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The story behind the East-West experts' exploration of nuclear test detection methods and their agreed conclusions, pregnant with latent purport for intelligence.

POLICING A NUCLEAR TEST BAN

Herbert Scoville, Jr.

The East-West conference on methods of detecting viola tions of any international agreement to suspend nuclear test held in Geneva from 1 July to 21 August 1958, was in effect, a might be expected, a USSR-West conference. The Wester delegation, a single team with members from the Unite States, the United Kingdom, France, and Canada, faced fou separate delegations from the USSR, Czechoslovakia, Polan and Rumania; but the Satellite delegates only presente papers apparently prepared by the Soviets and made no sul stantive contribution to the discussions. The Soviets a tempted to broaden the scope of the conference to incluc agreement to stop testing nuclear explosions, but the Weste delegations succeeded in maintaining the position that tl agenda was technical, not political, and that the decision c halting tests was not a matter for consideration. Neverth less the technical discussions were colored throughout wi political overtones, and several of the technical agreemen reflect Soviet political concessions.

The conference agreed first on technical methods whi might be useful in a detection system and on the capabilities each of these methods for identifying explosions under d ferent types of conditions. Both sides agreed on the use acoustic waves, radioactive debris, seismic waves, and electr magnetic (radio) signals to detect and identify surface, atmc pheric, underground, and underwater explosions. For exp sions at very high altitudes (30 to 50 kilometers and abov several additional methods of detection were discussed a considered promising, but none were specifically recommend for inclusion in the system, since experience with explosic at such heights is lacking.

After reaching agreement on these basic methods the conferees agreed on the technical equipment which would be required to put them to effective use, and then consolidated them into a recommended worldwide control system for policing a nuclear test suspension, specifying in some detail its technical requirements and disposition. This recommended system includes a provision for inspection of locations in which the control network has detected possibly natural phenomena that it has not been able to distinguish from nuclear explosion effects.

The Agreements

Acoustic Waves. It was agreed that with a sufficient distribution of listening posts the acoustic wave method would be effective in measuring and locating one-kiloton explosions in the air up to an altitude of 30 or perhaps 50 kilometers. The acoustic method is not applicable to underground explosions, but under the oceans even small explosions can be detected by hydroacoustic methods to distances of 10,000 kilometers. The instruments which record these air or water pressure waves can be expected to improve in precision and sensitivity, but they will not always be able to distinguish between acoustic signals from nuclear explosions and those from some infrequent natural events such as meteor falls, volcanic eruptions, and submarine disturbances. Acoustic detection must therefore be supplemented by other methods, even to identify explosions which do not occur underground.

Radioactive Debris. It was agreed that analysis of radioactive debris is effective in identifying and locating either fission or fusion explosions, and three methods of collecting samples were recommended. Control posts 2000 to 3000 kilometers apart on the ground would detect one-kiloton explosions in the air up to 10 kilometers high by sampling fallout 5 to 20 days afterwards, but would be subject to considerable error in determining the place of explosion and to some error in determining the time. If the approximate location of a suspected explosion is known, however, an aircraft can collect samples two to five days afterwards for a close determination of time and place. Shallow underground and underwater explosions are also susceptible of detection, with less reliability, by these means. Finally, inspection teams might collect samples from suspected

sites of underground or underwater explosions, as v
surface tests, and examine them for radioactive debris.

It was recommended that ground posts and existing a
flights over international waters be used for routine san
and that when other detection data indicated a need
samples over the territory of any nation, that nation's a
should carry observers from other nations in the cont
ganization in sampling flights over predetermined route
debris method would become increasingly effective wit
longation of a period free of nuclear explosions and wi
perfection of sampling and analysis techniques.

Seismic Waves. Seismic waves provide the only n
for initial detection of nuclear explosions undergrou
under waters not linked hydroacoustically with the o
and seismic wave detection is less discriminating than
methods. It was agreed that, given a sufficient distri
of control posts and ordinary seismic stations, 90 perc
more of five-kiloton seismic disturbances would be ide
and located within a radius of about five miles, but the ic
cation of one-kiloton explosions would require unusually
able conditions and unusually quiet seismic stations wi
range of 1000 kilometers. It was noted that the rang
discrimination of this method would probably be inc
with improvements in apparatus and technique, but s
disturbances not positively identified as natural earthc
would probably still give rise to the greatest number
mands for regional inspections—perhaps as many as 1
year, even if limited to magnitudes of five kilotons or g

Radio Signals. The radio signal caused by gamma rad
from an explosion on or above the earth's surface prov
detection means of great range and accuracy, but th
difficulty at ranges greater than 1000 kilometers in
guishing it from the electromagnetic emissions of ligh
flashes. The conference made reference also to a poss
that the radio signal might be deliberately altered or
nated through shielding the explosion against gamma
sions. It recommended further research to improve dis
nation and develop automatic equipment for this pu

