh Fan Song	S	Cuba.....	—
Cross Field.....	May-Oct '66	C-97	Fan Song C & E.....	C	E. Germany.....	5-66
Top Hat.....	.....	C-97	Bar Lock..... Big Mesh Fan Song Side Net	S	E. Germany.....	7-66
Briar Patch.....	.....	C-135	Hen House.....	VHF	Barents Sea.....	—
See Top.....	.....	C-97	Fan Song.....	S	Gulf of Tonkin.....	4-67



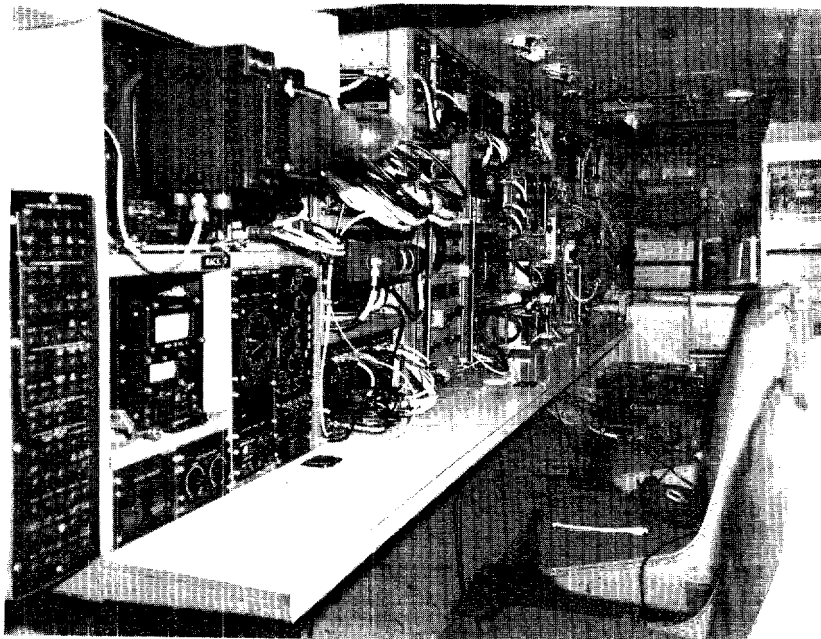
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Quality Elm

A series of reports on the power-pattern measurements have been disseminated throughout the intelligence community, where the accuracy and significance of the data have been widely accepted.

*Present Capabilities*

The Office of Elint power-pattern measurements are unique; there is no other comparable program in the U.S. intelligence community or in the Elint organizations of allied countries. Even the radar design and development laboratories have as yet produced no similar self-contained airborne measurement systems. Because of these unique capabilities, the USAF Air Proving Grounds Command and other groups have several times arranged for the use of the OEL system to compare the patterns of simulated Soviet radars with those of the real ones operating in the USSR.



Airborne instrumentation required for power-pattern measurement

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As each project was carried out, improvements were made in the instrumentation to enhance the system's accuracy and the convenience of its use. Now, instead of re-engineering the equipment for each new project as was required in the early days, the use of adaptable equipment is being emphasized. Receivers and recording equipment are now available, along with the associated antenna configurations and modified aircraft, for quick-reaction deployment against any radar in the normally used frequency bands. Additional instrumentation is being incorporated for the precision measurement of other parameters in the signals, such as radio frequency coherency, intra-pulse modulation, and pulse train characteristics.

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No Foreign Dissem

*Stand-by for faint signals from  
rare maintenance tests on a new  
SAM model.*

## AN ELINT VIGIL, UNMANNED

Edmund L. Soohoo

One of the more difficult electronic intelligence collection problems is that of picking up the signals associated with a missile. It is particularly difficult for the smaller missiles, such as surface-to-air types which transmit signals of relatively low power, if they are besides not often fired. A case in point is the Soviet SA-2 missile Guideline, older versions of which are used extensively against U.S. aircraft in North Viet Nam. The newer models are so far deployed only in the Soviet Union and a few Bloc countries, notably East Germany.

For the development of electronic countermeasures against surface-to-air missile systems the prime intelligence targets are, first, the type of proximity fuze they use to detonate the warhead, and second, the tracking beacon which, emanating from a transponder on the missile responsive to a ground guidance transmitter, serves to determine the missile's position in flight. If the characteristics of the fuze are known the warhead can be detonated at harmless ranges. If the tracking beacon can be jammed, the ground radar's computer can be confused as to the missile's location and so made to misdirect it. The Elint problem, then, is to determine the frequencies and modulation characteristics of these signals in the normal peacetime environment when live missile firings are rare and usually inaccessible. This problem exists for the latest version of the Soviet SA-2 system.

### *The Problem Signals*

This latest SA-2 system consists of the Fan Song E track-while-scan radar and the Guideline III missile. At the operational launch site there are a number of mobile vans housing the radar, the associated computer, and the missile guidance transmitter. There are 6 missile launchers. The radar is in the C-band microwave range, approx-

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imately 5000 MHz<sup>1</sup>, and the guidance transmitter in the UHF L-band (700-800 MHz). A mobile test van checks each missile's proximity fuze, guidance system including beacon transponder, and autopilot about once every six months.

These semiannual tests of the missiles' electronics are made with special equipment connected up by cable to exercise the various functions. But a certain amount of energy nevertheless leaks from the missile antennas during the tests. Although its level is extremely low—on the order of thousandths of a watt—such small amounts of power can be detected at long ranges by the use of sufficiently sensitive receiving equipment. The probability of intercept in any particular case depends upon the estimated power leakage, how close the collection site is, and the sensitivity of the receiving system.

A further problem is that of keeping on the lookout for the signal and recognizing it when it comes. If the test schedule is not known, a 24-hour surveillance is required over an extended period of time. The signal may last only a few seconds for each missile tested. For recognition purposes a "model" of the expected signal must be constructed, comprising the limits of possible fuze and beacon signals estimated on the basis of known systems and the current state of the art. Fortunately the characteristics of a proximity fuze signal are normally quite distinct from those of other radar-like signals. As for the beacon signal, it will have the same pulse repetition frequency as the ground radar, though at a different radio frequency, so that it too should be recognizable.

#### *Designing an Automatic Monitor*

The first task is to set up specifications for the target signals. The possible types of proximity fuze signals are basically three: continuous wave, pulse, and FM. These could be narrowed on the basis of U.S. practice and some intelligence on older Soviet proximity fuzes, but it is dangerous to estimate Soviet electronic development from U.S. analogies, since Soviet design practice and philosophy often departs from ours even where ours is well understood and available to

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<sup>1</sup> By international agreement:

- 1 Kilohertz = 1 kilocycle per second
- 1 Megahertz = 1000 KHz
- 1 Gigahertz (GHz) = 1000 MHz

Soviet designers. Therefore all possibilities, in the absence of positive intelligence, must be considered equally likely. The postulated ranges of frequency, modulation characteristics, and propagated power of the proximity fuze signals are outlined in Figure 1. The beacon signal is simply assumed to be a one-for-one pulse reply to the L-band guidance transmitter, which is in synchronism with the Fan Song E radar pulses.

Figure 1. SA-2 Guideline Proximity Fuze Model

Parameter	Expected Value	Uncertainty
a. Carrier Radio Frequency	3.6 to 3.8 GHz or 9 GHz	3.2 to 4 GHz and 7.5 to 10.5 GHz
b. RF Carrier Modulation		
(1) Pulse Modulation		
(a) Pulse Width	0.4 $\mu$ sec	0.3 to 0.6 $\mu$ sec
(b) Pulse RF	200 KHz	100 to 250 KHz
(c) Duty Factor	0.08	0.03 to 0.12
(d) Pulse RF Jitter	negligible	10% noise jitter
(2) FM-CW or CW		
(a) Voltage-Controlled Modulation Frequency	1 MHz	0.5 to 2.0 MHz
Frequency Deviation (peak to peak)	10 MHz	5 to 15 MHz
(b) External Ferrite Modulation Frequency	50 KHz	20 to 150 KHz
Frequency Deviation (peak to peak)	1 MHz	250 KHz to 2 MHz
(3) Modulation	sinusoidal	sinusoidal to noise
c. RF Power		
(1) Pulse Carrier	5 w peak	3 to 10 w peak
(2) CW Carrier	5 w average	3 to 10 w average
d. Antenna Gain	12 db	10 to 15 db
(1) Antenna Pattern	hollow cone	4° to 12° 3-db BW
(2) Antenna Front Sidelobes	-10 db	-6 to -20 db
(3) Antenna Back Lobes	-7 db	-5 to -10 db
(4) Main Beam Polarization	linear	linear to circular
(5) Number of Channels	2	2

Using these models for the target signals and further assuming some parameters for the collection system and its distance from the point of propagation, a calculation of the sensitivity required of the receiver system may be made. The following is a sample such calculation for the fuze signal at a single frequency to illustrate the

method of determining whether the proposed system has sufficient sensitivity.

Assumptions:

Fuze power	34 dbm (2.5 watts) <sup>a</sup>
Fuze frequency	9000 MHz (9 GHz)
Fuze antenna gain in direction of Elint site	-7 db
Path loss for 12-mile distance to Elint site	136 db
Polarization coupling loss	3 db
Received signal power at Elint site (34 minus the three loss factors)	-112 dbm
4-foot parabolic Elint antenna gain @9000 MHz	38 db
Receiver thermal noise	-108 dbm
System noise figure (Ratio with ideal)	10 db
Signal-to-noise ratio required for receiver stop and recognition in a 4-MHz bandwidth	10 db
Over-all system sensitivity to stop and qualify a signal (Thermal noise increased by the two noise ratio figures and reduced by the antenna gain: -108 +10 +10 -38)	-126 dbm

Thus the signal-to-noise ratio at this frequency would be  $126 - 112 = 14$  db, a usable figure for collection purposes.

*Construction of the System*

A block diagram of the monitoring system as completed is shown in Figure 2. All the signals are picked up by a single 4-foot parabolic reflector. The UHF guidance signal is taken off through its own feed (co-located with the microwave feed) and processed as indicated at the top of the diagram. The microwave signals in the range 2-11 GHz are fed to a triplexer which separates them into S (2-4 GHz), C (4-7 GHz), and X (7-11 GHz) bands. Traveling wave tube amplifiers amplify the separate bands and feed S-, C-, and X-band scanning receivers. The S-band receiver scans it continuously, covering it every two seconds, but for the sake of simplicity and economy scanner time is shared by the C- and X-band tuners under the direction of a control unit that allows two seconds of scanning in each band alternately.

The output from each of the microwave scanning receivers and the UHF receiver are fed to the analyzer, a digital computer which

<sup>a</sup>The decibel is a unit of comparison, a ratio of logarithms. It is related to absolute power by specifying db (here 34) above (or with a minus sign, below) 1 milliwatt (m).

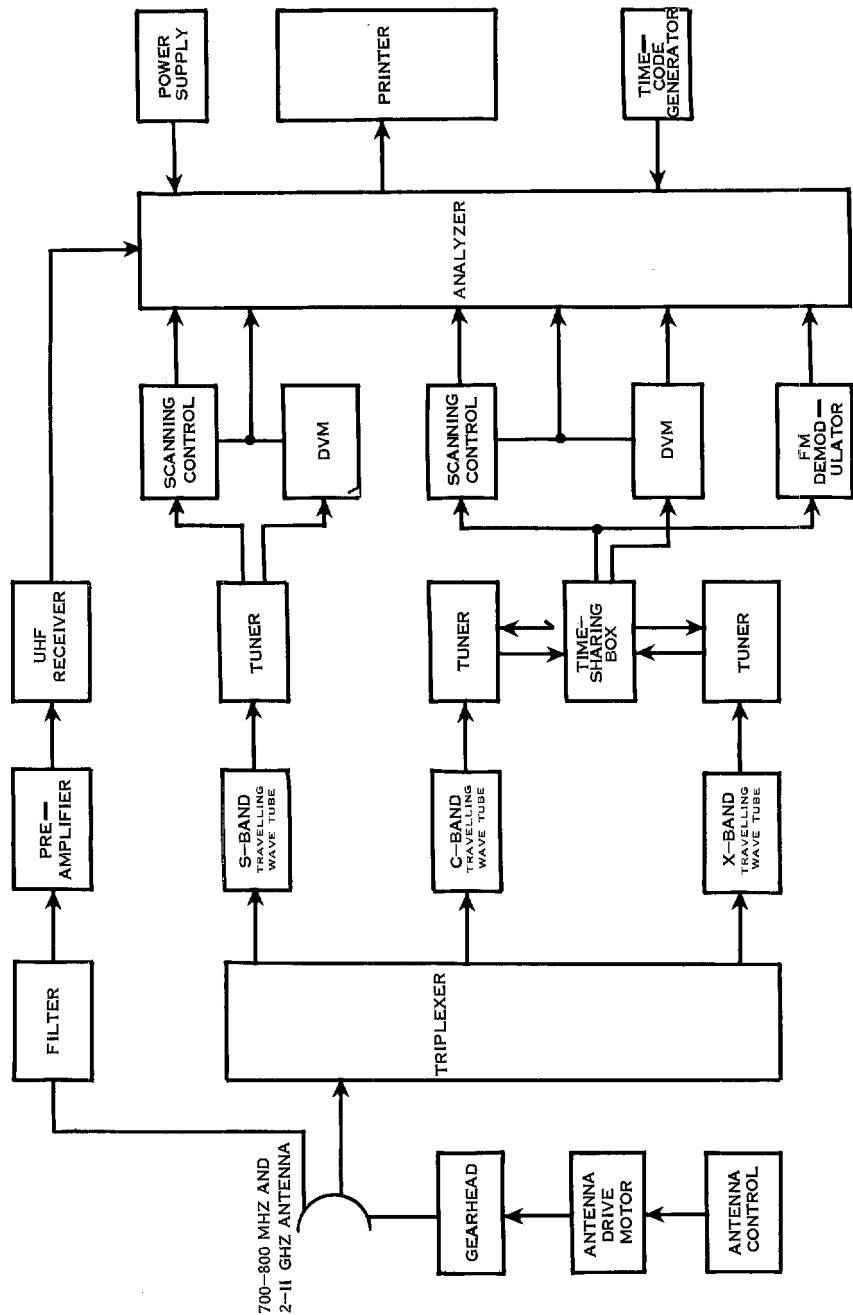


FIGURE 2. SIMPLIFIED BLOCK DIAGRAM OF COLLECTING SYSTEM

measures and qualifies the signals and prints out data on their characteristics on a 12-column paper tape. The chief elements of data here are frequency band, amplitude, whether pulse, CW, or FM, and synchronization of radar and tracking beacon pulses. At the same time the digital voltmeters shown as DVM give a digital indication of frequency by reading the sweep voltage analog of the scanning receivers and feed it to the analyzer for print-out as a direct frequency reading on each intercept.

The FM demodulator shown processes the intermediate frequency signals from the C- and X-band tuners, producing two DC voltage outputs proportional to the FM deviation and modulating frequencies. These too are qualified and formatted by the analyzer and printed out by the digital printer.

The time code generator is a digital device which gives the time in hours, minutes, and seconds for recording with each qualified intercept.

The antenna gearbox, drive motor, and control unit are used to peak the received signal. They operate on the radar signal, since this is transmitted for somewhat longer periods than the fuze or beacon signal, giving time to orient the antenna precisely on target.

#### *Properties and Prospects of Automation*

The advantages of such an automated system are many. It can operate 24 hours a day without constant attendance by an operator. It can intercept signals that occur for only a few seconds at intervals of months which would probably be missed by an operator manually searching the spectrum. The digital computer analyzes the data concurrently, permitting decisions to be made without waiting for time-consuming manual analysis. The cost of storing the output on paper tape is much less than it would be on the magnetic tape used for raw data, particularly when surveillance extends over a long period of time.

There are also disadvantages, however, in such a system. Automatic systems are expensive. They are sufficiently complex at present to require skilled maintenance and frequent testing to assure proper performance. They are subject to false alarms: noise occasionally passes the signal qualification tests and causes a print-out of data, or some genuine radar signal may fit within the boundaries of the



signal model, necessarily rather broad in searching for unknown targets. Only further analysis can eliminate this type of error.

The foregoing is only one of the possible applications for automatic Elint. Another would be statistical summary of the activity of one or more target radars to establish a pattern of operation or the doctrine which underlies it. By improving the precision with which the signal parameters are measured it may be possible to "fingerprint" each individual radar, something of great value to order-of-battle collectors in separating simultaneous signals of the same type.

By using the general-purpose digital computer with large amounts of storage, a program can be devised to recognize, sort, classify, and periodically report on all signal activity available to a collection system. There is already some activity in this area, but the sophistication possible with advanced programming techniques has only barely been explored. The potential here is the capability of doing almost everything a human operator would do. Striking advances in this direction are still around the corner. The classical Elint processes of collection and analysis will be greatly compressed in time, and the scope of things that are possible will be widened enormously.

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No Foreign Dissem

*A method to measure the worth of  
different items of intelligence about  
strategic forces.*

## A VALUE FOR INFORMATION

Max S. Oldham

Which is more valuable: our knowing the exact number of Soviet ICBMs, or our knowing the exact number of Soviet ABM interceptors? Is it worth more to us to learn the precise location of Soviet ICBMs or to learn the exact range of Soviet defensive fighter planes? Answers to questions like these are important determinants in decisions about procurement and use of intelligence collection systems. One method to help reach the answers to such questions in the field of strategic capability is described in this paper.

### *The War Game in Planning*

The strategic capability of a country depends in the main on its weapon systems, the potential target systems and forces opposing it, and the quality of its information about these targets and forces. Ideally, the weapon systems are selected on the basis of estimates as to which alternative systems contribute more to a favorable outcome in strategic war. One technique to compare the contributions of alternatives is the strategic war game. Many scenarios involving different strategies on both sides are tried in order to cover as wide as possible a range of variation. Different strategies might include attacking the enemy's forces or alternatively attacking targets of intrinsic value to him, acting to limit damage to oneself or to assure a desired level of destruction to one's opponent. One simplified example of a strategic war game scenario is illustrated by Figure 5 in the Annex at the end of this article.

Similar techniques are used to help the force operator allocate specific weapons to specific targets and to help R&D managers improve the allocation of their effort in the strategic field. These processes rest on the assumption that the value of a system is measured by its performance in simulated war. This same assumption is fundamental in using a strategic war game for determining the

relative value of various kinds of information about an enemy's targets or forces.

The outcome of a war game scenario can be expressed in terms of damage to the value targets of the two adversaries—in fatalities, total floor space destroyed, manufacturing facilities destroyed, or some combination of these. It has been found that all of these units of measure tend to have the same properties: as the Soviet force is increased, for example, the U.S. damage goes up, regardless which measure is used. The damage to both forces and value targets is estimated from the results of weapons effects tests as well as the experience of World War II. Because of the large numbers and types of forces and targets involved, a computer is generally used in measuring the outcome of the war game.