High-Altitude Explosions. The detection of explosic
an altitude of 30 to 50 kilometers and above was discuss

a theoretical basis, but no recommendations were made. Three methods were considered. The registration by earth satellite instruments of gamma radiation and neutrons would detect nuclear explosions hundreds of thousands of kilometers from the earth, but there are difficulties in the possibility of shielding the explosion and in uncertainties about background cosmic radiation. Light from the explosion itself and the luminescence of affected upper layers of the atmosphere would be revealing, but would not be observable from the ground in cloudy weather. Such an explosion would also create a measurable increase in the ionization of the upper atmosphere, but an unknown number of natural phenomena might produce similar effects. The detection of explosions millions of kilometers from the earth was not discussed.

The Control Network. The conference set up recommended specifications for acoustic, hydroacoustic, seismic, and electromagnetic detection equipment, and for apparatus to collect samples of radioactive debris both on the ground and in aircraft. It recommended that all ground posts of the control net be equipped for all methods of detection, except that hydroacoustic equipment would be needed only on islands and ocean shores and in ships. Ships could also collect debris samples and might use the radio and aeroacoustic methods with reduced effectiveness, but could not use the seismic method.

The number of control posts required was determined largely on the basis of the needs of the seismic method, since the discrimination of underground explosions presents the greatest problems. 160 to 170 land-based posts were recommended, 60 of them on islands, along with about 10 ships. The posts should be as close together as 1000 kilometers in seismic areas, but could be diffused to distances of about 1700 kilometers in aseismic continental areas and of 2000 to 3500 kilometers in aseismic ocean areas. It was suggested that each post might require a personnel complement of about 30 specialists plus supporting staff.

It was agreed that this system would effectively discourage violations of a nuclear test suspension: it would provide good probability of detecting and identifying all explosions down to one kiloton except those set off underground. It would detect underground one-kiloton explosions but would be able to dis-

tinguish only a small percentage of them from earthqu
Without on-site inspection, in fact, it would be impossib
positively identify deep underground nuclear explosions
of high yields, since they could always be claimed to have
earthquakes. If, however, the ten percent or less of
kiloton disturbances not identified as earthquakes and a r
ber of lesser events taken at random were subject to sit
spection, a violator could not feel secure against exposur
mattter what precautions he took.

The identification by inspection of deep underground
clear explosions would still be very difficult. All the r
active debris would remain confined in a small volume
underground, and surface evidence might be very difficu
obtain. An inspection team would have to survey the
pect area indicated by the seismic signals for signs betra
the conduct of a test—recently used mine shafts or tun
excavations, logistic support for tests, or instrumenta
This task would of course be easier in completely dese
areas than in inhabited ones where signs of human act
would not be so suspicious. Finally, when suspicion of a
cealed explosion was very high and the location closely
termined, it might be necessary to drill many hundred fee
a sample of the radioactive material in order to prove a
lation.

The Soviet Attitude

These agreements were not achieved in smooth harmon
spite of an increasingly evident Soviet desire to avoid
conclusions. Just before the opening of the conference t
was question whether the Soviets would even attend; but w
the seriousness of the Western delegation was evidence
the arrival of its members at Geneva, the Soviets also c
and the conference began as scheduled. Then the first
days were spent in political maneuvers, with the Soviets
tempting to force the Western side to agree in advance
if the conference were a success nuclear testing should c
The USSR's strong propaganda position resulting from
unilateral announcement of test suspension while the Un
States was engaged in an extensive series of tests mad
difficult to keep the Western insistence on a purely techn
conference from appearing too negative: Soviet propaga

could have exploited a breakdown of the conference in the initial stages and its published proceedings to considerable advantage. Finally, in the face of Western firmness, the Soviets requested a day's delay, obviously to obtain instructions, and then acceded to the Western position. Thereafter the discussions were almost entirely technical in nature, though shaped in some respects to take account of political factors.

In general, the Soviets attempted to make detection appear easy, while the Western delegates pointed out the practical difficulties in detecting and identifying nuclear explosions. Discrimination of natural events from possible explosions was usually simplified by the Eastern group. The U.S. representatives generally relied on the statistical use of experimental data, while the Soviets drew upon simplified theories. On one occasion, Semenov, a Soviet Nobel prize winner, amused the Western scientists by saying that the experimental evidence must have been faulty since it conflicted with his theories.