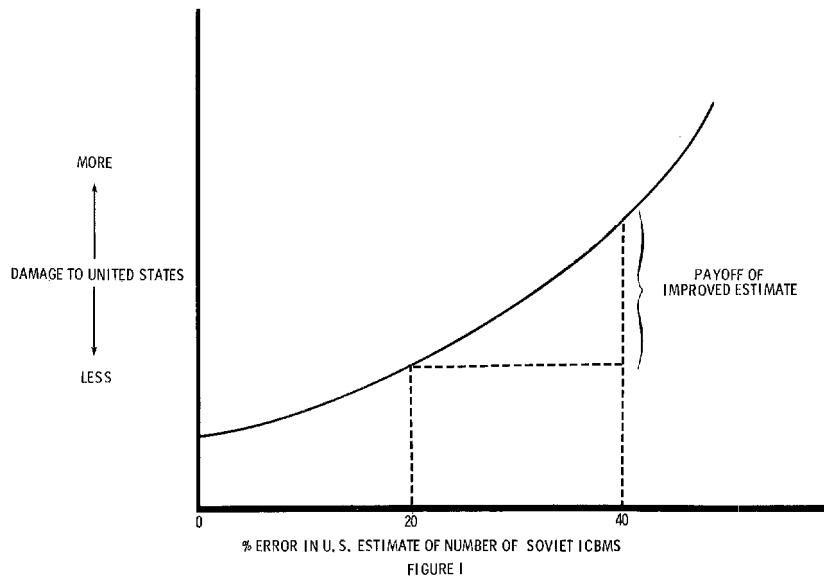
For planning the composition of U.S. forces the predicted outcomes of the many scenarios for various alternative forces, together with the costs of the alternative forces, are displayed as an aid to men who must make decisions about future forces.

One assumption characteristic of most strategic war games is that each side has complete knowledge of the forces and targets of his adversary. This assumption, though not reflecting real life, can be defended on the basis that changes in force procurement probably do not change the state of knowledge about the enemy, and further that one is looking only at changes in outcome which occur in a fixed intelligence environment.

#### *Relative Value of Information*

In order to obtain changes in outcome due to changed information when the forces are held constant, a modification of the usual scenario is necessary. Instead of various alternative U.S. forces, alternative U.S. information states are compared. (See illustration in Figure 6 of the Annex.) This is accomplished by forcing the U.S. planner to allocate his force against an estimate of the Soviet force (for example, the number of Soviet ICBMs) which is in error by a chosen, adjustable percentage. Then the impact of this particular error in information is measured by comparing the outcome with that when fully correct information is available.

The results of applying this process can be expressed in graphic form as in Figure 1.



As the accuracy of our estimate of the number of Soviet ICBMs increases from 40 percent error to 20 percent error along the horizontal axis, the payoff for the improvement, measured in reduction of U.S. damage, can be read on the vertical axis. Repeating this process, one can determine the payoff, measured in the same units, of improvements in the accuracy of our estimate of, say, the number of Soviet ABM interceptors. A comparison of these two payoffs, one for improving our knowledge of the number of Soviet ICBMs and the other for improving our knowledge of the number of Soviet ABM interceptors, then furnishes guidance for the best allocation of information collection resources to these two problems. One can extend this process to consider the relative payoff of many other kinds of information—ICBM accuracy, ICBM reliability, weapon yield, and so on.

These comparisons must, of course, be made over a range of possible war sequences. Also, just as the relative value of forces changes over the years, one could expect the relative value of different types of intelligence to change with time. Judgments based on the relative value of various types of intelligence must thus take into account the long term, recognizing R&D and procurement times for forces as well as for intelligence collection systems. Another factor of importance in

the allocation of intelligence collection resources is the relative cost of achieving specific improvements in the accuracy of estimates. Determining these costs is, in most cases, a complex and difficult problem.

### Sample Results

One of the particular aspects of intelligence which have been studied in detail is the degree of exactitude with which the location of Soviet ICBM launch sites needs to be known. Under approximate force levels for 1970, the value to the United States of increasing accuracy with respect to the location of these sites is shown in Figure 2.

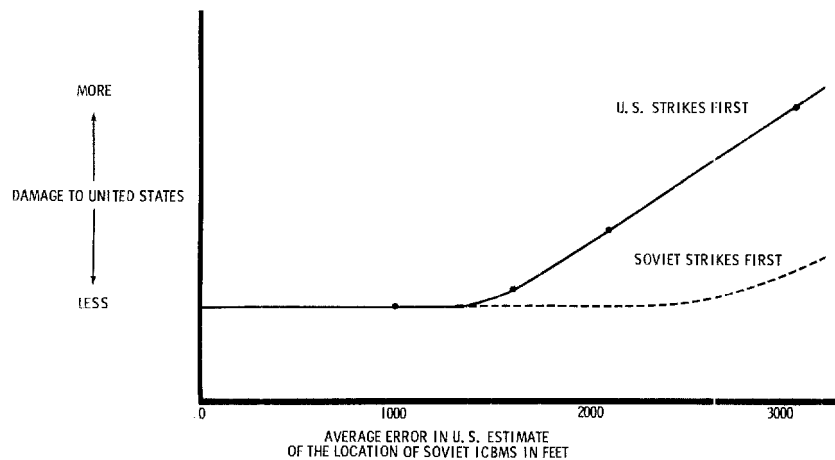


FIGURE 2

Though this is generically like the curve of Figure 1, it has the interesting property of returning no value to the United States for eliminating an average error about the location of Soviet ICBM launch sites of less than some 1,500 feet, regardless of which side strikes first. Thus one might conclude that intelligence collection, however inexpensive, should not be used to improve accuracy in this matter to better than within 1,500 feet. But there are possible changes in the composition of forces which could change this conclusion, as shown below. The importance of accuracy about location is related to the hardness of the target and the yield and accuracy of the attacking weapons. The curve of Figure 2 was therefore recomputed with average U.S. weapon yields reduced by a factor of 10, average U.S. weapon CEPs reduced by a factor of 5, and Soviet site hardness in-

creased by a factor of 5, conditions which are believed to represent reasonable extremes. Now the curve of Figure 2 is changed to that in Figure 3.

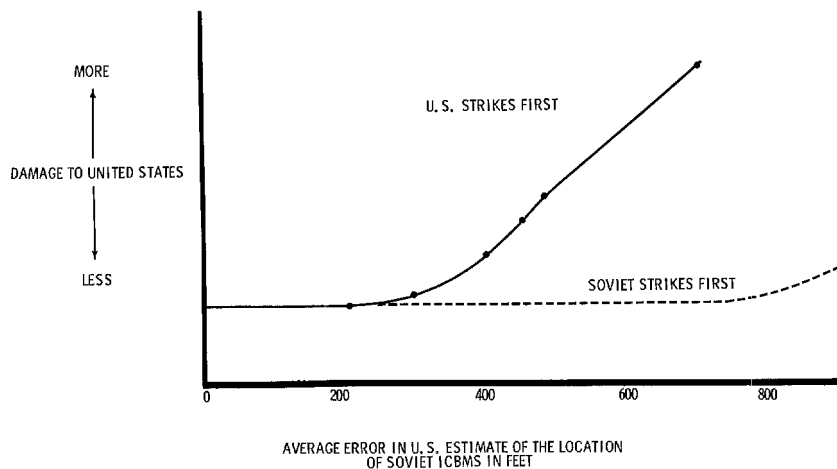


FIGURE 3

Under these extreme conditions values are changed so that collection efforts to improve U.S. knowledge of the location of Soviet ICBM launch sites might be justified down to an average error of about 300 feet, but beyond that there is no further payoff.

*Value in Dollars*

The damage yardstick for measuring relative value, while satisfactory for some purposes, does not give a basis for comparing the value of improved information with the cost of obtaining it. Since collection cost is generally measured in dollars, it is desirable to put a dollar measure on the value of improved information. This would permit a direct profit-or-loss comparison between costs and results and throw light on decisions about specific collection programs.

One method currently being programmed from which the dollar value of improved information can be derived is illustrated in Figure 4.

A basic curve like that of Figure 1 is generated and the improvement in outcome (measured in reduction of damage) is derived for an information improvement of, say, from 40 percent error to 20 percent. Now this same improvement in outcome can be achieved

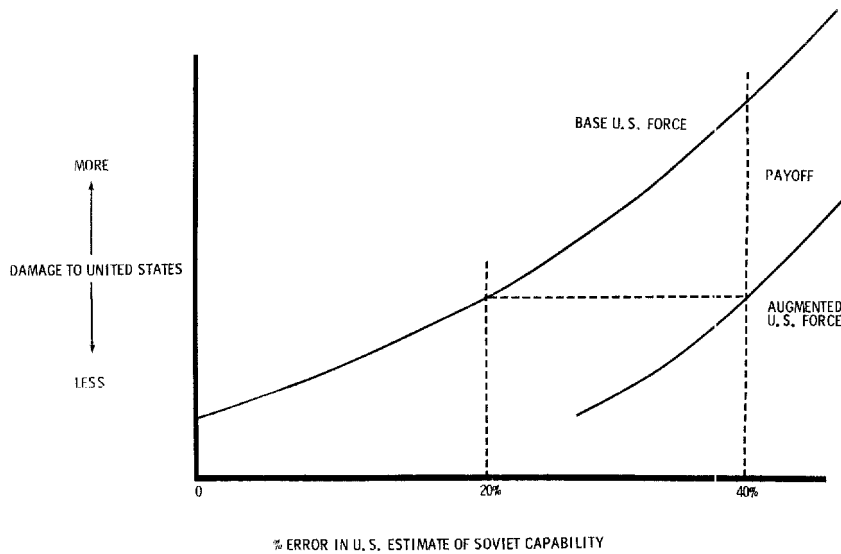


FIGURE 4

*without* improving information by giving the United States more forces. Assuming that this improvement in outcome is desired, the value in dollars of decreasing the information error from 40 percent to 20 percent is equal to the dollar cost of the optimized additional force required to achieve the identical effect. This dollar value for more accurate information may now be compared with the cost of collecting that more accurate information, assuming such collection feasible.

So far only a few results have been obtained, but a flexible computer program to place dollar values on improvements in information should be available in the near future.

#### *Problems*

Strategic war is complex and has a large number of variations. No war game can cover the myriad detail and variations of real life. Therefore the results must be carefully evaluated for reasonableness, the sensitivity of outcomes to variable inputs must be explored, and an adequate understanding of the applicability and limitations of war games must be developed. A strategic war game is a tool that could be misused. Even with a sound war game concept, the major role of computers requires the backing of extensive human evaluation and

judgment during the entire process. Used with proper care and attention to detail, war games, like computers, can be a tremendous help.

If this concept, model, and methodology with respect to strategic forces prove useful, there still remains a question—and challenge—with respect to similar treatment of opposing forces on a broader front. Can we develop a process of engagement analysis which might help set relative values on various types of information about ground forces? Are any non-military areas amenable to the application of engagement analysis techniques? As yet these questions have not been explored.

### ANNEX: A Sample Scenario

A sample strategic war scenario<sup>1</sup> is shown simplified in Figure 5.

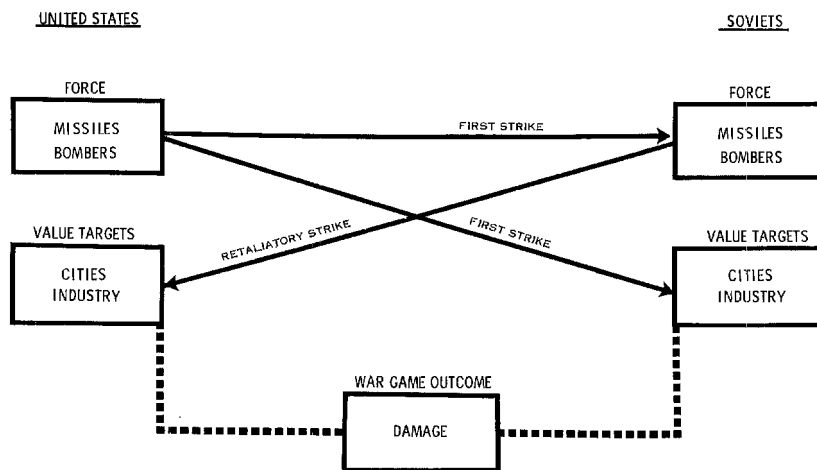


FIGURE 5

<sup>1</sup> Many have contributed to the buildup of strategic war gaming techniques—RAND, Stanford Research Institute, and the armed services, to name just a few. Of particular importance and deserving special mention are Mr. Joseph Bosevich of Martin Company and Mr. Hugh Everett of the Lambda Corporation, both of whom have made important contributions without which this paper could not have been written.



In this illustrative scenario the United States makes a first strike, allocating its weapons against Soviet forces and targets judged to be of intrinsic value to the Soviets. The Soviets then retaliate, applying the undestroyed portion of their weapons to U.S. value targets. U.S. objectives in this scenario include achievement of a preselected damage to Soviet value targets together with a maximum attack on Soviet forces in order to hold to a minimum the damage subsequently suffered by the U.S. value targets. The damage level to the Soviet value targets which is chosen by the United States thus tends to determine the relative allocation of U.S. weapons to Soviet forces and to Soviet value targets. The matching of specific weapons to individual targets to maximize the effectiveness of the U.S. force depends on weapon and target characteristics as well as the composition and size of the U.S. force.

This scenario can be modified so that the impact of less than perfect information can be measured. This modification is shown schematically in Figure 6.

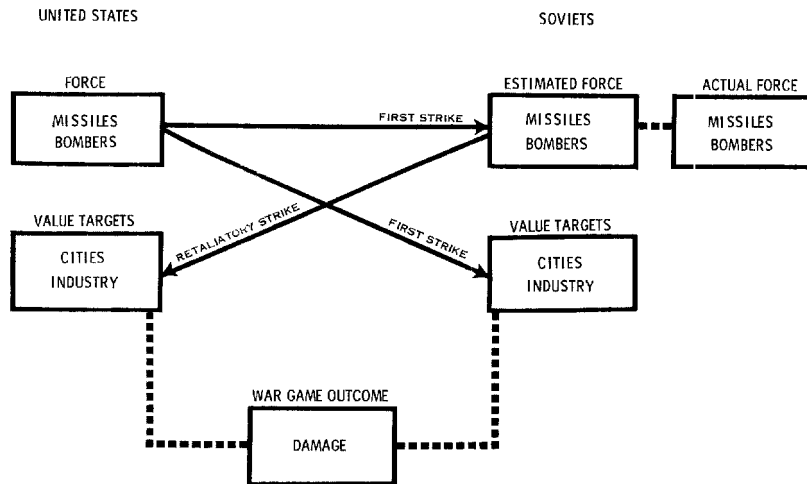


FIGURE 6

In planning and optimizing its attack the United States allocates its forces against value targets and an estimated Soviet force. The difference between the actual Soviet force and the U.S. estimate of it, with the effect of this error on the outcome, can be varied in order to permit the generation of curves like those in Figures 1, 2, 3, and 4.

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*Dollar figures for arms aid: means of derivation; limitations on significance; valid uses.*

## PRICING SOVIET MILITARY EXPORTS

Milton Kovner

Understandably, the USSR has been reluctant to disclose the magnitude of its military exports, either in monetary or in quantitative terms. The U.S. intelligence community has estimated that such exports to non-communist underdeveloped countries totaled about \$3.5 billion during the period 1956-1966. A review of the various approaches to the fixing of this dollar value and its components, the ambiguities that the figures embody, and their residual significance and usefulness may be of interest for the methodological and conceptual problems it illustrates.

### *Market Price for Weapons*

Sometimes the aggregate value of a military aid agreement, that is the dollar or sterling price the Soviets set on the arms and equipment in question, becomes known to U.S. intelligence and can be used directly. More generally the deliveries of equipment, which are in large part subject to intelligence observation, must be tabulated and prices assigned to each kind of item in order to arrive at the total. The assignment of prices is a complex process. In those few instances when Soviet and U.S. equipment items are similar enough in mission and capability to make cost comparisons meaningful, the Soviet prices have been calculated on the estimated cost of production in the United States. For the most part, however, they are derived from a representative sample of Soviet equipment list prices in dollars or sterling that has been garnered from clandestine sources. Thus the U.S. estimates of the monetary value of Soviet military exports, whether obtained in aggregate or piecemeal, are predicated largely on Soviet-originated list price data.

The problem is that estimating the dollar value of military deliveries must be no less difficult for the Soviet pricers than for U.S. analysts. In view of the divorce between internal and external prices in communist countries and with official exchange rates which only im-

perfectly reflect parities in purchasing power, all communist countries have been obliged to value their foreign trade transactions on the basis of prevailing world market prices. (This has been the case for intra-communist trade as well as for exchanges with non-communist countries, so that an East European official once jokingly remarked to British economist Alec Nove that even after the world revolution it would be necessary to preserve one capitalist country: "Otherwise how would we know at what prices to trade?") But given the absence of meaningful "market" prices for military equipment, especially for obsolete weapons or unique and highly sophisticated hardware, the USSR's list prices must be at best only a very crude approximation of the dollar value of its military equipment.

Then the Soviets compound the ambiguities by inconsistencies in the terms of their arms deals. Although virtually all their sales are on long-term, low-interest credit and the list prices do not appear to differ greatly from client to client, virtually all recipients of Soviet arms have received substantial and widely varying discounts. Yemen and Afghanistan, for example, have been given discounts of 95 percent and 75 percent respectively, making virtual grants of Soviet arms aid to them; Algeria, Iraq, Syria, and the UAR have had discounts averaging from 48 to 63 percent; and at the low end of the spectrum Indonesia has received little more than 25 percent discount while India, as far as we can determine, has received none at all.

#### *The Politics of Discounting*

The motives behind this selective discount policy are obscure. It has been suggested that weaponry, particularly when it is either obsolete or redundant to the needs of the Soviet or other Warsaw Pact armed forces, has little or no alternative use, so the USSR can afford to be generous in its pricing. This argument seems less convincing now that considerable discounts have been granted on increasing quantities of late-model and highly sophisticated equipment delivered to underdeveloped clients in recent years—in some instances equipment not yet delivered in quantity to East European countries.

Has the USSR made substantial discounts from its list prices in order to gain entrée into arms aid markets? If so, one would logically expect that this motive would lose its force as military establishments in such countries as the UAR become totally equipped with Soviet weaponry and dependent on Moscow for technical support and spare parts. But discounts have continued even to such captive markets.

Moscow's policy of selective discounting could reflect its assessment of a recipient's ability to pay. If so, it seems to have miscalculated grossly the repayment prospects of most of its military aid recipients, and especially its largest clients, the UAR and Indonesia. Both countries have repeatedly requested and begrudgingly been granted re-scheduling or moratoria of their military aid obligations. This proposition would also raise a question why the USSR does not give any outright grants of military aid, although admittedly the potential leverage afforded by repayable credits would be a consideration.

Finally, the various levels of Soviet discounts may simply be an expression of political favoritism. Yet it would be difficult to rationalize a Kremlin political preference scale which would place India at the bottom for military aid discounts but accord it highest priority for economic aid.

Although no single one of these suggested motives for the discount practices is overly persuasive, it does seem reasonable to think of Soviet calculations as compounded out of all of them, yielding a flexible pricing policy that is responsive to buyer resistance, ability to pay, political favoritism—and considerations of what the traffic will bear.