Specific evidence of Soviet desire for agreement developed toward the end of the discussion of the first of the methods for detecting nuclear explosions, that using acoustic waves. The Soviets had presented theoretical data optimizing the ranges at which explosions could be detected by this method and had proposed draft conclusions citing these ranges. Overnight three Western scientists prepared a statistical analysis, using data from more than 200 experimental observations of nuclear tests, which demonstrated that under practical conditions the ranges would be very much shorter than those given by the Soviets. The West proposed conclusions citing these short ranges. After considerable discussion of the validity of the analyses and their conclusions, the Soviets accepted the Western draft with only minor modifications. This accommodation was the first real indication that they were prepared to accept scientific facts at variance with their position in order to reach agreed conclusions.

A Major Concession

A more important demonstration of Soviet desire for agreement occurred in the discussions which followed on the use of radioactive debris for detecting and identifying nuclear explosions. Outstanding success in collecting good early debris samples by aircraft and difficulties experienced in obtaining

reliable samples by ground collection techniques had led West to propose the use of aircraft in addition to grou sampling. The Eastern delegations, on the other ha strongly held that ground sampling was adequate and relia and that the use of aircraft was unnecessary, unduly com cated, and expensive. This position was obviously based Soviet political sensitivity to the use of aircraft for intellige purposes. Discussion on the relative merits of the two me ods was protracted. Although the Western delegation pres for data to support the reliability of the ground detection s tem, the Soviets never succeeded in substantiating their sound technical position. Private attempts were made to assure them that our emphasis on aircraft was not based desire for unrestricted overflight but rather on sound tech cal grounds, but they remained extremely chary of the inc sion of any mention of aircraft as an important element the system.

The Soviets delayed agreement to any conclusions on t subject for several weeks, apparently awaiting instructi from home, and the conference proceeded to other subje Finally, however, they again acceded, agreeing to the inclus of aircraft sampling as a basic element of the system and e to the provision that overflight of national territory mi occasionally be required. Such overflights, to be sure, wo be made by the aircraft of the nation involved, but they wo have observers from other nations on board. This first ma political concession was strong proof that if the Western d gation presented a sound technical position and held to it, desire for agreement would lead the Soviets to give way.

In the discussions on the use of seismic waves for detect explosions, the Soviets again tended to theorize and to simp the problem, particularly with respect to discriminating tween the seismic signals from explosions and those fr earthquakes. In this case, the Soviet attitude may have b due largely to lack of scientific experience in such discrimi tion. The presentation of the U.S. data on the Ranier und ground test in September 1957 was convincing to them a won their gradual recognition of the difficulties involv After the differences in scientific views had been ironed o agreement was reached on the seismic method without raising of any major political problems. The Eastern dele

tions accepted the Western conclusions which stipulated that, in order to identify 90 percent of the earthquakes and eliminate them as possible nuclear explosions, at least five stations should be so disposed with respect to any seismic disturbance as to obtain a strong signal capable of determining the direction of the first motion. This agreement later became a major factor in the discussions on the over-all detection system and the number of control posts required.

Next came discussions on the electromagnetic method, where the problem of discrimination between radio signals from explosions and those from lightning flashes was a dominant factor. The Soviets presented strong theoretical arguments for reliable discrimination with the use of machine methods, but no specific data to support their theory. In this discussion, however, they appeared to be in a stronger technical position relative to the West than in any of the others.

Technical Disagreements

A major difference of opinion developed at this time, and continued almost to the end of the conference, on the possibility of shielding out gamma radiation and thereby eliminating the electromagnetic signal from nuclear explosions. In the course of the discussion one of the U.S. scientists referred to success in shielding out the electromagnetic signals in a shallow underground explosion. When quizzed by the Soviets on how much earth was above the explosion the scientist had to admit the explosion occurred 75 feet underground. This amused the Soviets to no end; and although later experimental data were presented to demonstrate that even explosions on a tower could be shielded, they never fully accepted the feasibility of shielding, and tended to ridicule the Western position. Unfortunately the final record of the conference does not completely clarify the technical facts on this subject. This was a good example of how care must be used in selecting evidence to present at a meeting of this sort.

Since neither side gave any indication of experience in detecting tests at altitudes greater than 30 kilometers—this was before the U.S. ORANGE and TEAK shots at Johnson Island—high-altitude detection was discussed largely on a theoretical basis. Both sides presented material on the possibility of using gamma and neutron radiation, ionization phenomena,

and optical methods. The Soviets pressed very strongly the use of sputniks equipped with gamma and neutron det tors, while the Western delegation urged equal considerat of the use of ionization phenomena.

The most violent session of the entire conference occur during an informal meeting arranged to iron out the fi wording of the conclusions on these methods. This meeti which had been intended to last for only a few minutes, star at ten o'clock on a Saturday morning, broke up for lunch four PM, and finally continued until after eight in the eveni with both sides refusing to make any concessions. The Sovi exhibited great sensitivity to the Western proposal to use ra techniques, either passive radiotelescopes or active syste probably out of fear of their intelligence potential. No agr ment was reached that day, and over the weekend the West delegation decided not to press further for its views. Inst it agreed that the conclusions would give some preference satellite detection over ionospheric phenomena, but wo specifically recommend neither for the detection system cause of the lack of experimental data. When the chairm of the Western delegation made this concession at the open of the following session, Fedorov, chairman of the Soviet d gation, was taken aback. He said plaintively that the Sovi had spent all day Sunday preparing technical papers to ref the Western position. He was almost unhappy that the W had conceded since it prevented his delegation from present these studies. Furthermore, in consequence of their was effort, the Soviets were unprepared to proceed to the next it on the agenda.

Discussions on the equipment to be used by the detect system were almost entirely technical in nature and invol no serious disagreements. The Soviets now for the first ti raised the possibility of using ships as platforms for detect stations in ocean areas where suitable land masses were available. The usefulness of ships for acoustic and elect magnetic detection was seriously questioned by the West, a in an informal session it was agreed that use of these meth on shipboard would not be included in the conference conc sions. When these conclusions were taken up for ratificati Fedorov apparently had not been briefed that this item h been eliminated from the text, and the conclusions were r

fied without further discussion. Later, just after Fedorov had unjustly chastised the Western delegation for not adhering to previously agreed conclusions on some other matter, the subject of shipboard detection again arose and Fedorov referred to these methods as an essential ingredient of the system. When it was called to his attention that he had just previously agreed to their elimination, he was considerably embarrassed.

The final text of the conclusions restored a qualified mention of the aeroacoustic and electromagnetic methods on shipboard. On land, it was agreed, all four basic systems—acoustic, seismic, electromagnetic and radioactive debris collection—would be used at every station. This collocation, found difficult by the West, was strongly endorsed by the Soviets and is very likely their practice.

More Political Concessions

The major problem of the conference was the integration of these various methods into a worldwide system capable of detecting tests under all possible conditions. At Soviet insistence, the discussion on all the basic methods had been keyed to small-yield test explosions, down to one kiloton, despite Western desires to include consideration of systems reliable only for higher yields. In designing the over-all system, therefore, the conference initially used the one-kiloton yield as a basic parameter.

The detection and identification of underground explosions was the dominant factor in determining the number and disposition of the control posts. The initial Western attempt at designing a system came up with about 650 stations for one-kiloton worldwide control, as against 100 proposed by the Soviets. The Soviet proposal was obviously inadequate for discriminating between one-kiloton underground explosions and earthquakes of equivalent energy, since five of the 100 stations would never obtain clear signals of first motions from such an event. The Eastern delegation then proposed the use of existing seismic stations as a supplement to the detection system, but the ease with which seismic records could be falsified and the signals from an explosion made to resemble those of an earthquake rendered this solution impractical.

At this point, the Western delegation suggested that a s tem be designed with capabilities of good discrimination i yields of five kilotons and greater, and the Eastern dele tions accepted this approach. By Western criteria such system required 160 to 170 stations, while in the Soviet desi it would have 130. Not unexpectedly, the Soviets agreed the Western figures just prior to the conclusion of the cc ference. This acceptance of a system which would involve l tween 15 and 20 control posts in the USSR, each manned by or more persons, constituted a second major Soviet politic concession at the conference.

Since at present it is not always technically possible identify a nuclear explosion by seismic means alone, inspecti of the site of an unidentified event suspected of being a nucle explosion is necessary in order to prove or disprove the occu rence of a concealed nuclear test. The 160–170 control pc system would leave unidentified some 20 to 100 events per ye of energies equivalent to five-kiloton yields or greater, and is clear that inspection would be required in such cas Furthermore, if the system is to have any capability for yiel of less than five kilotons, inspection of suspected sites of lowe yield tests on a random basis would be required as a deterre to violations at this level. The Soviets early in the conferen referred to the need for inspecting sites of suspected nucle explosions but consistently deferred the inclusion of stat ments to this effect in any of the agreed conclusions. Finall however, in the conclusions on the control system, th agreed to such inspection. This acceptance of the principle inspection was the third and perhaps most important politic concession made by the Soviets in order to achieve an agre report.

Soviet Intentions

Before the conference, many members of the U.S. delegatic believed that the Soviets were attempting to establish a sit ation in which they could continue weapons development l means of concealed tests and at the same time inhibit nucle testing in the West. The conference yielded no evidence support this thesis; in fact it had led all Western represent tives with whom the subject was discussed to change the views. The Soviets fought strenuously on many points ar

attempted to minimize the difficulties inherent in establishing an adequate test detection system, but these efforts appeared aimed entirely at avoiding politically sensitive arrangements such as large numbers of observers, overflight, and free access to locations within the Soviet Union. On all of these points, they ended up by making major concessions.