#### *Foreign Trade "Residuals"*

Another possible way to arrive at the aggregate dollar value of the military exports may be provided by lacunae in official Soviet foreign trade statistics. In each year since 1955 the sum of Soviet exports to individual countries, as given in these statistics, has fallen short of the announced global total of exports. The unexplained "residuals" have averaged about \$175 million a year, ranging as high as \$450 million in 1962. The Soviets, although undoubtedly aware of these incongruities in their foreign trade statistics, have remained conspicuously silent about them. Since 1965, however, they have provided a breakdown of foreign trade by major geographic area which has enabled us to charge almost the entire value of the residuals to trade with noncommunist underdeveloped countries.

Intelligence offices and others<sup>1</sup> have hypothesized that the bulk of these export residuals may in fact represent the dollar value of Soviet

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<sup>1</sup> See, for example, *Estimating Soviet Military Aid Deliveries: A Possible Alternative Method*, CIA/RR A. ERA 65-2, November 1965 (S/NF), and O. Hoeffding, *A Possible Measure of Soviet Military Exports to Noncommunist Countries*, Rand Memorandum RM-4611-PR, February 1966 (S).

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*Soviet Arms Aid*

exports of military equipment, either under credits or, to a far lesser extent, for cash.<sup>2</sup> The a priori arguments that can be adduced in support of this hypothesis seem persuasive, to wit:

In the years preceding 1955, when there were no known deliveries of military equipment to underdeveloped countries, the residuals were negligible. In each year since then they have been substantial and they are associated with the underdeveloped countries, to which the Soviet military exports then began to be directed.

Official Soviet trade data include a comprehensive commodity breakdown of Soviet exports to underdeveloped countries but give no listings for the substantial quantities of military equipment known to have been delivered to them.

Inclusion of the value of cash and credit military exports in the Soviet aggregate figures would be consistent with the Soviet practice of excluding "merchandise delivered under agreements to provide aid free of charge to foreign countries."

It would make good sense statistically to include, even in such oblique fashion, the aggregate value of military credit and cash sales because the payments on them (largely in commodities) would be included in Soviet import statistics.

The reporting of aggregate military exports, undistributed by country of destination, would be in conformity with general practice in the West, which treats the value and composition of military exports to individual countries as confidential but may reveal aggregate value on a global or area basis.

Finally, it is difficult to imagine what other category of exports of this magnitude Moscow would wish to avoid identifying by type or country of destination.

#### *Quantitative Check*

Two tests of the validity of the hypothesis would be (1) how close the total of Soviet military aid deliveries during the period 1956-66 (as estimated by U.S. intelligence) is to the cumulative total of residuals during these years, and (2) how good the correlation is between

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<sup>2</sup> A small portion of the residuals could be accounted for by exports to countries with which there were no bilateral trade agreements and trade was less than 2 million rubles.

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U.S. estimates of Soviet military exports by year and the annual trade residuals.

The U.S. estimate for the entire period 1956-66, we noted, was approximately \$3.5 billion on the basis of Soviet list prices. It has been estimated, largely from information supplied by clandestine sources, that roughly 56 percent of this total was payable in cash or through long-term credits; the remainder was represented by discounts from established list prices, i.e. constituted virtual grants. The cumulative trade residuals for the ten-year period total \$2 billion. If this figure, excluding the discounts as "aid free of charge," represents the cash-credit portion of military exports, i.e. roughly 56 percent of the total, the dollar value of the total delivered would be \$3.6 billion, remarkably close to the independent intelligence estimates.

Between annual export residuals and U.S. estimates of annual military exports the correlation is inconclusive up to 1962—perhaps because substantial quantities of arms were exported from East European countries, all or in part on Soviet account,<sup>3</sup> perhaps because of the lower reliability of U.S. estimates during the early years—but since 1962 the relationship has been quite close:

	Trade Residuals (\$000,000)	Export Values Not Discounted (percent) <sup>4</sup>	Derived Totals (\$000,000)	Independent Estimates (\$000,000)
1962	450	53.4	843	839
1963	203	48.0	423	576
1964	219	69.7	314	276
1965	270	73.9	365	341
1966	368	75.2	489	455
Totals	1,510	62.0	2,434	2,487

There is some error involved in applying discount rates per agreement to actual deliveries during the same year (Soviet military aid agreements are implemented rapidly, but it is unlikely that all goods actually moved during the year in which each agreement was signed), but the direction of change and even the absolute dollar values of the annual military exports as reached by the two methods are nevertheless in convincingly close agreement.

<sup>3</sup> East Europe, primarily Czechoslovakia and Poland, delivered more than \$450 million worth of military equipment to underdeveloped countries during 1955-60.

<sup>4</sup> I.e., ratio of credit/cash portion to total value.

*Uses and Limitations*

The dependence of intelligence analysts on Soviet list price data in deriving dollar values of Soviet military exports—prices which may be just Moscow's crude appraisals of the market values of the equipment and from which its negotiators readily grant substantial discounts—detracts from the reliability of such estimates as a meaningful index of the "real" value of Soviet arms shipments. Systematic efforts to calculate the cost of items of equipment in terms of what it would cost to produce them in the United States, although perhaps conceptually more meaningful, have been bedeviled by a host of data procurement and comparability problems. Such uncertainties notwithstanding, the intelligence estimates based on Soviet list prices (since these prices do not appear to differ markedly from year to year or among client countries) do provide a consistent standard against which to gauge the trend of Soviet military deliveries over time and as distributed among the underdeveloped countries.

The uses to which the intelligence community can put the arms aid data derived from trade residuals are somewhat more limited. They reveal only the amounts payable in cash or credit for the Soviet military equipment; they enable us to distribute the exports neither by country of destination nor by type of equipment; and the Soviet foreign trade statistics from which they are derived become available only six to nine months after the end of the calendar year. They nonetheless, in giving the value of military exports for which repayment is expected, provide useful insights into the balance-of-payments impact of Soviet military aid on both the USSR and its underdeveloped clients as a group. They also provide a check on the accuracy of the independent estimates of the dollar value of the exports.

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*A logical but little used methodology  
for overt observation in the USSR.*

## SOVIET REALITY SANS POTEMKIN

Gertrude Schroeder

Statements about the size and growth of the Soviet economy in relation to that of the United States have long occupied an important place in intelligence estimates of the USSR's capabilities. So also have statements about the comparative levels of living in the two countries and how they are changing over time. CIA's current estimates are that the Soviet gross national product is somewhat less than half of U.S. GNP and that per capita consumption is about one-third.

### *Consumption Analysis*

In presenting these deceptively neat figures the economic analyst goes on to say that they undoubtedly overstate the relative position of the USSR because the calculations cannot allow adequately for the superior quality of U.S. products and the much greater variety and assortment of products available here. These qualitative factors are particularly important in comparing levels of living in the two countries. For the purpose of this comparison the economic analyst first assembles data on consumer expenditures, product by product, for the United States in dollars and for the USSR in rubles. He must then convert the figures to a common currency unit by calculating ruble-dollar ratios for these products on the basis of their prices in the two countries. This latter is an extremely difficult and laborious process, for the analyst must try to match the individual products as closely as possible and include as many as he can.

In the latest set of consumption comparisons<sup>1</sup> CIA concluded that with respect to food, clothing, and personal services the allowance made for the quality factor had been more or less adequate. We had equated apples with apples and bread with bread, and we had compared Soviet prices for items of clothing with the prices of the cheapest counterparts in a Sears Roebuck catalogue. We decided

<sup>1</sup> CIA/RR ER 66-6. *US and USSR: Comparisons of Size and Use of Gross National Product, 1955-64*, March 1966. Secret.



that a haircut was a haircut in either country. With respect to consumer durables like refrigerators, radios, and automobiles, however, we concluded that the best matchings we could make still did not take sufficient account of the superior quality and durability of the U.S. product. To make some allowance for this factor we raised the ruble-dollar price ratios for these products by an arbitrary 20 percent. And we said that even this adjustment was probably not enough and that in addition there was no way at all to allow for the much greater variety and assortment of goods available to consumers in the United States, not to mention such extras as paper bags, plastic wrapping, and attractive, well-lighted stores. Besides doing our best to quantify the comparative lot of consumers in the two countries, our estimates also talk about the shoddy goods in Soviet stores, about queues, about the poor quality of personal services to be found everywhere.

From all this I had formed a mental picture of what everyday life for the average Russian was probably like. But I was eager to see for myself, and when the chance to do so finally arose I was determined to do my utmost to check on these preconceptions and acquire the best possible basis for the judgments that I as an economic intelligence analyst must make all the time.

#### *An Attaché Goes Native*

The opportunity for a first-hand look was a four-month (June-September 1967) assignment as assistant to the economic counselor in the American embassy in Moscow. I was given the diplomatic title of Attaché, and the Soviet Ministry of Foreign Affairs was informed that I was a research analyst in CIA on temporary assignment with the Department of State to help out the hard-pressed economics section of the embassy during the summer. My main task was to read the daily press and the economic journals and write despatches on significant items. Aside from doing a good job for the embassy the principal objective of my TDY was to learn as much as I could about the daily life of the ordinary Russian and obtain some insights into the workings of the Soviet economic system.

I became aware very quickly that extraordinary measures of one kind or another would be needed to accomplish this objective. Going about Moscow in embassy cars, participating in the busy diplomatic social life, and walking the streets in my typically American summer clothes would net me little more than the superficial impressions that

a tourist gets. I tried this way of doing things and found it pleasant but unprofitable: going about as someone quite obviously foreign, I got the usual treatment accorded foreigners. People were friendly and polite; they insisted that I go to the head of any line I might be standing in. It was evident that they wanted to make a good impression; they wanted me to see the good side of Soviet society. As much as possible I would be shown Potemkin villages and the people who lived in them.

Clearly, I had to break out of this impasse. I needed to shed my obvious foreignness and "go native." I needed to participate to the maximum in the daily life of Moscow as ostensibly a Soviet citizen, so as to experience and systematically observe the Soviet scene without eliciting the Potemkin-village behavior. But I also had to take care not to do anything that could create a problem for the embassy. I believe that I succeeded in both respects: that is, I created no problems for the embassy, and to a considerable extent I managed to become just one more Moskovite going about his business.

To go native one needs first of all to look and dress more or less like a Russian, or at least someone from one of the other republics. I managed to take on the drab appearance of the average Soviet woman by wearing a tacky outfit consisting of gray-green skirt, nondescript tan blouse, much-worn brown loafers, and of course head scarf. I shed my stockings; Russian women don't wear them in the summer, and American-type nylons are scarcely to be found anywhere. Since I had brought along only one such outfit, I looked more and more "native" as the weeks passed.

In addition to the appearance of a native, one needs a high degree of fluency in the language. This I had, thanks to several years of visiting the language laboratory and countless hours of practice. In the process I had somehow acquired a Baltic accent, for to my surprise Russians often took me for an Estonian. Finally, going native entails a willingness to do things the hard way, i.e., the Soviet way. Being taken for a foreigner in Moscow is much more pleasant than being taken for an Estonian. Having an embassy car pick one up after the ballet is nothing like fighting one's way onto a Moscow bus!

Attired in my sloppy and deteriorating outfit and equipped with the required language skills plus a willingness to rough it for the sake of learning something, I spent almost all of my free time in Mos-

cow wandering about the city. I rode subways, buses, trolleys, trams, and suburban commuter trains; I acted the would-be purchaser in dozens of bakeries, gastronoms (grocery stores), food stores, meat stores, fish stores, furniture stores, book stores, department stores, clothing stores, and gift stores. Ditto for collective farm markets and yarmarkas (miniature shopping centers), savings banks and stolovayas ("greasy spoons"). I wandered through parks and railroad stations, visited churches and even the crematory. I walked about the street in all parts of the city at various times of day and evening; I went on city sightseeing tours with Russians. In all these activities I systematically observed the people and their behavior, listened to their conversations, and talked with them as one does in casual, everyday contacts.

To the extent possible I did the same thing in other cities I visited—Leningrad, Kiev, Tbilisi, Yerevan, Baku, Vladimir, and Novosibirsk. Except for Novosibirsk, however, I could spend only a day or two in these cities. My conclusions therefore relate for the most part to things I observed in Moscow.

### *Shopping Pleasures*

What are things like for the average urbanite in the USSR? From what I myself experienced I concluded that everyday life is hard and very, very frustrating. One of the worst aspects is the uncertainty about almost everything. Take the matter of getting your groceries bought. In the first place, you nearly always have to stand in a queue. I stood in scores of them just to find out why the queue was there and what it was like to stand in one. I would listen to the gripes: "What puny little tomatoes! And 40 kopecks a kilogram! My God, how is a person to get along?" "Don't give me that one. Can't you see it's rotten?" "No cabbage, huh? There was some yesterday, why not today?"

These were the complaints at a street stall on October Square near my apartment. There were several such stalls near this square which I inspected almost daily. You never knew whether a given stall would be operating, and you could never be sure what would be for sale. Tomatoes and eggs today, maybe. Tomorrow it might be only green apples. Several times there was a barrel of pickled fish. Once there were plaster statuettes! Another time a truckload of melons was dumped on the sidewalk, and a long line quickly formed to buy them.

Across from the embassy one day a 30-person line formed to buy shoddy-looking black briefcases. In Sokolniki Park I stood for a while in a block-long line of would-be purchasers of nylon shopping bags imported from Yugoslavia and selling for 3 rubles 50 kopecks (about \$4) each. People grumbled about the price but bought the bags anyway. At 2 pm on a Tuesday 18 persons were standing in a line at a counter where sausages were sold; apparently some rarely available delicacy had appeared. Once on a Saturday afternoon I saw a half-block line in front of a small dingy bakery near the Kazan railroad station. Why? Having spent the preceding two hours pushing my way through the mobs in three railroad stations that I wanted to inspect, I was too tired to want to find out. Maybe there were sweet rolls for sale that day; although bread was always available, I once visited five bakeries within walking distance of October Square in search of a sweet roll.

I made it a practice to visit the gastronom near the embassy at different times during the day and on different days of the week. One could never be sure of finding even the most staple of foods there. Frequently there was no fresh meat, and if there was it was pretty poor quality by American standards. Rarely were there any vegetables except tomatoes (in season) and cabbage, and sometimes there were none at all. There was usually a sign "No potatoes." On street cars and trolleys women carrying loaded string bags would greet each other, "Ah, potatoes! Where did you get them? How much did you have to pay?" or "Where did you find that melon?"

On Wednesday about 5:30 I walked into a large gastronom on the Arbat. The place was bedlam—packed with a pushing, shoving crowd of women shoppers, each trying mightily to buy a thing or two. I decided to take on the process of trying to buy tea and a can of fish. I pushed my way through the mob in the dimly lit store in the general direction of the counter where tea was sold. The particular queue for tea was hard to locate in the crowd, but I finally stationed myself at its end after having inadvertently gotten into its middle and been rudely pushed aside and chewed out by the woman in back of me. In due course, I got up to the counter.

The clerk was standing with her back to the customers, talking angrily with a fellow clerk. I waited, and people back of me started grousing. Finally, she turned around and glared at me. I asked does she have a small package of tea and how much is it? "What kind?"

I hesitated. "Well, don't you know what you want? Can't you see all these people are waiting? Make up your mind!" I pointed to a stack of boxes of tea, and she said, "All right, 60 kopecks."

But that was only the first queue. Next I had to fight my way through the line for the particular cashier that served the tea department in order to pay 60 kopecks and get a ticket. Then I had to return through the original queue to hand the ticket to the surly clerk and get my tea. Ditto for the purchase of a can of fish. In dire need of a cup of coffee after all this, I made my way to a coffee bar in a far corner, only to find it hopelessly mobbed. It was nearly 7 o'clock as I left the store, physically and nervously exhausted.

In my wanderings in and out of stores of all kinds I was particularly struck by the miniscule amount of variety and assortment in the goods available to Soviet purchasers. Shelves and showcases were usually half empty. Where a woman in the United States or Western Europe can choose from 20 to 30 kinds of shoes in her favorite store, a Soviet woman can choose from perhaps five or six kinds in all the stores selling shoes in Moscow. Although book stores, in contrast, were chuck full of books, opera librettas were not to be found even in music stores, and the Russian classics (Pushkin, Tolstoy, Gogol) were as scarce as hen's teeth. One can do much better for these at Kamkin's in Washington, D. C.

#### *Social Graces*

With difficulties and frustrations such as those to put up with every day, one can understand why the Russians treat one another (but not foreigners) so very rudely. If you adhere to our custom of keeping to the right when walking on the sidewalk, you merely get pushed aside and glared at. Subway crowds at rush hours are frequently violent; they shove you hard through the turnstile, race pell mell down the corridors, and push you onto the train with a brute force that I had never experienced even in the crowded subways of New York and London. If you can't keep up with the mob, say just pause to read a directional sign, they start yelling at you.

Similar experiences are to be had on buses, which always seem to be packed to twice their capacity. Once I had been pushed (literally!) onto a bus and pressed against a pole near the door with such force that I could neither stand up straight nor move. The bus stopped. "Are you getting off?" asked a large middle-aged woman near me.

No, said I. "You're not! Then why are you here? Can't you see you're in everyone's way? You're blocking the door. Move!" I felt myself become one with the pole as she and others pushed past me and out the door.

And then there is the experience of getting dinner in one of the better Moscow restaurants. (Incidentally, there are fewer than a dozen good ones in this city of six and a half million; the rest are *really* greasy spoons or worse. And one or two of the good ones are frequently closed for repair.) There are always queues in front of the restaurants at dinner hours. The doorkeeper locks the door after letting each diner in, and those left outside bang on the door and shout at him. When we were let in ahead of everyone else, having had the embassy reserve a table, I would always be astonished to see many empty tables.

Just as I had heard, it does nearly always take three hours to get through dinner. The waiters are a seeming eternity between successive operations. Signaling to them will get you nowhere. You can see that they are not busy; they merely lean against the wall and talk to one another. Often there seems to be some kind of argument going on. Once in the hotel restaurant in Tbilisi while waiting to be seated I listened in great embarrassment to the manageress reading the riot act to a waitress. "Why are you sulking? Stop acting like a child. You know it's not *kulturniy* to behave this way in public. If you want to be naughty, do it at home!" The indifferent attitude of clerks and waiters is not surprising; they have no real incentive to behave otherwise. Their salaries are little above the legal minimum wage (now 60 rubles a month), and the bonus system is such that they can't add much over 5 rubles a month to this no matter what they do. Tipping is rare.

Even getting a little recreation is full of difficulties for the ordinary Russian. One Sunday morning, dressed in my native attire, I went to the park "Exhibitions of the Achievements of the National Economy." The entrance fee is 30 kopecks. The crowd got larger and more vociferous the nearer I got to the gate. What was the problem? I soon found out: only two cashiers' cages were open that day to accommodate the huge crowd. I pushed my way through, trying to locate the end of the queue. There seemed to be several, and people argued loudly about which was first and who was or was not ahead of whom.

Near the cashier's cage stood a man whose job apparently was to supervise the queues and mete out justice. After a half hour of being pushed about and scolded for allegedly crashing some line, I decided I had had it. I pushed ahead and clutched at the sleeve of this supervisor, amid a barrage of verbal abuse from those around. "What are you doing here?" said he. "The queue is over there! This is no way to act." I assumed a helpless and confused air and said in halting Russian, "I am an American. I don't know where the right line is or how things are done here. I only want to get into the park." Presto, in seconds I had bought my ticket and was in!

In Novosibirsk I talked with a young girl, who said to me, "There is so much here that is disgusting. Our papers are always telling us how great things are. Tell me, did you see anything interesting in our stores here in Novosibirsk, anything you wanted to buy?" No, I said. "Of course not! There's nothing here, nothing! Do you know that there are no women's shoes in this city and there haven't been any for a long time? Once in a while some will come in and then there is such a melee as you can't possibly imagine." And the prices! A pair costs 30 rubles, and the things wear out in a few months. Why? And all of us have to work so hard." I myself saw no women's shoes in the stores I visited, and the bareness of the shelves was indeed startling. Of the two so-called department stores in the downtown section of this city of over a million, one was closed for repair, and the one that was open resembled a small store that had just had a close-out sale.

Daily life has a dull sameness. After a while everything seems to look alike and the people seem bored and preoccupied. In Moscow they walk about with a frown. And in Novosibirsk a young psychiatrist said to me, "What have I to look forward to? Only to getting married, maybe, and living out my days in this place. It's so boring!" "Why don't you try to get to Moscow to do research, perhaps?" I say. "To Moscow! Why, that's quite impossible. You have to have connections, and I don't." "But you could work toward it." "No, it's no use, none at all. You just don't understand. Connections mean everything here."

#### *New Perspective*

In summary, I went to the USSR with a set of notions about what to expect that I had formed over the years from reading and research on the Soviet economy. I also had a collection of judgment factors,

partly intuitive and partly derived from this same research and reading, that I applied in drawing conclusions and speculating about probable future developments in the Soviet economy. My four months of living in the country itself, however, greatly altered these preconceptions and modified the implicit judgment factors in many respects. No amount of reading about the Soviet economy in Washington could substitute for the summer in Moscow as I spent it.

As a result of this experience I think that our measurements of the position of Soviet consumers in relation to those of the United States (and Western Europe) favor the USSR to a much greater extent than I had thought. The ruble-dollar ratios are far too low for most consumer goods. Cabbages are *not* cabbages in both countries. The cotton dress worn by the average Soviet woman is *not* equivalent to the cheapest one in a Sears catalogue; the latter is of better quality and more stylish. The arbitrary 20 percent adjustment that was made in some of the ratios is clearly too little. The difference in variety and assortment of goods available in the two countries is enormous—far greater than I had thought. Queues and spot shortages were far more in evidence than I expected. Shoddy goods were shoddier. And I obtained a totally new impression of the behavior of ordinary Soviet people toward one another.



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*Facets of a program for assessing foreign leaders' physical and psychic states.*

## VIP HEALTH WATCH

Myles Maxfield

and

Edward G. Greger

An inconspicuous article in a London newspaper of 2 July 1964 noted that a Dr. David M. Wallace had suddenly cancelled pending appointments and left for Bucharest, Rumania. No other information was given. Dr. Wallace, it developed, was a world-famous urologist. Why would a famous Western specialist suddenly be summoned to a communist country? Rumania had adequate medical facilities, including competent specialists in urology, and its propaganda boasted of giving its people the best of medical care. The calling of a non-communist foreign physician was then a major aberration which could only be explained by supposing that one of the highest dignitaries of the regime was seriously ill.

### *Last Days of Gheorghiu-Dej*

Files showed that Gheorghiu-Dej, First Secretary of the Party and actual ruler of Rumania, had a urinary tract problem. Although he now appeared to be in robust health, he had undergone one operation in the fall of 1962 and a follow-up in January or February 1963 for a polyp of the bladder. Official reports stated that the operations had been successful. This type of polyp, however, tends to recur and often undergoes malignant degeneration. If so, it becomes invasive and spreads rapidly, offering an extremely poor prognosis. The British specialist's unknown patient might therefore in fact be Gheorghiu-Dej. This possibility, although there was no direct evidence for it, was reported to the State Department and the White House.

Half a year or so later, although official reports still insisted that he was in perfect health for a man of his age, Dej turned over many of his duties to a chosen successor, Ion Gheorghiu Maurer. On 20 March 1965 he died. The final medical bulletin gave the cause of

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death as cancer of the lung and liver, a metastatic extension of a primary urinary tract carcinoma. U.S. officials had had an eight-month warning of the possibility of this change of government.

#### *The VIP Program*

The importance of foreseeing changes in government is only one of the reasons why an effective VIP health watch is of value to intelligence. There are countless historical cases in which the health of a leader has affected the policy of a nation. Alexander the Great, an epileptic, died at the age of 33 before his conquests could be completed or stabilized; the health of Julius Caesar and of Napoleon, among others, is said to have adversely affected their historical roles. In more recent times, the incapacitation of Woodrow Wilson in his last few months severely prejudiced his programs. The deterioration in Franklin Roosevelt's health toward the end of the war has been linked with the Western failure to check Soviet political advances in Eastern Europe.

Thus the mental and physical health of foreign leaders may often have a significant and sometimes a critical impact on U.S. security and foreign policy. For this reason the CIA maintains a program for the collection, analysis, evaluation, and dissemination of VIP medical intelligence. The collection program is one of the most varied, complicated, and challenging in the intelligence community, a real test of the guile and ingenuity of the collection agencies. Materials range from open unclassified information such as that used in the case of Gheorghiu-Dej to highly sensitive reports with very limited distribution. Personal sources will include some who are trying too hard to please and others who are actually hostile. The accuracy of agent reporting tends to vary directly with the professional calibre of the agent.

It will be instructive to review in some detail several contemporary cases in which the physical or mental health of a world leader has played a significant role.

#### *The Last Laugh*

Medical diagnostics has opened a new and exciting chapter in the field of medicine. Along with recent advances in bio-cybernetics, symptom diagnosis and the prediction of future illnesses have been greatly simplified for the modern physician. These advances have

given an invaluable tool to the medical analyst who is called upon to make definitive diagnoses on the basis of reported symptoms which are often nothing more than wishful thinking on the part of political opponents or opportunists. A diagnostician of some experience, by utilizing his knowledge of biostatistics, may be able to make a tentative diagnosis as his patient first walks into his office.

A person with a moderately advanced case of cancer, for example, can often be identified at first sight by his pallor, weight loss, and drawn appearance; physical examination and laboratory tests only provide confirmation. The expression *Facies Gastrica*, literally "gastric appearance," has long been in use to describe people with peptic ulcers; it is easily recognized by the trained physician. Recently publicized statistics have made the entire world aware of the higher incidence of lung cancer in heavy smokers. Race, age, weight, climate, and habits are only a few of the factors the physician can use in his diagnosis, prognosis, and predictions.

Yet predictions can be tricky. A simple case where symptoms and statistics pointed to a terminal illness was that of Marshal Radion Malinovskiy, the late Soviet Defense Minister. The 68-year-old Malinovskiy was the prototype of the old-guard Soviet military officer—working-class family, fought as enlisted man for the Tsar in World War I, volunteer for the new Red Army, distinguished command record in World War II, Marshal of the Soviet Union. He succeeded Zhukov as Defense Minister in 1957.

He had been reported in ill health for several years, but the reports became more numerous in about 1964. He began to miss some important gatherings, so there was speculation that he might be out of favor politically if he was not seriously ill. It was known that he was very much over-weight (300 lbs. at 5'7"), a diabetic, a heavy drinker, suffering from hypertension (high blood pressure) and radiculitis (spinal nerve root inflammation). In addition he was reported to have a "weak heart," and there were rumors that he had a heart attack in September 1966.

Such information as this would almost make the medical analyst feel guilty at taking any pay for predicting the outcome. It did not even require the mechanical competence of a computer to add up a prime cardiovascular problem for the ailing Marshal. His age, obesity, hypertension, history of diabetes, and heavy drinking all pointed directly to this diagnosis. Eighty percent of people at the age of 70

have arteriosclerosis; this of course predisposes to a cerebro-vascular accident (stroke) or myocardial infarction (heart attack).

An analysis to this effect was officially recorded in February 1967, with the notation that Malinovskiy was indeed ill physically rather than politically and would probably succumb to his affliction in the near future. He cooperated and died on 31 March, but—with characteristic Bolshevik intransigence—of cancer.

*False Alarm for Aidit*

Medical misdiagnosis can also play an important part in political developments. A most striking example of this was a mistaken prognosis for President Sukarno of Indonesia just preceding the abortive communist coup in September 1965. Although his bedroom proclivities have almost become legend, Sukarno does have a serious health problem. He has lost the use of his left kidney because of two large stones, and he has a large staghorn stone in his right kidney. He has a moderate hypertension which is aggravated at times of stress. This combination of impaired renal function and hypertension could give rise to sudden complications that might cause his death at any time. On the other hand, he could live five or more years with his condition.

In addition to his kidney condition and possibly related to it, Sukarno reportedly had a urinary bladder polyp, a urinary bladder calculus (removed in a Vienna clinic), and three attacks of coronary insufficiency. He was also reported to have suffered a minor stroke, to have had swollen ankles and feet, and to have numerous other complaints. In short, he would not be considered a good insurance risk. His medical history was of great concern not only to U.S. intelligence but evidently to that of communist China also, as may be seen from what follows.

Sukarno had been receiving medical treatment in Vienna from the internationally known internist Professor Karl Fellingner. It was Fellingner who had diagnosed Sukarno's kidney stones and in collaboration with Professor Uebelhoer, a Viennese urologist, had removed the large calculus from his bladder. Dr. Fellingner strongly recommended that Sukarno return to Vienna to have his left kidney and the large stone in his right kidney removed surgically: failure to do so would result in further kidney damage.

Sukarno, however, had an almost pathological fear of surgery, since a soothsayer had once predicted that he would die by steel. Because

of this fear and at the suggestion of Foreign Minister Subandrio, who was a physician himself, he turned to communist Chinese physicians in Djakarta, who promised help by nonsurgical techniques. Given acupuncture treatments and oriental herb medicines, he was convinced that his condition was improving. This reliance on the Chinese physicians gave the Chinese intelligence service and the PKI (the Indonesian Communist Party) an immediate source of critically important information, for if Sukarno were suddenly removed from the scene they could expect the anti-communist Indonesian army to move immediately to crush the PKI.

Against this eventuality the PKI, with Chinese military aid, were preparing a coup which would eliminate the army threat while maintaining Sukarno as a figurehead. The Chinese physicians in the meantime were to monitor Sukarno's state of health and keep the PKI leader, D. N. Aidit, informed. At this point fate and misdiagnosis played their role. On 28 September 1965 Sukarno, while making a speech, was stricken with such a severe pain originating from his kidney that he was forced to leave the speaker's platform. (It is quite possible that he had passed a small stone from his kidney to his bladder, a process usually accompanied by excruciating pain.) The Chinese doctor who attended him thought this the end; he declared that Sukarno would not live more than a week.

This was the signal for the PKI to move. At that point, however, the coup was only in the early stages of preparation; weapons that had been smuggled in for PKI paramilitary units had not been distributed, were still in their crates. Therefore it failed. Although several of the top generals were murdered by communist execution squads, the army chief, General Abdul Nasution, managed to elude capture. He quickly called up the Siliwangi Division under Generals Suharto and Adjie and prevented a PKI take-over. His aide, General Mokoginta, effectively handled the situation in Sumatra. If the coup had been delayed until the PKI was fully armed and prepared, the outcome could easily have been reversed. Thus a medical misdiagnosis by a communist physician precipitated the miscarriage of a communist bid to take over the largest country in Southeast Asia.

#### *The Resurrection of Segni*

Every newly graduated physician tends to jump to definitive diagnoses and prognoses based on textbook symptoms. Very soon in his career, however, he finds that some patients do not behave accord-

ing to hoyle. Those who by all standards should die within hours sometimes live on for months or even years; on the other hand those with a favorable prognosis may die the next day. For the VIP Health Watch analyst this problem is aggravated. Instead of making a physician's direct examination of the patient's subjective and objective symptoms and complaints, he must usually work through a third- or sometimes fourth-party relationship. Symptoms are sometimes reported through a source who may be depending on rumor or even wishful speculation; many sources play amateur diagnostician.

Such was the case of the 73-year old President Antonio Segni of Italy. The silver-haired Segni had a history of circulatory troubles and was suffering from an unspecified stomach ailment, probably ulcers. On 7 August 1964 he had a stroke which paralyzed all motor faculties on the right side of his body and affected his speech. On 15 August, at 1515 hours Rome time, a person close to Segni reported that he was in a deep coma, that the doctors had given up all hope for his recovery, and that he was being kept alive as long as possible for the sake of his family but would die by nightfall. There were other similar reports.

Every medical intern has seen many such cases in which stroke patients suffer permanent brain damage and are kept alive only through the use of drugs and a mechanical respirator. In the light of the familiar symptoms and the reliability of the sources reporting them, the conclusion seemed obvious that Segni would not be with us much longer. This prediction was dutifully made in official intelligence publications; the Italian President was given only hours to live. But a month later he was sitting up in his hospital bed speaking with little difficulty and drinking coca cola. In the halls of the CIA there is now a more cautious and (one hopes) wiser medical prognosticator who is still jokingly reminded of the "grave" finding he made in 1964.

#### *Good Medicine for Wheelus*

The discovery in 1958 of major oil deposits in the young country of Libya, ruled by King Mohammad Idris, has changed it from one of the poorest countries in the world to one of comparative wealth. Before that, ever since its independence in 1951, it had relied heavily on Great Britain and the United States for economic and military aid. In 1954 the United States, in exchange for her economic assistance, had been granted rights for the construction of the Air Force complex

at Wheelus. This base served as an important link in the world-wide network of the Strategic Air Command.

The oil freed Libya from dependence on U.S. aid and at the same time aroused Egyptian President Nasser's interest in the country. An Egyptian propaganda campaign in 1964 against Western bases and "colonialists" aroused considerable Libyan popular protest, especially in urban areas, where there were violent demonstrations. The U.S. Air Force officers assigned to renegotiate the base rights with King Idris that year were quite concerned. Wheelus still served as a valuable tactical base, a storage facility for critical material and weapons, and a key site for U.S. air rescue operations.

VIP Health Watch analysts were able to furnish the USAF some useful information concerning the 74-year-old King. Although his health was fairly good for a man of his age, he tended to be concerned about it, and he had become almost completely dependent on medical care afforded him and his family at the Wheelus Base Hospital. He had great faith in American physicians, openly proclaiming them the best. In 1959 they had treated him for trachoma, from which he enjoyed a complete recovery. In 1960, after he fell and sustained a painful hematoma on his knee, this was likewise treated at the Wheelus facilities (by Dr. Watson Jones, a British physician). Every year Idris receives a complete physical examination there. In addition he is thankful to USAF physicians for a successful hysterectomy on his wife.

Under these circumstances Air Force negotiators were able to conclude a favorable new lease on the base, and in spite of the recent turmoil in the Near East it is still there.

#### *How Does a Gamal Grow*

A study of the character of Egypt's President Gamal Abdel Nasser on the basis of his psychological and medical background provides insight into his behavior vis-à-vis the Soviets, the West, Israel, and the rest of the Arab world. At the age of eight years Gamal was sent for schooling to live in Cairo with his Uncle Khalil, who had recently been released from imprisonment for organizing demonstrations against the British. Here the boy developed a taste for intrigue and became fiercely independent, objecting violently to authority of any kind, whether that of his father, his adult neighbors, his teachers, or the police. He was not told until he returned home for the summer

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vacation that his mother had meanwhile died in childbirth; this made him very bitter and widened the gulf between him and his father. The father remarried, and Gamal never again lived happily at home.

At the age of twelve, Nasser participated in a riot and was arrested. As a young man he continued his classical revolutionary development, joining the Young Egypt Party, leading demonstrations, becoming disillusioned and switching to the Wafd Party, leading more demonstrations. He became very popular with his fellow students, disputed bitterly with the school headmaster and the police, and spent some more time in jail. When he was refused readmission to school, his fellow students rioted until he was admitted. He refused hospitalization for a head injury received during a riot against the British. His antagonism toward authority and rules was extraordinary.

At the age of 20 he graduated from the Egyptian Royal Military Academy and as a young lieutenant organized the "Free Officers," a secret society of young Egyptian Army officers whose principles were to give allegiance to no one, form no alliances, make no promises, and have no ideology. When he was 34 he participated in an unsuccessful assassination attempt against General Sirry Amir, and then he led the coup unseating King Farouk and establishing General Mohammed Naguib as President. At the age of 36 he deposed Naguib and became President himself.

It would be surprising if Nasser's independence, defiance of authority, and taste for leadership had changed on assuming the presidency, and indeed they have been evident from the first in actions like his repression of Egyptian communists while taking Soviet aid, his seizure of Suez, his attempts to establish an expanded United Arab Republic and exercise leadership over the entire Arab World. Notable on the other hand in the established pattern of his behavior are his quiet and respectable family life and his fond admiration for President Tito of Yugoslavia, although he has few close personal friends.

Physically strong, Nasser is afflicted with a diabetes that is apparently difficult to control. (He is dependent on Western insulin, especially Swiss, for this; Soviet Bloc drugs have not been favorably received in Soviet-aided countries, and even some high Soviet officials prefer Western drugs, including specifically insulin, to their own.) The diabetic's requirement for insulin depends upon his rate of food intake and rate of metabolism, and these both vary with physi-



cal activity or emotional stress. In some diabetics, and apparently this is the case with Nasser, the balance is quite delicate, difficult to maintain, and definitely affected by emotional incidents. There have been at least two episodes reported in which he has been forced to cease his activities immediately and get emergency medical aid—one during the Suez crisis and the second very recently. Such attacks may recur and limit his activities somewhat, but not seriously for some years to come if competent medical care is quickly available.

#### *Chinese Puzzle*

The enigma of Red China, the most denied of denied areas, challenges us to make the most of any information we can develop bearing on the hidden springs of the regime's policies and actions. A psychological and medical analysis of its key personality, Mao Tse-tung, may contribute to understanding some aspects of its course in the past, including even the bizarre irrationality of the late "cultural revolution."

Mao was born on 26 December 1893 in Shaoshan village, Hsiang t'an hsien, a rural county some 20 miles south of the Hunan provincial capital at Ch'angsha. He was the eldest of three sons and a daughter. His father was a moderately wealthy farmer who earned a good living trading rice. He was a hard-bitten peasant, however, sharp-faced and bigoted, with a taste for Confucian classics; he had fought for the Manchus and he respected the empress dowager. He treated his servants and farm laborers with contempt, had few friends, and took little interest in his family. He was restless, ill at ease, and hot-tempered, an unattractive exemplar of the type of petty capitalist that was to become a target of his son's revolutionary regime.

On one occasion Mao ran away into the woods for three days, returning only because of the thought that his mother would have no one to defend her. His mother, in contrast to his father, was placid and devoted to her family. She was a deeply religious Buddhist and averse to killing or any kind of brutality. For a period during his childhood Mao attended the Buddhist ceremonies with his mother, who wanted him to be a priest. This early religious experience is still evident in some of his writings and utterances. Only in recent months this archpriest of an atheistic ideology referred to his eventual demise as a "going to God."

When Mao was thirteen years old there was a famine in his province. The peasants protested against the local government and demanded that the rice granaries be opened to them. Instead of receiving help they were reprimanded, punished, and the leaders executed. In the same year the Secret Society of Peasants (Ko Lao Hui) was in conflict with the landlords in Shaoshan. They too were repressed and the leaders publicly executed. The young Mao, in strong sympathy with the peasants, was left with an indelible impression of these injustices which must have had an influence on his later revolutionary doctrine.