Furthermore, the Soviets strongly pressed for a high-sensitivity system, one capable of reliably detecting explosions as low as one kiloton. Had their objective been to design a system susceptible of evasion, they would have given much readier acceptance to the Western proposal to consider higher-yield systems. In view of all these considerations, I believe that the USSR has no present intention of carrying out a concealed nuclear test in the event of a moratorium, and that it would openly abrogate such an agreement before risking being caught in a violation. Moreover, if the principle of inspection is adequately safeguarded in political discussions and in the terms of a suspension treaty, the system as designed is adequate to deter any nation from conducting a concealed nuclear test, at least with a yield greater than one kiloton. Without on-site inspections such a system would not be capable of preventing deep underground nuclear tests of even moderate yields.

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U.S. intelligence has organized to support the economic cold war and about some of the methodological problems it has encountered.

THE ASSESSMENT OF COMMUNIST ECONOMIC PENETRATION

Edward L. Allen

What the Soviets call "peaceful competition" with the West, particularly Sino-Soviet Bloc trade and development aid to underdeveloped countries, has presented a new challenge to the West and, from our own professional viewpoint, imposed new tasks upon economic intelligence. The increases in Bloc trade have been spectacular. Since 1954, Soviet trade with underdeveloped countries is up 500 per cent; total Soviet trade with the West is up 100 per cent. Further, the Bloc last year got 36 per cent of Egypt's trade, 33 per cent of Iceland's, 40 per cent of Afghanistan's, and nearly 25 per cent of Yugoslavia's. It succeeded in getting a substantial share of the trade of Syria, Burma, Iran, Turkey and Ceylon.

U.S. Organization for Cold War Economic Intelligence

It became clear to us three years ago that the USSR and other members of the Bloc had embarked upon a long-run program of economic penetration. At that time, we revamped our internal organization to provide the essential intelligence support to government policy-makers. As the Bloc program grew and the magnitude of the threat became clearer, we extended our list of consumers far beyond the executive branch of the government. It was important to keep not only Congress informed, but also influential business groups and the public in general. The Soviet economic challenge, in the words of our Director, Mr. Allen Dulles, had become the most serious challenge our country has faced in peacetime.

The pattern of coordinated reporting is now well established. Since February 1956, a working group under the Economic Intelligence Committee has turned out a detailed report every

two weeks. This working group is composed of representatives of the Department of State, CIA, the International Cooperation Administration, the military services, and the Departments of the Treasury, Commerce and Agriculture. Additionally, there is an analytical summary every six months, and a special quarterly report to the President's Council on Foreign Economic Policy. The full organizational structure supporting this intelligence effort is illustrated in the chart on page 22.

This organizational arrangement provides a mechanism for combining the political, military and economic facets of Soviet penetration activities. Although there is no rigid division of labor between agencies, there are obvious areas of primacy of interest. The Department of State, for example, bears the primary responsibility for political analysis, while the Department of Defense prepares all estimates on illicit trading in Bloc arms.

On a broader basis, an annual National Intelligence Estimate is produced which covers not only the magnitude, impact and intensity of Bloc penetration activities, but also relates these activities to the capabilities, motivations and internal policies of the Soviets.

Characteristics of Bloc Aid Programs

We have found a number of common characteristics in the Bloc aid programs for underdeveloped nations. First of all, a composite prescription is applied on an integrated basis—a line of credit, technical assistance and training, and in most cases a commitment to long-term trade. The provision for payment by means of its own commodities has great appeal to an underdeveloped nation, particularly one which is having difficulty in marketing exportable products at adequate prices.

Secondly, the Soviet program is almost entirely a credit program. Interest rates are low—2 or 2½ per cent. Repayment usually begins after the project is completed. Amortization is usually prorated over a 12-year period. Our Western interest rates are higher, but our repayment terms are often much longer, running from 30 to 40 years.

Third, the Soviet program usually covers only the foreign exchange costs of a project, leaving the balance to be financed from internal resources. Western development loans have

assisted through various devices with some of the internal nancial requirements.

Fourth, Bloc economic credits are usually related to ind trial development. They are granted for sugar mills, cem plants, and textile mills rather than for sanitation, sewage, housing development.

Fifth, these industrial programs are aimed at increasing t public or socialized sector of the economy, rather than t private or free enterprise sector. Thus the Russian-bu Indian steel mill at Bhilai is a government-owned pla whereas the American-built plant at Jamshedpur is a privat owned expansion of Tata.

Finally, the aid-and-trade deals are independent of milit pacts. Non-Communist underdeveloped countries receive B military and economic assistance without entanglement in Bloc military alliance. This practice disarms many; it ler at least surface credence to the Soviet line that "there is r body here but us peace-loving Russians" as the military a economic technicians pour in.