Feeling the conflict between his studies and working in the fields, he decided, under the encouragement of a school teacher, to go to middle school. After a long argument with his father, who wanted him to stay in the family enterprise, he went off with no extra money beyond his tuition fees. In school he was at first lonely, poor, and despised. He was known as "the dirty little peasant from Shaoshan." When he went to the head of his class for excellence in studies, that made him even more despised among the anti-intellectual students. He became an intellectual, discussing the reform movement with students of like inclinations. He was much moved by a book entitled, "Great Heroes of the World," and especially its biography of George Washington. During the rest of his education periods of excellence were broken by some poor work as his interests developed and changed. He became a leader of progressive movements and excelled in essay writing and debating.

After refusing to consummate an early, arranged marriage, Mao eventually married three times. In 1919, while in Peking attending lectures at the University, he fell in love with Yang K'ai-hui, the daughter of a professor of philosophy, and he married her the following year in Shanghai. She was executed by Ho Chien, a Chinese warlord, in 1928. His next wife, Ho Tzu-ch'un, in the course of seven years bore him five children, three of whom they left in the care of peasants they met on the Long March. Later attempts to locate these were unsuccessful. Eventually this marriage ended in divorce. His current wife Lam P'ui (Chiang Ching), a former Shanghai actress, he married in 1939.

One of Mao's sons by Yang K'ai-hui (probably the one wife he really loved) was killed in the Korean War. This has had a very

strong emotional effect on him and may account in part for his almost paranoid xenophobia, especially with respect to the United States.

A current medical review of the now 73-year-old Mao shows it very unlikely that he any longer has the mental or physical stamina to engage in continued personally demanding activities. His physical health is deteriorating and the prognosis for his life over the next 3 to 5 years is not good. There is acceptable evidence that he has arteriosclerosis and hypertension, with one stroke in December 1965 or January 1966 and possibly others previously. These disorders form a coherent clinical entity, a disease that may account in part for the loss of mental alertness, increasing rigidity of outlook, and stubbornness. The disease itself is serious, limiting his life expectancy and his physical stamina.

There is additional evidence that Mao's condition is compounded with parkinsonism. This is a chronic progressive neurological disorder which is frequently accompanied by mental depression; it will further impair his physical and mental stamina. Heavy sedation is required to control the tremors associated with parkinsonism. This very likely explains the almost vegetable appearance of Mao on public occasions.

The natural progression of these diseases includes a high likelihood of further strokes or heart attacks, increased rigidity of thought, unwillingness to change ideas, and the development of paranoia. These latter symptoms could quite possibly have been reflected in the recent turmoil in China. Continued careful medical analysis will be a factor in determining whether Mao can remain in command or is likely to have power taken from him.

*The counterintelligence role in a Latin American government's anti-subversion effort.*

## COUNTERINTELLIGENCE VS. INSURGENCY

Carlos Revilla Arango

The counterintelligence force of established government authority enjoys certain advantages in its conflict with that of an insurgent organization.<sup>1</sup> It has greater human and material resources. It operates on a sure financial base, has powers of investigation and control, and commands assets in the form of files and records which are not easily built up by the insurgents. Its officers have legal status and secure places of work instead of the hunted life of the dissidents. These advantages often suffice to guarantee the government success.

Although the achievements of the counterintelligence force can be reversed by military, political, or diplomatic action, the fact that it does succeed, even temporarily, demonstrates the superiority of the government operation. The excellent record made by the Tsarist secret police against revolutionaries in the decades before the first world war<sup>2</sup> is not the less so because of the imperial government's subsequent political and military reversals. The successes of German counterintelligence in occupied Europe, in spite of great popular sympathy for its opponents, outweighed the failures; and the triumph of established authority in Malaya, the Philippine Islands, and Greece is a matter of record. The ultimate failure of British authority in Ireland

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<sup>1</sup> For an analysis of the counterpart effort of the insurgent organization against the intelligence and security forces of the government, see the author's "Insurgent Counterintelligence" in *Studies* XII 1, p. 39 ff. Note that the product of "counter-intelligence" as discussed in both these articles includes what would be positive intelligence on a conventional adversary. This is not just because counterintelligence has been officially defined, somewhat extravagantly, to include counter-subversion, but because the methods used by and against the subversives, featuring subtle harassment, surveillance, penetration, and provocation, are the hallmarks of counterintelligence. Counterintelligence forces should not, on the other hand, be put to gathering information on guerrilla order of battle from the standard military intelligence sources—captured documents, prisoner interrogation, reconnaissance, etc.

<sup>2</sup> See the Kronenbitter articles on the Okhrana, *Studies* IX 2 and 3, X 2 and 3, XI 1 and 4, and XII 1.

and French in Algeria derived from political decisions, not the weakness of counterintelligence.<sup>3</sup>

The governments of Venezuela, Columbia, Ecuador, Guatemala, and Peru have been engaged in struggles with dissidents. The survival of these governments depends on the efficacy of their counterinsurgency programs and, within these programs, on the performance of their respective counterintelligence forces. And the success of the latter depends in turn on the ability of the individual counterintelligence officer to learn to know his enemy and to use his advantages to good effect.

#### *Exploration*

The counterintelligence officer is responsible for getting information on the organization, personnel, assets, plans, and activity of the dissidents. He is also responsible for making the best possible use of this information to negate their activity or turn it to the advantage of the government; but his success in this will vary with the level and importance of the information he acquires.

Usually he first seeks to identify the objectives of the insurgent movement. He reads its manifestos, flyers, pamphlets, newspapers. Is he dealing with a Marxist-Leninist organization? If so, does it take Peking's line? Or Moscow's? Is it opposed by communist factions of the other persuasion in the country? Do minority political groups sympathize with it? Do its social objectives differ significantly from those the government itself is striving for?

Will the government's accomplishment of its social and economic programs destroy the foundations of the insurgency? Can these programs be accomplished in time? A member of Peruvian President Belaunde Terry's own Acción Popular said, "I'm not waiting for my son to have a better life—I want a better life myself."<sup>4</sup> This is the impatience which makes the Indians invade the lands. Can the President's programs bring a better standard of living to the people before the communists provoke them to rebel? The study of these broader questions will make the counterintelligence officer more persuasive in his later efforts to recruit members of the insurgent movement for his own purposes.

<sup>3</sup> For a fuller discussion of this thesis see Andrew T. Molnar, et al., *Undergrounds in Insurgent, Revolutionary, and Resistance Warfare* (Special Operations Research Office, the American University, Washington D.C., 1963), pp. 11-12, 41.

<sup>4</sup> *Time*, October 8, 1965, pp. 36-40; also January 7, 1966, p. 34.

Next, the counterintelligence officer must get details on the nature and make-up of his adversary's forces. He must find out their numbers and the structure of their organization, trace its lines of command, and determine its unit functions, geographic scope, and practices with respect to compartmentation. At what stage in its development will it be a serious threat to the government? Is it organized on the basis of secret and street units? Does it follow the precept of General Alberto Bayo to the effect that a cell should be limited to three persons?<sup>5</sup> Does the cell leader report to an area or city coordinator? Do the coordinators report independently to a central committee? What is the size of the central committee? Does it approve its manifestos meeting as a unit or do its members each indicate their individual concurrence by signature? Do the members reside in this country, or abroad? If abroad, how do they communicate with the resident leadership and transmit instructions, money, propaganda? Do the resident leaders travel abroad to report and receive briefings? Are the written records of the movement kept abroad? Or where are they secreted in this country? How do resident leaders communicate with one another? What degree of autonomy is exercised by area coordinators?

#### *The Pursuit of Detail*

As the counterintelligence officer finds the names of insurgents in their manifestos or in police reports, he begins to compile a record which will reflect their background, character, and motivation, their past record, and their ambitions for the future. He takes particular interest in Gustavo Ruiz de Somocurcio, for example.

On Thursday morning, Jan. 30, the Government security police raided a Communist hide-out located at Piura 900, in the Lima suburb of Miraflores, seizing a veritable arsenal of weapons, . . . Cuban flags, and a voluminous collection of propaganda material, including several thousand copies of a pamphlet entitled "La Revolución Peruana en Marcha" written by Gustavo Ruiz de Somocurcio, reportedly the leader of the group, who with a number of his confederates was captured and placed under arrest. . . .<sup>6</sup>

He asks himself questions about Gustavo Ruiz. What kind of house is it at Piura 900? How much would it cost to maintain such a place? What family does Ruiz have? Did he have a telephone? Did he have a police record? Has he ever traveled abroad? What

<sup>5</sup> See "Insurgent Counterintelligence," *Studies* XII 1, p. 41.

<sup>6</sup> *Peruvian Times*, February 7, 1964, p. 1.

schooling did he have? What was his service record, if any, in the armed forces?

What was Ruiz's employment? How much was he paid? Was he a conscientious worker? Did he get along well with his colleagues? With whom was he friendly? What are their names and addresses? Did he pay his bills promptly? If he rented, what does his landlord have to say? Domestic servants? Friends of the family?

From telephone and residence directories, from police, passport, and military files, from surveillance and investigators' reports, from testimony of priests and professors, the counterintelligence officer culls the answers to such questions, both hard fact and potentially useful bits of gossip, speculation, criticism, and complaints from Ruiz's contacts. At this point he still can draw only a pencil outline of the subject and his motivation, his needs and his aims. The answers to many questions can be developed only by further investigation. And much work still remains to be done in identifying the men arrested with Ruiz and discovering their functions in the insurgent organization. Was one of them perchance a courier?

Couriers are an important target of the counterintelligence officer. He will look for persons who make frequent trips abroad, checking airline manifests, social column reports of arrivals and departures, the government consular officers (who might be so conscientious as to take note of the comings and goings of fellow nationals), or the representatives of friendly governments who may have a parallel interest in following the journeys of subversives.<sup>7</sup> An even more important target for him are the area coordinators, because their knowledge should surpass that of any individual cell member. But he also makes every effort to pinpoint the location of meeting sites, the identities of foreign support personnel, and the location of caching and training sites. An inventory of the insurgent organization's physical and personnel assets can give some indication of its scope and operational prospects.

#### *The Larger Picture*

From interrogation reports the counterintelligence officer may get the location of safesites abroad and the identities of foreign sym-

<sup>7</sup> See Edwin M. Martin, "Communist Subversion in the Western Hemisphere," *Department of State Bulletin*, Vol. XLVIII, No. 1237, 7507, March 11, 1963, pp. 347-356, and No. 1238, March 18, 1963, pp. 404-412.

pathizers. He may, for example, learn of a safehouse in Hong Kong, perhaps one run by a Swiss national with a French passport. Does its location or keeper identify a foreign sponsor? If one assumes that it is a link to Red China, say a way point for travelers on the mainland, does this conflict with data which suggest that the insurgents have a tie to Soviet Russia? Or perhaps he may acquire the London address of a sympathizer with the insurgency. Does the sympathizer serve as a maildrop? A source of funds? Why London—a way point for travelers to Eastern Europe? Or he may identify a financial contributor in Stockholm. Is this an independent contributor or merely a channel for funds from Red China's diplomats? Or he may run onto a German courier who travels between Paris and Rome. What is this for? If the insurgency draws its major strength and sustenance from roots abroad, it is possible that our officer confronts not only its own counterintelligence force but that of the Soviet Union, or China's, or Cuba's.

Do the range and number of safesites suggest major financial backing? The counterintelligence officer weighs against the apparent legitimate income of the insurgents the assets and expenditures of the organization as they become known to him, including the cost of travel to Peking, or Moscow, or Havana, the rentals paid for houses in Brussels, Madrid, or London, the funds needed for that courier run from Paris to Rome. Some contributions may be made by fellow citizens buying political insurance. He watches the daily press for editorialists who write sympathetically of the dissidents' objectives, use their grievances as the basis for questioning officials, or criticize the government for any resolute action against Indian land invaders or striking workers.

He looks for patterns in incidents of bombing, kidnaping, assassination, and intimidation of police and private citizens. He recalls that the killing of Caracas policemen not only demoralized the national police service but signaled further acts of violence. He interprets the shooting of an American consular official in Cordoba, Argentina, as a demonstration of power by the guerrillas in that country in their effort to win the uncommitted to their cause. He suspects that the rash of kidnapings in Guatemala provides needed funds for dissident groups there. He believes that the robbery of a Miraflores bank in Lima accomplished that same purpose. He searches reports



of Indian land invasions and peasant uprisings for evidence of the hand of the insurgent organization:

Following the clash which took place on Feb. 4 near Sicuani . . . between a detachment of the Guardia Civil (national police force) and highland Indian invaders of farms and other private property, the police on Feb. 8 seized an arsenal of guns, munitions, and explosives in the home of a Communist agitator, Paulino Mamani, at Chara, 15 kms. from Sicuani. Mamani, who proclaimed that he was "fighting for the poor," was reported to be living in the greatest luxury, with a bank account of some two million soles, said to have been accumulated from the contributions which he extracted from his followers.\*

Such incidents can provide indications of the imminence of larger action. Organized attacks on police outposts, for example, can either reflect a need for arms or serve to demonstrate the dissidents' power. If the attackers seize arms, they probably need them; if not, they probably have their own in sufficient quantity, worse luck. If they carry away their dead and wounded, that is bad: they have discipline and a sense of responsibility. If not, they are less likely to represent an immediate threat to the government.

A campaign of terror usually precedes any broad-scale action aimed at the destruction of the government. But within such a campaign its targets have different connotations of immediacy. The destruction of a foreign-owned factory or plantation would be a low-heat action, particularly if it followed a campaign of vilification by others not participating in the insurgency. It could be just on-the-job training for recruits. Or an action which pleased the general public and served as a call to arms for the uncommitted. Assassination of a foreign resident, however, may mark the beginning of action against all foreigners; it will provoke an intensive investigation by security police and must therefore be rated somewhat higher in its connotation of immediacy. Assassination of an official representative of a foreign government must be placed yet higher on the scale, since police counteraction will be more severe. And the killing of someone in the country's own government can be taken as a clear warning of impending conflict.

#### *Records*

As information is acquired, it must be recorded in a fashion which makes for ready retrieval when needed. The counterintelligence officer begins, for example, by preparing three-by-five cards on Gustavo

\* *Peruvian Times*, February 14, 1964, p. 1.

Ruiz de Somocurcio and others who have come to his attention, recording full name, alias if known, date and place of birth, address, occupation, and data pertinent to their dissident role. Other cards, devoted to addresses which appear to have been used as maildrops or safe meeting sites, he cross-refers to those on the individuals or organizations involved. He makes a similar file of cards on telephone numbers used for dissident communications, and one on automobiles used by couriers. He builds map files locating the dissidents' camps, caches, etc., and including sketches or photographs of these places.

More expansive personality files, keyed to the three-by-five name cards, extend to the subject's military and educational history, family data, strength and weaknesses of character, position in the insurgent organization, and relationships with comrades and associates. The counterintelligence officer can readily accumulate such data on personalities engaged in overt activities for the insurgency. Surveillance of these persons can lead him to echelons and persons hitherto unknown, and then the surveillance can be lifted from the overt targets and placed on the others. The theoretical compartmentation of overt elements from the clandestine is not always maintained. Friendship can be cause for violating it, need for ignoring it, foolishness for overlooking it, and accident for disrupting it.

These records—three-by-five cards with summary data on the dissidents, organizational and geographic charts showing locations and functions, maps and sketches locating and describing training sites, safesites, caching areas, and deaddrops, and above all the personality files reflecting individual prejudices and purposes, fears, problems, and motivation—are the counterintelligence officer's working file, his tool for operations.

#### *Control and Harassment*

Established authority has powers which it can use to control, restrain, or harass members of the insurgent organization. The government can declare martial law and suspend constitutional guarantees. It can deny the insurgents the right to peaceful assembly, freedom to propound their views in competition with official news media, and freedom of movement. The police can increase their vigilance against use of "the editorial pages of the poor,"—wall-painting—and set up checkpoints to intercept insurgent couriers.

Under these controls the dissidents cannot take advantage of disasters, protest the imposition of martial law, or exploit the administra-

tion's blunders in managing the crisis. At the very time when they might pose as champions of the people they have the least opportunity to capitalize on events. On the afternoon of May 24, 1964, a riot at the National Sports Stadium in Lima cost the lives of 301 persons. The Peruvian government was prompt in suspending constitutional guarantees before the dissidents could exploit the breakdown of law and order which took place that night, and they were powerless to add to the disaster.

As the government establishes curfews, increases its street patrols, and activates checkpoints on roads leading to the capital, counterintelligence can increase its knowledge by studying the interrogation reports on persons who travel in violation of the curfew. If the government requires registration of all firearms, the investigation and interrogation of violators may open up new channels to the insurgency. Or, on advice of counterintelligence, police may raid the home of a known member of the insurgent organization. The arrest and detailed interrogation of all persons found there should pave the way for further action.

Counterintelligence can begin its own harassment of the insurgent organization by exploiting the arrest of individual members. Assume that six self-confessed Marxist-Leninists have been detained by the authorities. (In Peru, charges are not pressed against a person for his political philosophy. But a pistol was found during a search of the premises, and none of the prisoners admits to ownership: grounds to hold and question.) They are being investigated. Advise the press in the course of the investigation that not *all* the prisoners have been cooperative. The implication will disturb their friends; which of the six *have* been cooperative? (Or is it a police trick? Yet they cannot assume it to be a police trick.) Treat the prisoners kindly and arrange for their early release. Their friends will interrogate them—perhaps to the government's ultimate advantage.

Counterintelligence can denigrate individual leaders of the insurgency by publicizing their lapses in morality or high level of living. For example Paulino Mamani, the champion of the poor with the bank account of two million soles. Arrange for an interview by reporters following his release from prison. Take photographs of his home, his car, his maid, his children and their school. In a feature story, speculate about his plans for the future. Travel abroad? A vacation in Lima? He must patronize some restaurants in Cuzco. Interview one of the owners, and ask for the names of Mamani's

favorite dishes. Give the reporters the recipes for these, or better, serve them to the reporters. Encourage them to comment on the meal. And send the feature story to the newspapers in the provinces, where the guerrillas are going hungry.

These are mild harassments whose results cannot be foretold with assurance; they are a casting of bread on the waters. Yet, considering the disappointments and frustrations to which the young guerrilla is subject, they can make his life seem less attractive. Counterintelligence can intensify the climate of suspicion and concern in which the guerrilla lives by using them together with police harassment, control measures, and raids. It can also use further provocative techniques to demoralize the adversary.

The counterintelligence officer can, for example, give a Judas kiss to a member of the insurgency. He may direct a police officer well known in his precinct to approach this member while seated with fellow dissidents in a favorite café and give him a warm, friendly (and knowing) greeting. The target is left then to allay his friends' suspicion, to protest his ignorance of the reason for the incident, and to speculate himself on its purpose. *Yet he greeted you by name, in the familiar form. He smiled at you; he gave you a half abrazo. He is well known here, as long assigned to this precinct. And this, too, is where you are from. So he could have known you from the past. But your record was never good here; you have said this many times. You were always in trouble, you said. You had to leave here because they were tough on you. You said. But we see that he greeted you warmly.* And the target knows, even as he tries to protest his innocence, that a guerrilla can never explain a caress from the police.

The counterintelligence officer should exploit the climate of suspicion in which members of the insurgency live. But on the other hand he must anticipate their security scrutiny of any event which is not of their doing. When he acts, therefore, he must protect the source of the information he acts upon by diverting their security investigation from it. One tactic he can use is that of the "lion in the street." He can arrange for a police van ostensibly transporting a criminal to sustain an accident in the street. In the ensuing confusion, the criminal escapes. The police, of course, must establish a cordon around the area and search the houses and apartments in it. They explain that the escaped criminal may have sought sanctuary by holding an innocent family hostage. In their search

they discover not the prisoner but a cache of dynamite and the subversives they were after. In this way counterintelligence can cover the source of its original lead, apprehend its chosen targets, and further shock the insurgent organization. The latter will make a security analysis, but not with the intensity that a direct arrest would have provoked.

Another provocation the counterintelligence officer may use is to mail an insurgent a cryptic note of thanks for certain gifts received or services rendered. He might ask the addressee to meet him at the "usual place." The target, out of town this week, lives with other members of the group, whose attention can be directed to the note by a telephone message urging an immediate reply. They become curious enough to examine it. *Gifts? Usual place? Is it a woman? The handwriting looks like one with a mustache! Have you noticed a change in our friend of late? Why did our last job go badly? Was he really going to visit his mother in the country?*

Or the counterintelligence officer may release to the public a list of subversives wanted for acts against the public weal. Later he publishes another list which omits certain names that appeared on the first one. He can select as the dropouts persons whom he knows to be in some difficulty with the leadership. Since these lists are read with an avidity appropriate to those of lottery winners, the dropouts may soon drop as well from the favor of their comrades. Then, in the classic process by which a suspicious conspiracy breeds its own traitors, they may be persuaded by subsequent ill treatment to work for the government in return for absolution or rewards.

*Penetration: The Open Bid*

The success of any action against an insurgency depends on the accuracy of the information upon which it is based; and the most useful information comes from sources within the enemy's ranks. Therefore the key task of the counterintelligence officer is to acquire such sources. His role is different from that of the police:

Counterintelligence does not knock at doors and arrest men. Rather it sits among them while others knock on the door. It is arrested with them and goes into the same cell. It works on escape routes with the patriots, it aids them, steers them, and tries to protect them, going on the assumption that knowing your enemy is better than destroying him and having to search for a new enemy.<sup>9</sup>

<sup>9</sup> Hugo Bleicher, *Colonel Henri's Story* (London, 1954), p. 13.

Yet it is essential that he control the time and tactics of the arrest and provide the data on which formal charges may be based. He should monitor his source's progress through the prison routine, advise him as to his behavior under interrogation, and debrief him privately in the prison. He must resolve the source's problems of the moment and guide him in his future actions. In all this the left hand must be well coordinated with the right.

There are different ways to acquire inside sources. One can offer to buy information from the hungriest member of the meanest cell in an underground movement. Such a person does not generally have access to much information, and the aim of the counterintelligence officer must be at sources who possess or have good prospects of gaining information of value. But since he must begin somewhere, he will often make a first approach by shotgun through the official or public press. *Let all persons having knowledge of the personnel or activities of such-and-such organization report same in writing to post office box so-and-so. The constitutional rights of all those reporting will be safeguarded. Immunity will be granted to reporting members of the organization with respect to offenses committed against the state prior to this date. Reward.* Such a plea will draw a mass of conjectures and irrelevancies along with, possibly, some pertinent facts which, moreover, he may already have on file. The sources are likely to be persons only on the periphery of the movement, from waiters with long ears to embittered wives with long memories. Yet the public appeal may bear eventual good fruit, as we shall see.

More subtly, counterintelligence can sponsor feature articles in the press which describe the depredations, harmful activities, and constant threat posed by the insurgent organization and incidentally point out gaps in what is known about it. Readers having knowledge in these particular areas are urged to write the author. The virtue of this approach lies in narrowing the field of inquiry and encouraging more specific returns.

In either case the public plea is unlikely to produce immediate results of great value. But someday a guerrilla, leafing through old newspapers reserved by café management for meaner purposes, may discover the article. He may find it amusing, or even interesting. He might clip and keep it for a time, possibly thinking of insurance against a day when he falls from grace. In that case he will not discuss it with his colleagues, or at least not be the first to mention it.

But if he ever finds himself in a situation which gives him little hope for the future, he may remember this invitation.

*The Volunteer*

A public plea of this nature, if inefficient, is secure in that it enables the respondent to pick his own time and often place in which to make contact. He can not only satisfy himself of the good faith of the advertiser, but also take time to develop or organize the information requested. In taking these steps he commits himself of his own volition; he is not brought to heel by the pressures of prison life. It is true that a defector is not necessarily a great prize in terms of what he can give. He may have come over because of lack of advancement in the dissident organization or he may have lost contact with its leaders and resigned himself to recovering what he can by selling the past. But an aggressive counterintelligence program often brings unexpected rewards; and a public plea for information is an aggressive action, not a desperate alternative.

As he presses to expose or identify the personnel and activities of the insurgency, as he engineers arrests and provokes the dissidents to act against their own kind, as he intensifies the suspicion which pervades the enemy ranks, the counterintelligence officer often serves as midwife to the birth of dissidents *within* the dissident organization. Young guerrillas find that its chains of discipline fetter their movements and spirit more thoroughly than the regime it is dedicated to overthrow. They are gradually discouraged by the denigration of its leadership, provocations against its members, publicity for its noxious activities, offers of rewards for information about it, and the ever-increasing controls and suspicion it promotes. In time, some of them begin looking for a way out, for a door from the garden; and someday one finds this door. *I believed something had to be done. Things are not good in Peru; it is wrong to be hungry. Things must be changed, but not in the way of Luis de la Puente. What do you think we can do?*

The counterintelligence officer must now ask many questions. What does he really want? Money? Sanctuary? Revenge? Or is he an agent of the adversary? If he comes in good faith, what information can he provide? Can he identify the secret leaders, their safe sites, caching points, and couriers? Does he hold a position of any importance? If he does, who knows that he is here? Will he return

of his own free will? *Can* he return? How long before his absence will be noticed?

The young defector is likely to pose few problems of control. Though sometimes scarred by social inequities, he is not usually deeply marked by his underworld experience. His suspicions can, of course, be aroused to a self-defeating pitch, but he is also easily confused. He is not wary and patient like the old, who know the value of what they have to offer, may recognize the pressures on the counter-intelligence officer to produce results, and make demands for money or other rewards accordingly.

#### *The Penetration Agent*

The value of a guerrilla who voluntarily offers his cooperation far surpasses that of one recruited by inducements or of an agent inserted into the insurgents' ranks. The bought or browbeat recruit has not cast off clean his old allegiances. And the synthetic dissident lacks the dedicated shine of the true believer.

If it is through an agent that counterintelligence is going to penetrate the dissidents' organization, it must be through one whose ostensible motivation they will understand and accept. It must also be someone whose talents or advantages of employment or location they need—say a customs official, or a passport office employee. Into the same category would fall international airline pilots (to serve as couriers), hotel managers (as safesite keepers), postal officials (for the procurement of post office boxes), interprovince bus drivers (as intra-country couriers), and university professors (to spot and assess student candidates). Such agents have to be briefed, prepared, and directed with the greatest care.

In a longer-term process, the counterintelligence officer may select a young student or worker and direct his activities as he simply enters the general milieu of the dissidents without making any positive approach to join them. He should frequent the coffee shops they patronize, move in the same university or labor circles, attend their student or worker rallies, act sympathetic to their beliefs, and serve as a spear-carrier in their public enterprises. In the course of time, after watching his attitude and assessing his reliability, they are likely to approach him. He should neither jump at the first offer they make nor delay his assent too long. The insurgency welcomes those whom it persuades to drop their ploughshares, books, or



fishnets to serve the cause, even as it views with suspicion those who take it upon themselves to seek it out.

#### *Recruiting in Place*

Because the insurgent organization makes every effort to screen out espionage agents from among those who come to its doors uninvited, mounting a thorough background investigation and other checks, the counterintelligence officer may choose rather to recruit a person already in place and avoid the hazards of trying to introduce an outsider. Here his success will depend on how accurately he selects and assesses the candidate. He must make an exhaustive study of a candidate's dossier in order to assess his strengths and weaknesses and measure his desires and needs. If the target can be persuaded to cooperate, does he have access to the desired information? Can he safely transmit it to the counterintelligence officer on a continuing basis? When did he last participate in an approved insurgent activity? If he is reassigned elsewhere, would there be communications problems? Is he emotionally reliable? Through whom should we make an offer to him, and in what manner? If he accepts, how do we know it is in good faith? When in this world of counterintelligence does "yes" mean "no"?

Dissidents under arrest constitute one pool for recruitment. These candidates are most promising while still suffering from the trauma of arrest and before news of it reaches the public. The prisoner selected for recruitment is isolated from the others, and he is permitted no contact with the general prison administration. No publicity is given to the arrest, no record of it even made. The counterintelligence officer bends every effort to win the man's cooperation. With approval from above, he can promise him freedom, immunity from prosecution for past offenses, and the prospect of a bright future. He can assure him that no one will know of his arrest or cooperation.

If the candidate is one of several taken by the police in an action that has become known to the public, the counterintelligence officer must carry out the recruitment under devious guises. He should separate the prisoners, question each privately, assess them, review their dossiers, and formally announce their detention to the press. At this time he can also say that he is appreciative of the cooperation some of the prisoners have given to the authorities. Then, before interest in the case has subsided, he should release two of them,

with a public statement that members of the underground do not have to fear lengthy detention or maltreatment by the authorities. In a separate statement at about the same time, the investigative police should request that anyone with further information concerning violence against the government contact the department for an interview.

Immediately after the release of these two prisoners the dissidents whose names appear in their dossiers should be arrested. If they have fled abroad or are in hiding, the police should go through the motions of searching their homes and offices. In another week, another prisoner can be released without comment to the press. Finally, the counterintelligence officer arranges for the charges against the remaining three or more prisoners, including his newly recruited source, to be dismissed. The investigative action of the insurgent organization will then be concentrated on the first three prisoners.

The successful recruitment of a prisoner can be ascribed to the trauma of detection and arrest, to the unfriendly regimen of the prison, to the sense of failure he feels (in proportion to his devotion to the cause), and to the effects of physical and spiritual separation from his comrades. The arraignment before authority, the removal of his clothes and personal possessions, the physical examination, the prison garb, and the isolation aggravate his psychological distress. As he lies in his cell, cut off from the discipline, demands, and dedication of his organization, denied participation in the busy give-and-take of his colleagues, he is a ready target for a sympathetic and understanding approach, for the friendly face and kindly manner of one who wants to help him, for the counterintelligence officer. And if he can be persuaded in this helpful spirit to take one corresponding step on behalf of the government, he may become an agent serving counterintelligence with the same fervor he formerly devoted to the insurgent cause.

#### *The Decoy*

The counterintelligence officer can also arrange for the creation of a phony guerrilla group in the mountains or the city, in the hope that the malcontents, social dropouts, and visionaries will flock to a modern-day cave of Adullam. His purpose is to leech blood from the insurgent organization, identify potential enemies of the government, and provide an emotional safety valve he can control. He can supervise military security sweeps of the area, setting the bounds of search and informing his guerrillas of the impending action. Through manip-

ulating publicity for his decoy group and government efforts to crush it, he can build up its leader as a new peasant hero, a superman whose valor, cunning, ruthlessness—and charity towards the poor—capture the public imagination.

In nourishment of this legend he can take natural disasters—a burned warehouse, a washed-out bridge, a derailment or road-blocking landslide—and attribute them to his heroic rebels. He can have them raid isolated police outposts and then multiply their purported numbers in eyewitness accounts by peasants or passers-by who exist only in his imagination. He can prepare letters to the editor in the name of his guerrilla. He can release photographs of a Hercules, with features suitably obscured, to convince the skeptical that a new Castro is on the horizon. He thus sets up a counter pole to the real insurgency, which cannot tolerate rival heroes, others' victories, and competitors for public favor. It must, then, divert effort to penetrate the new threat and bring all forces into its fold. This diversion can only weaken its proper struggle against the government.

#### *The Shadow Battle*

The counterintelligence officer sits with his maps, charts, cards, and files, studying his adversary and the apparent timetable of his program. He reads the propaganda and manifestos of the enemy organization; he attends public rallies held in its name. He initiates action against it to foil a particular undertaking, exploit information received from agents, or unnerve his opponents. His aggressive moves force the insurgency to conduct intensive security investigations, reorganize components, relocate assets, revise its communications, or re-educate its membership. He can even force it to compete with his decoys in addition to its genuine political competitors.

He cannot, however, disrupt the insurgents by offering them secure passage to freedom outside the country, as Fidel Castro has to the dissident in his Cuba. The dissidents of Peru, Ecuador, Venezuela, and Guatemala are Marxist-Leninists who do not seek safehaven in free countries. These Latin American governments cannot protect their authority, as Castro did, by offering a free exit to dissidents.

Nor can one defeat the dissidents by armed action. The insurgent organization only thrives on violence. Counterintelligence tries, therefore, to discourage dissidents by provocative and harassing actions based on information acquired through penetration. It attempts to attenuate the spirit and numbers of the insurgents, and it can succeed

if it is granted time. Its failures can most often be ascribed to pressures from above for immediate and dramatic achievements.

A carefully worked-out counterintelligence program is most undramatic even when effective. It entails hard work and the amassing of good records. It is drudgery. It produces no miracles. But if unencumbered by a short-sighted policy from its superiors, it can provide respite for mending the social and economic fabric of the state.

*Philatelic KGB*



#### FIFTIETH ANNIVERSARY OF SECURITY ORGANS

The USSR Ministry of Communications has issued a new postage stamp commemorating the 50th anniversary of the All-Russian Extraordinary Commission [CHEKA]. Founded on Vladimir Lenin's initiative, this Commission, led by the ardent Bolshevik, Felix Dzerzhinsky, coped with honour with its tasks in strengthening the dictatorship of the proletariat in the struggle against counter-revolutionary conspiracies. Today the organ of State Security [KGB] also vigilantly protects the state interests of the USSR from the schemes of foreign intelligence services.

--*Novosti*, 13 December 1967

## COMMUNICATIONS TO THE EDITORS

*Wise & Ross*

Dear Sirs:

Your reviewer of the latest Wise & Ross extravaganza, *The Espionage Establishment*,<sup>1</sup> failed to note one central problem with this third team-effort to siphon off royalties and attention from the marketplace of intelligence sensationalism: the work is a plagiarism from beginning to end.

In contrast to *The Invisible Government*, which provided chapter notes (admittedly inadequate and misleading ones) with some references, *The Espionage Establishment* has none. Neither book has acknowledgments, but at least the earlier one, through these chapter notes, implicitly acknowledged the sources of pilferage.

Of the approximately 46 footnotes which refer to sources (supplemented by some textual references), 19 are in the chapter on the Soviet Union, to which your reviewer gave good marks. A check of these sources makes clear that most of the material in the chapter was not derived from them but plagiarized from elsewhere. Similarly, the 14 or so source notes in the chapter on Great Britain are not the basic sources utilized in this chapter.

The chapter on China has only one source reference (to biographic data from Donald Klein). Your reviewer attributed most of the material to "overt sources—*Time* magazine and other periodicals." It would appear that most of the data, which your reviewer called "dated," can be "dated" more specifically to 1965, when Messrs. Seagrave and Jones researched a piece for *Esquire* (January 1966). Perhaps to avoid clouding their own resourcefulness and ingenuity, Messrs. Wise & Ross failed to note this major source.

If your reviewer insists upon giving higher marks to *The Espionage Establishment* than to *The Invisible Government*, he might at least subtract a few points for the new low in source attribution.

Onlooker

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<sup>1</sup> *Studies* XII 1, p. 97 ff.

Dear Sirs:

Wise and Ross have a reluctance—in fact, a total block—about using those three little words, “I don’t know.” This block is equally apparent in their books and in their radio and TV appearances. For example, the David Susskind show on 25 November 1967:

Susskind: I want to ask you, how does our spy system—the CIA compare to the Russian system, the British system?

Wise: Well, David, it’s very hard to get into the business of rating these systems. You know, there are some people who say that the Israeli system may be the best of all, it’s very small. I think that in some ways we’re better—we have a better system than the Soviets and perhaps, in some ways, they’re better than we are. It’s kind of difficult to start giving them marks . . .

Susskind: I mean, would [CIA in a training exercise] send you downtown in Washington to tail a man? I mean, would you actually spy it up?

Wise: There have been reports—we have not gone into this very much—but there have been reports of trainees being sent into a factory to swipe papers and do this sort of thing.

Susskind: Is there any assassination in recent years that you can lay at the doorstep of [CIA] superspying?

Wise: Well, we can turn that around a little and tell you about an attempt that wasn’t carried out . . .

Questioner: I’d like to know . . . what the ratio of women to men is in this field.

Ross: Well—the ratio of men to women varies and it’s a very difficult—it’s an intangible to get at because it’s—it’s a secret quantity.

Once they almost slipped, but quickly caught themselves. The Jim Conway show in Chicago, 27 October 1967:

Fran: What do we know about the Soviet Intelligence? What do we know really?

Ross: Well, frankly, we don’t—our own intelligence knows a great deal. The public knows relatively little which is one of the reasons why we wrote this book.

In a nation which accords the press a freedom unmatched anywhere else in the world, it seems in order to expect a corresponding sense of responsibility on the part of the press. Few who have read *The U-2 Affair*, *The Invisible Government*, and *The Espionage Establishment* can doubt that the motivation of the authors is basically mercenary. Though they call for an awakened, informed, and responsible citizenry to redress the balance against Big Government, one can’t help wondering whether they see themselves as citizens, too, sharing the same broad responsibilities, or whether they fancy themselves as above it all, the monitors of a battle on a darkling plain below.

*The Espionage Establishment* is a bad book, because it is superficial and even hypocritical. The authors attempt to probe the motives of others without honestly examining their own. They maintain standards of conduct for the government—that is, the people—without accepting these standards for themselves. They conceal their sources and pretend, without humility or honesty, to omniscience. Few would take seriously a book by amateurs about surgery, say, or navigation, or any other subject requiring professional expertise. But Wise and Ross are two of several self-annointed experts who make—and will probably continue to make—a good deal of money from just such books about intelligence because there is no way for the general public to judge their qualifications or the quality of their merchandise.

Henry L. Wardsworth

*Agent Stalin*

Dear Sirs:

I should like to comment a little further on *The Young Stalin*, by Edward Ellis Smith, which you recently reviewed.<sup>1</sup> I agree with your reviewer that the author tries too hard to show that Stalin was an agent of the Tsarist Okhrana and that he remained one over too many years, but I do not find the evidence very persuasive even for the early period.

Part of the case for the agent thesis rests upon the portrayal of Stalin as a daring revolutionary hero prominent in organizing strikes, writing proclamations, setting up underground printshops, and inciting the populace to rebellion; how could he be doing all this and yet moving about almost with impunity in the Caucasus if he were not in collusion with the police? But this picture of the young Stalin derives from Soviet writers in the period of his dictatorship who had no choice but to depict him with panegyrics. Biographers who did not have to cater to Stalin's glorification—from Trotsky down to revolutionary Georgians in exile—speak of him (under his nicknames Soso, Koba, etc.) as an unimportant little malcontent, unnoticed not only by the police but by the early revolutionaries. He had little reason to hide.