Sources of Information on Bloc Economic Aid

We have encountered rather formidable difficulties in es mating closely the magnitude of Bloc economic assistance underdeveloped countries. It is true that considerable inf mation is usually available from open sources regarding t amounts of non-military assistance which Bloc countr *promise* to deliver. Soviet agreements, in particular, a widely publicized, especially when large lines of credit are e tended: it has been trumpeted to the world that Afghanist received a $100 millions credit and Egypt a $175 millions cre from the USSR. More important for our purposes, the actu texts of many of the major agreements have been officia released.

Even when no value figures are announced, informati available through attaché reports usually permits us to es mate the approximate total cost and the foreign exchan component of an economic assistance agreement. Reports c tained through overt or covert channels from Western indu trial firms who have commercial contacts in underdevelop countries can also provide such data. The cost of the pet leum refinery Czechoslovakia is building in Syria, for examp

was estimated in part on the basis of information obtained from a Western corporation whose bid on the project was rejected.

We are thus confident that our estimates on promised economic assistance are fairly accurate. We believe we are within 5 per cent of the correct total figure and no more than 10 per cent in error for individual countries.

The confidence we have in our estimates of Bloc *performance* on assistance agreements is considerably less, and so far we have published estimates of only the *minimum* amount of assistance actually provided. Such estimates are of some value, but they are an inadequate basis for answering several pressing questions. In particular, they do not enable us to determine the amount of indebtedness or the rate of loan amortization of a country receiving credits from the Bloc.

The major difficulty in assessing the implementation of Bloc assistance agreements is finding sources of raw information. It is exceptional for officials in underdeveloped countries to be candid in discussing Soviet projects with U.S. attachés. Debt statements and ministerial reports of recipient countries are occasionally helpful. But in general we must rely on delivery or shipping notices and clandestine reports on construction progress. Clandestine reports are also our most valuable source on the numbers, competence, and activities of Bloc technicians assigned to aid projects. We feel the need for much more information on what success the Soviets are having in getting accepted as the representatives of peace and progress and the real champion of underdeveloped countries.

Special Problems with Bloc Arms Deals

Estimating the value of military assistance encounters considerably greater difficulties than estimating non-military assistance. The publicity attending the signature of an economic assistance agreement is notably absent in the case of military agreements. The military estimates must be based mostly on descriptions of individual shipments or other observations contained in many discrete military attaché and clandestine reports. The resulting estimates of units of equipment are converted to value terms by applying Bloc prices to the items in question, if they are known. In some instances we have had to use the U.S. prices for comparable items in

order to arrive at a value estimate. We consequently belie
that although our estimates in terms of equipment units a
reasonably accurate, those in terms of value may be in err
by 25 per cent or more.

The most troublesome consequence of our uncertain
about value estimates is inability to determine with precisi
the financial indebtedness to the Bloc of those countries r
ceiving Bloc military assistance. A reliable determination
the amount of cotton Egypt, for example, is shipping eac
year in repayment for the arms it has received from the Bl
would be significant intelligence. But especially in the case
Egypt, the inaccuracy of our evaluations is compounded by tl
fact that some of the arms delivered have been obsolete ar
therefore sold at a discount, and some of them apparently ha
been given without charge. Moreover, some small portion
the arms shipped to Egypt and Syria have been sent on to l
used in other areas, and we are not certain who ultimate
will pay for these.

Sources of Information on Trade

Collection of data on Bloc external trade is considerab
simplified by the fact that most non-Communist countri
issue periodic reports on the value and pattern of their foreig
commerce and we therefore do not have to depend on Commu
nist sources. Statements issued by Bloc countries, as we
as information obtained through clandestine collection, pr
vide means of cross-checking sources. When there are di
crepancies between estimates made on the basis of official no
Communist compilations and the statements of Bloc cou
tries, we do not automatically assume that the Communist
are lying.

An early estimate of Soviet shipments of machinery an
transport equipment to underdeveloped countries in 1956, fc
example, showed only about 20 per cent of the amount claime
by the USSR. This discrepancy, we ultimately concluded
probably resulted from inaccurate item classification in th
recipient countries. Underdeveloped countries often have ur
tidy or inexact customs procedures. Even when a standar
classification system is used, customs officials are frequentl
lax in establishing proper criteria to be used by their oper

ating personnel. Indian practices are particularly annoying in this respect. In their official reports of commodity imports, items accounting for as much as two-thirds of the value of imports from the USSR have been listed in the unspecified "all other" category. Since among the underdeveloped countries India is a major Bloc customer, the errors in India's commodity reporting may have a considerable effect on our estimates of total Bloc trade.

Other underdeveloped countries have similar bad habits. Most of them publish trade data in a very leisurely fashion. None is up to date in releasing statistics on commodities. No country includes shipments of military items in its reports. There is also the usual problem of re-exports involving third nations, compounded in the Soviet case by the employment of brokers and trading fronts for sensitive transactions. Finally, countries which have multiple exchange rates, such as Egypt and Argentina, present particular difficulties when we attempt to evaluate their trade in terms of dollars.