Then there are the documents in the files of the Paris Okhrana, preserved at the Hoover Institution, which Smith tries to use in support of his theory but which really point in the opposite direction. Okhrana

<sup>1</sup> *Studies* XII 1, p. 104 f.



headquarters sent the Paris office Stalin's name and description as a subversive or suspect on four occasions between 1904 and 1911; these are the only references to him in the files. Now the Petersburg headquarters would not have informed Paris about the identity of agents working for it at home, within the Empire; but when a revolutionary was recruited as an agent his name was as a rule deleted from the roster of subversives, and Headquarters circulated to all outposts lists of names to be deleted without giving any reason therefor. Stalin's name appears on no such circular.

Moreover, it was Headquarters' practice to inform Paris, as well as all outposts at home, about people who had in any way served as agents or informers but then either were dropped as unreliable or deserted the service of their own volition. If Stalin had been an informer or penetration agent and dropped out in 1912 when opted by Lenin for the Central Committee, the Okhrana home office which had controlled him would have prepared such a circular for dissemination to the outposts. There is no such circular on Stalin. Even if he had served the Okhrana only in the very first years of his adult life, as a student at the Theological Seminary or employee at the Tiflis Geophysical Observatory, when he was dismissed he would have been reported in the circulars as a defector or an informer "not meriting confidence" (*nezasluzhivayushchi doveria*); scores of such circulars were disseminated regularly. But his name is not included in any of them.

If Stalin had been informing some local police agent on fellow students in the Seminary, he would most likely have been forced to continue. Instead of letting him be expelled as a student and fired as an employee, each time against his own wishes, the Okhrana would have seen to it that the Seminary retained him, just as it did other agents among the students. Smith himself cites the case of agent Demetrashili, who began his career at the same Theological Seminary in Tiflis; he was made to continue with his schooling and eventually converted into a regular penetration agent. The same Folder No. 1 at the Hoover Institution on Deep Cover Agents which documents this case shows that again and again students and government employees were reinstated or re-hired at the request of the police organs.

Incidentally, in referring to the Okhrana structure and personnel strength, Mr. Smith makes without documentation statements that are completely unrealistic. For example, he credits the Okhrana with having in Petersburg, when Stalin came there in 1909, 2,500 profes-

sional intelligence officers. According to all official tabulations, the entire Okhrana at home and abroad could not muster a staff of that size. Smith also questions Stalin's access to documentation and funds. But most of the revolutionaries had the same problem, and quite a few of them moved around much more than Stalin. Especially for the Social Democrats, documentation was somehow always abundant. Mr. Smith could have found at the Hoover Institute scores of listings of all types of passports used by the Bolsheviks—of their own manufacture, stolen, doctored, or obtained officially through penetration.

Despite its forced inferences about Stalin as agent, *The Young Stalin* has value in documenting the dictator's character as manifested in its formative stages. He is similarly described in a perhaps still unpublished manuscript to be found in Trotsky's files:

His youthful companions characterized him as sullen and quite unlike his comrades in the nature of his activities. Wherever he appeared in his revolutionary travels, there was talk of intrigue, breakdown of discipline, arbitrary behavior, slander of comrades, and denouncing of opponents to the police. Many of these reports were probably based on lies, but no other revolutionary gave rise to talk of such a nature . . . Koba's name never appeared in any of our correspondence. He considered that, being a provincial, he was slow getting ahead, and he looked on others with envy.

Rita T. Kronenbitter

## INTELLIGENCE IN RECENT PUBLIC LITERATURE

### Doctrine

THE REAL CIA. By *Lyman B. Kirkpatrick, Jr.* (New York: The Macmillan Company. 1968. 312 pp. \$6.95.)

It is probable that no single person had as wide and deep a knowledge of the Central Intelligence Agency as Mr. Kirkpatrick. His interest and his contacts ran from chauffeurs and code clerks to the level of Presidents. He had personal experience in middle and top management, and his years as Inspector General and later as Executive Director gave him unparalleled access to information. On top of this he was energetic and questioning and had a most retentive memory.

In writing the book his intent was to use this wealth of knowledge to inform the public of what the Central Intelligence Agency really does, how it does it, and the significance of its role. His contribution in this regard is most welcome, and in some respects he succeeds admirably. The opening and closing chapters, for instance, are on the whole excellent expositions of the organization, function, and importance of intelligence in the U.S. Government in the modern world. They could, with some editing, have made an excellent piece for some publication like *Foreign Affairs* but would then, of course, have been read by an extremely limited audience.

To reach the wide audience at which he was aiming, Mr. Kirkpatrick had to employ writing techniques other than simple exposition. He could, of course, have gained publicity by discussing sensitive operations and so had the book touted as an exposé, but he offers no new information of this kind. He chose instead to appeal to public interest by taking the anecdotal route based on his own experiences relating to intelligence. Even here he has been most discreet and at times has almost leaned over backwards to protect the security of Agency operations. In Chapter 6, for instance, he discusses his personal experience with what he refers to as a subsidiary outside intelligence organization. This was indeed a revealing and appalling episode, but the full lesson for the intelligence community does not



ORGANIZATIONAL INTELLIGENCE: Knowledge and Policy in Government and Industry. By *Harold L. Wilensky*. (New York: Basic Books, Inc. 1967. 226 pp. \$5.95.)

We have had books about intelligence from professors of history, military men, diplomatists, newspaper scandal-mongers, and ex-intelligence officers. Now we have one from a sociologist—a “behavioral scientist”—and it ought to be a useful, interesting, and welcome contribution. It is in fact a disappointment.

For one thing, I find much difficulty in satisfying myself that I understand what the author is trying to say. This is odd, since he explains his purposes at the beginning of the text, occasionally frames a generalization or a summary in the body of the book, and even provides a chart at the end to tell what he has said. Yet there is such a mass of statements of fact and declarations of theory, such a quoting of examples and citing of research projects, such a straining for categorizations and hypotheses, that one feels that some greater wisdom than the chart reveals *must* somewhere be enunciated.

What, in fact, does it add up to? Something like the following: There are more experts around nowadays than there used to be; facts and figures are apt to count in deciding the policy of great organizations; experts can help with facts and figures; the bigger the organization, the more experts it is likely to use. But oftentimes all does not run smoothly. There are frequent intelligence failures. These are rooted in “structural problems.” For instance, in a big organization with ranks and grades the boss does not always get told the facts, especially the more unpleasant ones; great hierarchies are apt to diminish the initiative and originality of individuals (yet there must be hierarchies); specialized sub-divisions of experts war amongst each other and become parochial (yet there must be specialization); intelligence organizations get over-centralized, remote, etc. (yet there must be centralization). Some of the failures of intelligence are owing to “doctrinal” shortcomings, e.g.: unevaluated facts are often used by policy-makers and this is bad; over-emphasis on secrecy often produces loyalty-security systems that encourage time-serving and mediocrity; short, speedy, journalistic estimates are favored by policy-makers but are inherently pretty undependable.

And so on—though this is a fair setting-forth of most of what appears on the chart. All these propositions are true, especially since the author qualifies them by the remarks summarized above in parentheses. But

does one need all the apparatus of learning in this book, and all the behavioral-science jargon, in order to establish such things?

Of course, one ought not to be too scornful. It may well be useful to confirm by painstaking "research" many propositions which seem obvious to common sense. After all, common sense tells us that the sun goes round the earth; it proved worth while to examine this notion further. Perhaps the propositions of this book are not obvious to those outside the intelligence profession. Perhaps they really needed examination. Perhaps the remedies which the author suggests for the conditions which produce intelligence failures are not equally obvious. I suspect, however, that by choosing different examples, and reversing the trend of argument, one could establish a set of propositions directly contrary to those in the book, granted that one were permitted to qualify them to the extent that the author qualifies his. And the author might have been more careful in his "research" on some of the examples he uses to prove his points. He does not know very much about the Bay of Pigs episode, for example, nor about several other things which he blithely adduces as evidence.

In spite of these animadversions, there is a good deal of interest in this book. For us, in governmental or military intelligence, it is broadening to see "intelligence" considered as an aspect of business organization: the disaster of the Edsel, for example, is attributed to a failure of intelligence, and the sorry story of the "Great Salad Oil Swindle" perpetrated by Anthony De Angelis from 1957 to 1963 is given a whole entertaining chapter. Police work gets attention, and a good deal is drawn from the author's own previous work on the organization of labor unions. Indeed, the concept of intelligence gets a wider definition than we are accustomed to; it is taken to embrace the whole contribution of "experts" to enterprise. It thus includes such things as the strategic studies of the RAND Corporation and the activities of the Council of Economic Advisers. The author considers this last to be a model of the way that intelligence ought to be organized and administered.

I have struggled with this book for a long time and still have the lurking feeling that it must somehow be a better book than it seems. Certainly it will prove a quarry of material for the next man who writes a book on intelligence, and it will furnish learned footnotes to the next behavioral scientist who writes about the organization of social enterprises.

Abbot Smith

AL-HARB AL-NAFSIYYAH: Marakah al Kalimah wal-Mutaqad (Psychological Warfare: the Battle of the Word and the Doctrine). By *Salah Nasr*. (Cairo: Dar al-Qahirah lil Tibaah wal-Nashr. 1966. Vol. I, 636 pp., £E 1 [\$2.40]; Vol. II, 471 pp., 80 piastres [\$2.00].)

The author of these volumes on psychological warfare is the former Director of the Egyptian General Intelligence Department presently under arrest for his role in the Abd-al-Hakim Amir "suicide." Volume I, devoted to "The Word," discusses a number of topics as diverse as the formation of social attitudes, the nature of rumors, and the use of psychological warfare to "combat imperialist intrigues against the Egyption Revolution." Volume II, "The Doctrine," covers an equally broad spectrum, ranging from brainwashing to methods of corrupting public opinion.

The work is almost entirely derived from books in English on social and abnormal psychology and on propaganda. It appears to have been intended as lecture material in a training program for new Egyptian intelligence officers. In its present form it may suffer from having been sanitized for publication; in any case the treatment it gives to the many topics it covers is very cursory, often little more than a short definition of each.

Book seven of Vol. I, "Intelligence and Analysis," may be taken as typical of the work. An intelligence officer glancing through its chapter headings—the role of intelligence in psychological warfare, the intelligence of propaganda, the analysis of propaganda—and its introductory affirmation that

The future of any country will depend on the exactness of the information that intelligence supplies it as the basis on which important national policy decisions are made . . .

is led to expect an interesting in-depth discussion of the subject, particularly from a professional who headed an intelligence service from the mid-1950's until the summer of 1967. But instead he is taken on a mad 60-page dash through some forty sub-topics into which the chapters are divided, most of them having little relationship to the chapter headings.

The result is first a feeling of dizziness in the reader, and then, after a pause to collect one's thoughts, a sense of having been cheated.

John Bedrosian

## World War II

A DIFFERENT KIND OF WAR: The Unknown Story of the U.S. Navy's Guerrilla Forces in World War II China. By Vice-Admiral *Milton E. Miles*, USN (Ret.), as prepared from the original manuscript by Hawthorne Daniel. (New York: Doubleday. 1967. 629 pp. \$7.95.)

This is the posthumous revision of a manuscript left by "Mary" Miles describing in great detail his experiences in organizing, developing, and operating Navy Group China, the American component of a quasi-covert joint enterprise called the Sino-American Cooperative Organization that was highly effective in irregular intelligence operations in the China Theater during World War II. The Chinese component of SACO was supplied by General Tai Li's Bureau of Intelligence and Statistics. General Tai was Chiang Kai-shek's most trusted subordinate, charged with China's internal security and the coordination of China's clandestine activities against Japan.

Miles was sent out in April 1942 with verbal orders from Admiral King to survey the resources of the BIS and ascertain how it could contribute to what were then the Navy planners' ultimate objectives, landings on the China coast. "In the meantime," King directed, "do what you can for the Navy and to heckle the Japanese." Miles, then with the rank of Captain, satisfied himself as to the BIS potential and worked out in consultation with Tai the draft of the agreement that was to establish SACO. The essence of the compact was that Tai would be in command but all SACO operations would be under joint operational control. Miles would command the American component and also take charge of certain joint activities which were of primary interest to the American side—meteorological observation and reporting, for example.

The agreement became effective, after topside approval in the Theater and in Washington, on 1 April 1943, but it was obvious from the outset that SACO's efficacy would depend to a large degree on the development of mutual confidence between the two parties. Tai was suspicious of all foreign intelligence liaison. He had refused a liaison offered by the British, fearing that in the postwar period they would work against China's interests. He suspected that the OSS, active in India and Burma, might be under British influence. He did not wholly understand American wartime intelligence arrangements



and so was dubious as to how far he could trust Miles and still protect the interests of his country. Thus it was Miles' primary task to build such trust.

Miles well appreciated this fact. The basic operational program for Navy Group China, the program in which he indoctrinated his command, called for the creation of a truly combined Sino-American operational staff to make the fullest possible use of Chinese knowledge of their own country and the tactical problems of clandestine operations against the Japanese there on the one hand and take advantage of American planning, organization, and grasp of techniques on the other. This staff was to serve, rather than command, the men in the field, and the field components were to be as integrated as the staff. Whenever the BIS component of SACO balked at an operational plan proposed by Navy Group China, the Navy planners simply made sure that their Chinese colleagues fully understood the proposal and its rationale. They never tried to coerce them to comply.

Thus there were never outstanding disagreements between the two parties, and Tai began to trust the Americans in SACO. This was no small gain. With the exception of the 14th Air Force, there were few if any other American units in China whose personnel refrained from overt public criticism of virtually every phase of the Chinese war effort. Tai was well aware of this and could not help viewing the Sino-American military alliance with some misgivings.

As BIS and Navy Group China continued to work together, their developing spirit of mutual respect was enhanced by the fact that Miles imposed austerity on his men and as a rule had them live with and not much better than their Chinese colleagues. As mutual trust led to mutual understanding, these led to a mutuality of effort. In the long run, the BIS contingent of SACO probably contributed more to the realization of purely Navy Group China objectives than the Americans could to projects of more direct value to the BIS. Navy Group China was all too often hampered in meeting Chinese needs by interference from the American Theater command and the American Embassy.

Admiral Miles' comments on these joint operations—scattered throughout the book, with greatest concentration in its thirteenth chapter—form in their entirety a manual on how the United States should carry out its liaison, intelligence and military, with lesser powers. The most successful American commanders in China during World War II were Generals Wedemeyer and Chennault, and their approach to the Chinese was in many respects not unlike Miles'.

The most entertaining part of the Admiral's book lies in his stories about the SACO field units, some of the operations they carried out, and his reconnaissance trips near Japanese-held territory. Miles is a superb raconteur; and if he exaggerates the exploits of his men from time to time and often fails to give credit to other Chinese and American units associated with SACO in a given action, we must take into account his intense pride in Navy Group China and the high SACO esprit de corps that was so largely of his making.

Another subject that Admiral Miles deals with in considerable detail, *passim*, is General Tai Li's character. To most Americans in this country and in China, Tai was a sinister figure. Our Chungking Embassy and most of the Western correspondents in China vied with one another in condemning him. "China's Himmler" was one of the kinder epithets they used on him, and senior American military officers often echoed these sentiments. But as Miles points out, Tai's critics had no first-hand evidence to support their charges; they were merely parroting the accusations of his Chinese political rivals.

As China's chief of security, Tai was under oath to preserve the political integrity of the Nationalist government, a body riddled with dissension. That this integrity was preserved through the war years was due at least as much to General Tai as any other man. The force at his disposal was minimal, and he carried out his responsibilities much more by persuasion than by coercion. A policeman's life is not a happy one. On the basis of conversations with knowledgeable but disinterested Chinese and personal observation of activities at some of the BIS installations, I believe that Admiral Miles' portrait of Tai is by far the most faithful that has appeared in print.

Too much of Miles' book is devoted to his effort, fruitless in the end, to maintain a monopoly over American clandestine activities in China. Here he was undoubtedly motivated by Admiral King's injunction to "do what you can for the Navy," which it seems he interpreted to mean the exclusion of other American armed services. He went to great lengths to keep other American intelligence operational organizations, particularly OSS, from carrying out their functions in areas where SACO was active. Doggedly he resisted the attempts of General Wedemeyer to bring SACO under his command. He goes into his discussions with Wedemeyer at considerable length, pointing out the general's predisposition to favor OSS over SACO. He is blind to the obvious fact that Wedemeyer found OSS a valuable adjunct and much more manageable than SACO.

He liked and respected Wedemeyer, and so concludes that the General was badly advised by his staff. This may well have been true too, for there was considerable opposition in the Army, both in Washington and Chungking, to having a Navy unit in China performing functions that could be carried out equally well by branches of the ground and air forces. In any event, as Miles relates in some detail, from the date that General Wedemeyer assumed command in China, the fortunes of Navy Group China waned while those of OSS grew and prospered in the same proportion.

Miles' bias in favor of the Navy and of Navy Group China leads him to make extravagant claims and misstatements of fact too numerous to list. The book tries to leave the impression that if it had not been for the OSS and the Army, the SACO operation would have shortened the war in China by a considerable amount of time. It is sidetracked from the story of SACO's achievements (which were many in the areas of coast watching and weather and radio intelligence) and methods of operation to trying to prove how wrong OSS and the Army were and how right SACO was. Throughout it implies that OSS was not well led, created difficulties in the field, and accomplished little. Some of the evidence it cites to this effect is patently false: that John Coughlin moved his headquarters to Ceylon for the sake of the good living there; that OSS requisitioned single-barrel shotguns for use in the guerrilla fighting in Burma; that the only successful operation in Thailand during the war was the one Miles sponsored; that OSS personnel in SACO were prima donnas because they did not want to use chopsticks at every meal.

Although *A Different Kind of War* is thus partisan, tortured, and unconvincing in many places, with errors of fact and misleading conclusions, it is nevertheless of no slight worth. Its treatment of the problem of melding clandestine operations with conventional military intelligence and operations in an active theater is outstanding, required reading for all concerned with such problems. It is of equal, if not greater, value for the military or civilian officer responsible for developing the military, covert action, or intelligence capacity of a minor power. And those who served in China during World War II will derive much pleasure from Miles' accounts of SACO operations as well as from his revelations about the bitter rivalries in the Theater.

A. R. Northridge and  
James R. Teevan

LA GUERRE SECRETE DES SERVICES SPECIAUX FRANÇAIS.

By *Michel Garder*. (Paris: Plon. 1967. 528 pp. 25 fr.)

If the French government had not disregarded the advice and warnings of its intelligence service, World War II might have ended differently and France might not be what she is today. Such is the contention of Michel Garder in this book about the work of the Service de Renseignements before and during the war. He centers his history of the SR from 1935 to 1945 on the biographies of General Louis Rivet, Colonel Paul Paillole, and Colonel Roger Lafond ("Verneuil"), three of its key figures. A former counterespionage officer himself, Garder knew and worked with all the French intelligence chiefs during the 10-year period. He obviously has the greatest admiration and respect for Colonel Paillole, but his words of affection for Verneuil are heart-warming to anyone who ever knew "le petit père."

Garder is writing about men loyal to Maréchal Petain and General Giraud. He ably defends this loyalty and the old SR and is definitely hostile to the Gaullist BCRA (Bureau de Contre-espionnage, de Renseignement, et d'Action) which eventually absorbed the SR. He makes no effort to hide his disdain for General de Gaulle's followers who "deserted the sinking ship" and went to London, where Colonel Passy (André de Wavrin) founded the BCRA, a complex mixture "of shady patriotism, partisan spirit, pride in always having been right, and unhealthy suspicion of everything and everyone near or far that smacked of the enemy number one—the Vichy heresy." The SR veterans "felt uprooted in this environment which was not theirs; another language was being spoken, and further, the spirit was different: we had a feeling of being watched."

In precise and authoritative language, often lit with flashes of appealing humor, Garder calmly tells the story of the SR of the "old timers," professional soldiers and men of integrity, extraordinarily competent and brave. These career officers constituted an intelligence organization of great value because they were infected with "the virus of intelligence which the uninitiated cannot know." The book contains revelations which clash brutally with the carefully nurtured official version of events. Without a doubt it will become an annex indispensable for a complete understanding of the history of World War II.

In great detail, Garder describes the successes and failures of the SR in the framework of the history of the period. As early as 1935, he says, Colonel Rivet, head of the SR, had warned that Germany

would occupy the Rhineland, as it did on 7 March 1936, but the Sarraut government preferred to wait for the event to happen before taking action. Admiral Canaris had advised Hitler that the French would not move. The SR's remarkably good information on Hitler's intentions before the war was due, according to Garder, to Paillole, who from the beginning of his career believed in the doctrine of offensive counterespionage as opposed to mere defensive reaction. Moreover, it was his principle that "counterespionage does not mean doubling traitors and defectors and gangsters who eat like scavengers where they can. It means using people of integrity and trust. The real penetration agent is one who is motivated by patriotism or hate of the regime." "We must attack the enemy," Paillole used to say, and the SR did attack. Rivet did not like the Popular Front, but he did his job and did not meddle in politics as Canaris did in Germany. His Guy Schlessler in 1936 "knew the German army better than the French army." In Berlin, Paul Stehlin of the SR could and did see Goering frequently, and André François-Poncet and Maurice Dejean had excellent sources there.

By 1937, the author continues, the SR had three phenomenal sources in Germany. One was a code clerk who furnished the blueprints of the German code machine, so the French were reading the Nazi traffic. That year the Service was able to get its controlled agents recruited by the Abwehr. It had the OKW orders at the time General Beck was replaced because of his opposition to the projected attack on Czechoslovakia. Although it continued to warn the government, Léon Blum took no action and General Gamelin was undisturbed. "The Berlin post is too pessimistic," he would say; and then Stehlin was only a captain. In 1938 the French government had over a month's warning before Munich.

At this time the task before the SR was to eliminate traitors in France who were giving information to the Abwehr and so become the sole supplier itself. So successful was this effort that the comparatively rich Abwehr was financing French intelligence through double-agent operations.

In 1939 no one in France except the SR believed in the possibility of a German-Soviet pact. But Paillole and General Baril of the SR predicted such a pact and Germany's march on Poland. Poland was warned; and since at this time liaison between the French and British was very close, MI-6 was also forewarned. Even the dismemberment of Poland did not convince certain Maginot-Line gen-

erals in France that the Germans would attack the West, but the SR had received the information that Hitler would invade the Low Countries and also Norway and Denmark. Maisonneuve, an assistant of Baril, predicted in the spring of 1940 that Hitler would overrun France in a month, and everyone thought him crazy.

After the fall of France, Garder relates, Paillole immediately saw the possibility of operating clandestinely and welcomed it. He organized a clandestine counterespionage service; his men took aliases and went underground. Two months after the armistice, a security service called Bureau des Menées Antinationales was established by Colonel Rivet; it had the approval of the Nazis because it was supposed to investigate "subversives" in unoccupied France. Admiral Darlan was opposed to the MA but tolerated it. Laval, however, instructed Rivet "to take no intelligence action against Germany and not to collaborate with the British and the Americans." Rivet disobeyed. The MA got hold of the OKW order, dated 10 May 1940 and signed by Keitel, which called for an invasion of the UK and then an attack on the USSR. This document was passed to the British and the Soviets at Vichy.

From shortly after the Germans arrived in Paris until 1942 the SR had a tap on the telephone cable between Paris and Berlin and monitored the Wehrmacht traffic, including Hitler's calls from the "Wolf's Lair." Garder says that this source was able to warn resistance people who were about to be arrested. Judging by the product of the tap, the Germans thought that Vichy was wholeheartedly on their side. This was of course not the case; both Rivet and his associate Revers did everything in their power to wage the secret war until they were relieved of their commands by Darlan, who thought the French should fight the Bolsheviks alongside the Abwehr. Rivet described such ideas as "monstrous." Although loyal to the person of Maréchal Petain, Rivet and his group viewed collaboration with the Germans as "the collaboration existing between a butcher and his sausages." So when they were instructed to repress the Gaullists and other anti-Nazis, they refused.

After the complete occupation of France, the SR continued to function under the cover of an organization called Travaux Bureau, and men with flair and prudence like Verneuil stayed in France throughout. In Algeria under Giraud, Rivet remained overall director, with Paillole in charge of counterespionage. Paillole advised Giraud to make peace with De Gaulle, and the De Gaulle-Giraud combination of the CFLN

(Committee of National Liberation) was formed. In November 1943 a civilian, Jacques Soustelle, was put in charge of the Direction Générale des Services Speciaux, so for the first time the SR was taken out of the General Staff. After the liberation, the organization became the DGER (Direction Générale d'Etude et de Recherche), and finally the SDECE (Service de Documentation Exterieur et de Contre-espionnage). The book ends at this point because Rivet and Paillole leave the picture and the BCRA triumphs over the SR in the successor organization. A footnote might have indicated that in 1966, after the Ben Barka case, the SDECE was again placed under the Ministry of National Defense.

The author makes only two brief references to the very important role of the Communists in the Resistance, noting that they took over the Comité pour Action Militaire only after the liquidation of Jean Moulin, the Gaullist resistance hero—who does not appear in his book until page 388. Similarly, and even more puzzlingly, since he is Russian-born and a recognized authority on Soviet affairs, he says nothing whatever about the very significant activity of the Soviet intelligence services in France during the 1935-45 period.

Paillole, who is still alive, having escaped the fate of Bidault, Soustelle, and the generals who helped De Gaulle return to power and were then purged, probably helped Garder write this book. It is therefore understandable that the Gaullists are the villains, with men like Saar-Demichel, Foccard, and Hounau not mentioned, and Passy, Wybot, Fourcaud, and Vaudreuil mentioned only briefly. On the other hand, Maurice Dumont, who was a protégé of Paillole and Verneuil, gets credit for "having liquidated in one blow the whole anti-French espionage and propaganda network operated by the German armistice commission in Casablanca."

Concerning OSS Garder writes:

The most unsuccessful feature of the impressive American war machine, its Achilles' heel as it were, was none other than the famous OSS which so many novels have since glorified. An improvised outfit, made up mainly of incongruent elements, without traditions and approved methods, wasting enormous resources in obtaining very meager results . . . the shakedown cruise of this organization was not yet completed at the end of 1944. Nevertheless, this toy of the wealthy fascinated many neophytes of French intelligence. It was to this type of fancy-dress OSS rather than to the old-time intelligence service that the ambitious directors of the DGER tended to gravitate, spurning with scorn that quality characteristically French—the sense of size.

The serious student of World War II intelligence must read Garder's book, but he must balance this account of what happened with the evidence of other witnesses, especially the *Souvenirs of Passy*, *Memoires de Guerre*, Vol. III, of De Gaulle, *Résistance* by Georges Bidault, *Second Bureau* by Philip Stead, *Histoire de la Résistance* by Henri Michel, *Envers et Contre Tout* by Jacques Soustelle, *Mes Camarades Sont Morts* by Pierre Nord, and *Chemins Secrets* by Colonel Groussard.

Maurice Lesueur

THE DEATH OF GENERAL SIKORSKI. By *David Irving*. (London: William Kimber. 1967. 231 pp. 45/-.)

This book is of unusual counterintelligence interest. After examining all available evidence with 25 years of hindsight, David Irving concludes that the cause of the airplane crash at Gibraltar in which General Wladyslaw Sikorski and his daughter and thirteen others died remains a mystery. The Czech pilot, the only survivor, is said to have been uncooperative with the author's inquiry.

At the time of his death on 4 July 1943, General Sikorski, Premier of the Polish government-in-exile and Chief of Staff of the Polish Armed Forces, was a thorn in the side of the Soviets, the Nazis, and also the British. So rumors persist that this was a political assassination, and the findings of a British Court of Inquiry to the effect that there was no evidence of sabotage and the pilot was in no way to blame are disputed. The Poles pointed out that it had not been possible to determine how the elevator controls had become jammed on takeoff and rejected the British report as showing a tendency to pure polemics.

Irving delineates chronologically what happened before and after Sikorski's death. His investigation of the case appears to have been very thorough, but like Inspector Clousseau he cannot find its solution. Solving old murders requires more than cold facts; some hot flair is indispensable. It seems we will have to wait for a Soviet defector or someone like Maxwell Smart to tell us whether the Katyn massacre and Sikorski's death were crimes closely connected, having a common perpetrator.

The Soviets claim that the Nazis had the motive and opportunity to murder Sikorski; they had a well-organized sabotage section of proven efficiency in Gibraltar. Many Poles, including the general's widow, are inclined to believe that the crash was engineered by the Russians.



The Communists in Warsaw at one stage even accused Stanislaw Mikolajczyk of having caused Sikorski's death. German playwright Rolf Hochhuth claims to have proof that he was murdered by British intelligence; he learned this in the late autumn of 1963, he says, from a member of the British intelligence services.

Irving comments on all these theories without resolving the conflict or establishing any significance in the following facts he offers:

that Alexander Bogomolov, the Soviet Ambassador to the Polish government in London, had his plane parked next to Sikorski's Liberator in Gibraltar on the day of the "accident";

that in January 1942 the Polish Foreign Minister had asked Bogomolov about the fate of the 10,000 Poles, mostly officers, who had been in prisoner-of-war camps in Kozielsk and Starobielsk in the vicinity of Smolensk, and Bogomolov replied that they had been freed (the world now knows what happened to them in the Katyn forest);

that Sikorski had insisted on an investigation of the Katyn massacre by the International Red Cross in Geneva after the bodies were exhumed in April 1943, but none was conducted;

that Sikorski's plane had crashed once earlier, in taking off from Montreal, and before that an incendiary device had been found in it;

that in May 1943, a person speaking Polish advised Mikolajczyk and other high Polish officers that Sikorski's plane had crashed in Gibraltar, six weeks before the "accident" actually happened;

that there were a lot of British counterfeit pounds and furs aboard the plane at the time it crashed;

that FNU Pinder, identified as the head of the British intelligence service in the Middle East, was also on board the Liberator;

that frogman Lieutenant Crabb, who years later disappeared while Khrushchev was in London, was in Gibraltar "working over the boats" at the time and helped salvage the crashed Liberator;

that Dr. Josef Retinger, head of the Polish intelligence service, who always accompanied Sikorski, did not do so on this trip;

that after the war Sumner Welles expressed before a U.S. congressional hearing the belief that Sikorski's plane had been sabotaged.

Thanks to Irving's book, we now know all these facts. The possibility remains that some or even all of them have an explanation

that is anything but sinister. But one is bound to wonder. We will have to keep on wondering until an investigator with more flair than Irving appears or until someone confesses to the assassination of General Sikorski.

Richard Nelliser

### Anthologies

GREAT TRUE SPY STORIES. Edited by *Allen Dulles*. (New York: Harper & Row. 1968. 393 pp. \$6.95.)

Allen Dulles has done both the general reading public and intelligence trainees a service in compiling this anthology, a sort of case book to accompany his *Craft of Intelligence*. As editor he contributes a foreword, a few explanatory paragraphs at the start of each of his eleven sections, and introductory comments on each of the thirty-nine individual stories in them. But his most important contribution lies in the selection of these, made with the discrimination and care of a professional. That places this book many cuts above any other anthology in the field of which this reviewer is aware.

This professionalism does not mean that the book will not sell well, for a paperback edition (when forthcoming) will be an eye-catcher on any newsstand. While readers of the Ian Fleming genre, or even devotees of David St. John or Edward S. Aarons, may mourn the absence of a girl for every bed, fast cars, and special liqueurs, these pages prove again that oftentimes in the real intelligence world truth can be stranger than fiction; and when you get right down to it there are some dandy adventure stories in the book. For those who like their spy hero with weapon in hand, Mr. Dulles includes a section entitled "Action: The Dagger Beneath the Cloak." Here we have the kidnapping of two British intelligence officers by the Nazis in 1939 as told by Walter Schellenberg; here also is the assassination of two Ukrainian émigré leaders, Rebet and Bandera, by the Soviet intelligence operative Stashinskiy, who subsequently defected himself.

Fewer than a quarter of the 39 stories date prior to World War II. The surprise inclusion of a selection from *The Memoirs of Jacques Casanova* seems to have given the editor particular satisfaction, in the course of showing how an agent should not behave.

Mr. Dulles notes in his foreword that the anthology was not intended

. . . merely as a collection of entertaining spy stories. My aim has been rather to present a comprehensive view of the business of clandestine intelligence as it has been practiced during the present historical era and to do so by drawing on available published materials.

The division of the material into eleven sections is accordingly done by professional categories: Penetration, Networks, Counterespionage, Double Agents, Defection, Evaluation, and the like.

The first section, Penetration, opens with Richard Collier's exciting narrative of how maps of Hitler's Atlantic Wall defenses were stolen by an agent of the French Resistance. This is followed by a solid piece on the anthologist's own wartime penetration agent in the German Foreign Office. The section also contains Edward Sheehan's excellent article on Kim Philby which appeared a few years ago in *The Saturday Evening Post*. The recent disclosures on the Philby case were published too late to be included, but in a postscript to the Sheehan piece Mr. Dulles makes reference to them and notes that the Soviets

... pushed rather than suppressed publicity regarding [Philby in Moscow], in hopes, no doubt, that the more publicity that could be given to this affair the deeper the wedge could be driven into the Anglo-American cooperation which has been in operation for many years. Certainly it would only play into Soviet hands if we engaged in recriminations as a result of the Philby treason.

The Section on Codes and Ciphers includes the letters on our breaking of Japanese and German codes which General Marshall sent to Governor Dewey at the start of the 1944 Presidential campaign in order to forestall any exposure of this information in the course of Republican attacks on President Roosevelt's policies before Pearl Harbor. Of these letters Mr. Dulles writes that "there is nothing like them in the whole history of intelligence." Governor Dewey did keep silent about our communications intelligence activity during his campaign, but it is interesting to note that he was aware of its successes even before he received the letters.

The whole anthology is recommended for good authentic bedside reading.

Walter Pforzheimer

SECRET SERVICE: Thirty-three Centuries of Espionage. By *Richard Wilmer Rowan* with Robert G. Deindorfer. (New York: Hawthorn. 1967. 786 pp. \$10.)

The book under review is an updating of the late Mr. Rowan's comprehensive history of espionage, originally entitled *The Story of Secret Service* (Garden City, New York: Doubleday, Doran & Co.). At the time of its original publication in 1937 it was probably the best history of its kind extant, and it remains so today. Nevertheless it left something to be desired. Although it was almost 700 pages long,

any history that ranges from Biblical times to the beginning of World War II is bound to be rather sketchy in its treatment of cases. Moreover, Rowan was an amateur with respect to espionage, dedicated in this study to be sure, but still a professional writer rather than a professional intelligence officer.

From the mid-1930's on, increasing taxes and rising costs of living made it impossible for families to pass great private libraries and collections on to their heirs as they had done in the past. As a result, countless such libraries and family archives went the way of either public sale or gift to public libraries and institutions, where they became available to scholars. Thus almost from the date that Rowan's book was published, new original and secondary sources were commencing to become available which could have been used to enhance it greatly. On several occasions Rowan told this reviewer of his desire to update *The Story of Secret Service* with regard both to the history already covered and to new cases of the three subsequent decades.

With Rowan's death, his book has now been updated by Robert Deindorfer and given the new title. Virtually the entire original text has been retained, with some deletion and condensation. Deindorfer's additions commence at page 573 of the new volume and amount to about one-seventh of the total. The results are disappointing. A part-time "quickie" writer without professional intelligence background, Deindorfer has not performed the research required to improve the original Rowan text or to make his own 100-page contribution meaningful. He apparently was writing in a hurry; he did in fact fail to meet his deadlines for the book. His brush is broad, and there are occasional inaccuracies. It is apparent from his text, and particularly from his footnote references, that he made little use of the good sources available to anyone willing to take the time to search them out.

Among the major postwar cases, one checks the index in vain for such as that of Pacques in France, Frenzel and Felfe in Germany, and Petrov in Australia. Penkovskiy is dealt with in nine lines and Wennerström in eight. Alger Hiss and the Rosenbergs are strangely absent. Deindorfer notes the award of the National Security Medal to NSA cryptologist Frank B. Rowlett, but makes no mention of the same award to William F. Friedman or of his famous cryptologic successes. He spins off a totally inadequate write-up of the OSS in eight pages, devoting an additional five to Allen Dulles' penetration of the German Foreign Office. He calls General Donovan "vain and opinionated" but "thoroughly decent, dedicated," and he finds the designation of

Donovan as the father of present-day American intelligence "a bit excessive." Deindorfer's qualifications to make such judgments are not evident.

Allen Dulles contributed a short preface to *Secret Service*, stressing the need for secrecy in clandestine work and pointing out how wide of the mark most of the literature is in this field. He notes the significance of Rowan's original work and then goes overboard in kindness to say that Deindorfer has brought "an accurate and objective sense of perspective" to his portion of the present volume. This reviewer recommends that the reader stop his reading of the book at page 572.

Walter Pforzheimer

THE DEFECTORS. By Colonel *Vernon Hinchley*. (London: Har-  
rap. 1967. 250 pp. 25/-.)

The reader looking for a compendium of defector case studies should run, not walk, past this sorry little book. It is a jumble of opinion, distorted facts, and wrong conclusions on such cases as Burgess and Maclean, Penkovskiy, Lord Haw-Haw, Hayhanen, Monat, Casement, Rohrer ("No more damaging blow to Western Security was inflicted than the defection of Sergeant Glenn Rohrer of the American Intelligence Service [*sic*]"), Philby ("It is now suggested that Philby, like Alger Hiss, was picked out by the Russians while he was still in the university, as a man likely to rise in the world. But this is the kind of rumour which always arises when a case comes out into the open. There is not the slightest evidence that it is true."), etc.

One suspects that the author had it in mind to show that if the British have been embarrassed by defections from their ranks, the Americans are in even worse shape: "The Americans look askance at what they regard as the rather loose British Security system, but it is a question of the beam and the mote." Colonel Hinchley's efforts to substantiate this line are not convincing. The profundity of his efforts in general may be judged by his conclusion. In this he says that defectors must be serious-minded, mentally tough introverts, and he doubts that they could ever be the life of a party. "In fact, all I have against the average defector is that I could never like him very much!"

John P. Vaillancourt

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