New Tasks for Intelligence

There is a need for detailed performance information, beyond the question of volume and money value, on Bloc development aid programs. Part of the Western effort in underdeveloped nations is devoted to highlighting for these newly emerging countries the dangers of dealing with the Bloc, to pointing out the advantages of dealing with the West wherever possible. So we not only need to report that country x received a cement plant from the Bloc at a certain price, but also to report the plant's reliability, relative efficiency, and the quality of its product.

And it is not enough for intelligence to measure current trends and performance in Bloc trade and aid. We have, in addition, the important task of anticipating future Soviet moves, of pointing out where economic, military or political problem areas are developing which could present the Bloc with opportunities for exploiting weaknesses. This must be done early in the game if Western policy-makers are to have an opportunity to move in first or to capitalize on some action of the Bloc.

Both in the anticipation of future Bloc moves and in the detailed analysis of Bloc development aid performance to date, I believe that we in the intelligence field need to do a lot more work.

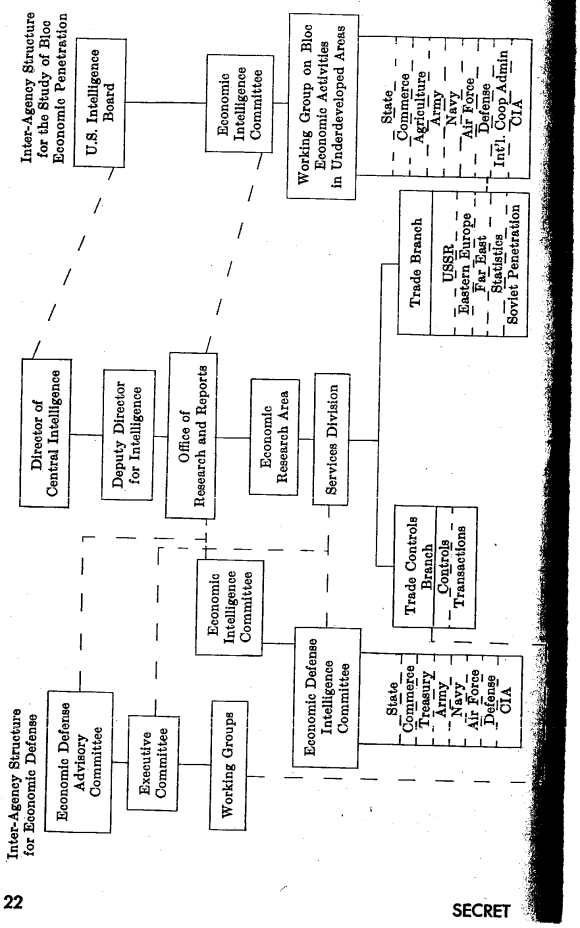
Strategic Trade Controls

The other side of the economic cold war coin is the strategic trade control program. We in CIA play a major role in providing the interagency committee structure of the U.S. Government with intelligence support for the development and enforcement of international and U.S. security export controls against the Sino-Soviet Bloc. This intelligence support consists primarily in estimating the significance of certain Western commodities, technology, and services to the war potential of the Bloc.

U.S. unilateral controls, as you are aware, are broader than the international ones, and require separate administration. There are therefore two major interagency committees involved in the control of strategic exports, one dealing with problems of multilateral export controls and their enforcement and the other with those of unilateral export controls. The CIA participates in an advisory capacity at each level of these committees up through the National Security Council, as indicated by the dashed lines in the appended chart.

Reports on Bloc exports and imports are often useful in pointing to economic strengths or weaknesses in the Bloc, but one can easily exaggerate an apparent economic strength or weakness by relying solely on commodity trade data. The USSR, in particular, has sometimes exported machinery and equipment known to be in domestic short supply (rolling mills and agricultural machinery, for instance) when such exports have been judged to be of net Soviet advantage. Similarly, in reviewing Soviet purchases from underdeveloped nations, it is prudent not to seize on every import of foodstuffs or industrial raw materials as proof of economic weakness in respect to that commodity.

Commodity studies of Bloc foreign trade will rarely reveal anything more than specific short-term soft spots in the production pattern. This type of information is useful for trade control purposes, but it is inadequate as an indicator of the



overall capability of the Bloc to achieve its objectives in the cold war. The real capability of the Bloc is revealed only in a close survey of its economic structure and its production and growth characteristics. The basic facts are the $180 billions of current gross national product for the USSR and the annual growth rate of about 10 per cent in Soviet industry, a GNP of nearly $70 billions for the European Satellites and of over $60 billions for China.

Institutional characteristics, in particular the bilateral nature of Soviet trade, the isolation of the Soviet price structure, and the inconvertibility of the ruble, may cause the USSR serious problems in its future trade outside the Bloc. They have not seemed, however, to be a serious constraint so far.

To determine Bloc economic weaknesses and strengths, and to estimate the impact of the strategic trade control program as a whole, we look primarily to Soviet domestic production capabilities. The large and rapidly expanding production capacity of the USSR, complemented by the European Satellites and to an increasing extent by Communist China, is an impressive indicator.

The bases for the aggressive U.S. approach to documentation

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ON PROCESSING INTELLIGENCE INFORMATION

Paul A. Borel

The cycle of organizational activity for intelligence purposes extends from the collection of selected information to its direct use in reports prepared for policy makers. Between these beginning and end activities there lie a number of functions which can be grouped under the term *information processing*. These functions include the identification, recording, organization, storage, recall, conversion into more useful forms, synthesis and dissemination of the intellectual content of the information collected. The ever-mounting volume of information produced and promptly wanted and the high cost of performing these manifold operations are forcing a critical review of current practices in the processing field.

Storing and Retrieving Information

Efficient and economical storage and retrieval of information is by all odds the toughest of the processing problems. Millions are being spent on it by the research libraries of universities, of industry, and of government. Even as we meet here today, an international conference is under way in Washington at which new means of storing and searching for scientific information are being discussed.

For intelligence, storing and retrieving information is a particularly vexing problem. Our Document Division alone processes daily an average of some 1,500 different intelligence documents, received in an average of 15 copies per document. This is exclusive of special source materials, cables, newspapers, press summaries, periodicals, books, and maps. Since these reports come from scores of different major sources, the daily volume fluctuates and shows lack of uniformity in format, in reproduction media, in length and quality of presentation, and in security classification. As they come in they must be read

with an eye to identifying material of interest to some 150 different customer offices or individuals.

We have a general library of books and periodicals, whose operations approximate those of the conventional library. We have several registers (in effect special libraries) through which we handle special source materials, biographic data on scientists and technicians, films and ground photographs, and data on industrial installations. Most of these materials are subject to control through indexes of IBM punched cards.

We have a collection of two million intelligence reports miniaturized by microphotography. Short strips of film are mounted in apertures on IBM punched cards filed in numerical sequence. Access to these cards, from which photo reproductions can be made, is obtained through an organized index of IBM cards now numbering eight million. Thus access to the document itself is indirect, through codes punched into the index cards to indicate subject, area, source, classification, date and number of each document. The data on index cards retrieved in response to a particular request is reproduced on facsimile tape and constitutes the bibliography given the customer. This system—which seeks to fit a given request with the relevant "intelligence facts" on hand—we call the Intellofax system.

These then are our assets. I'll say no more at this time about problems in connection with the general library, or those of operating our registers, since they are in many respects variations on the theme of our concern with the effective operation of the Intellofax system.

Demands made on our document collection stem from three types of requests:

Requests for a specific document to which the analyst has a reference or citation;

Requests for a specific bit of information in answer to a specific question;

Requests for *all* information relevant to a subject which may or may not be well defined.

Our major difficulties are almost all connected with the last of these three, the one which requires a literature search. In searching unclassified literature we rely on commercially produced reference aids, but in searching classified materials we

use the Intellofax punched card index. This index we would use to retrieve, for example, information responsive to a request for "anything you have on the movement of iron ore from Hainan to Japan between 1955 and 1958, classified through *Secret*, and exclusive of CIA source material."

Intellofax is a high-cost operation. Only 10 to 15 per cent of the questions put to the information section of our Library are answered by literature search; yet some 30 people are used in the necessary coding, and another 50 to 60 in IBM and auxiliary operations exclusively in support of Intellofax. On the other hand, some portion of this cost would be incurred in operating any alternative system even at minimum level; and Intellofax makes possible the organization of bibliographic material in various forms and at speeds which would not be practical under a manual system.

Search results, however, are not uniformly accurate. We recently tested the accuracy of the Intellofax system by having a task team of three analysts from a research office conduct a controlled experiment. Five subjects, corresponding to common types of reports produced by that office, were selected. The test indicated quite conclusively that the system does an efficient job of retrieving documents referring to specific objects or categories (trucks, factories, serial numbers), but that it is less satisfactory in handling a more general subject, such as industrial investments in China. A comparison with the analysts' own files showed very satisfactory Intellofax performance in retrieving documents placed in the system, but some documents in the analysts' files were not retrieved. Reruns with the same code patterns yielded consistent results.

The inaccuracies of the Intellofax system reflected in the above and other tests can be reduced by revising procedures and improving supervision, but they cannot be eliminated altogether. In literature search a set of symbols assigned to incoming documents is used to provide the searcher with a clue to the pertinence of any document to the request he is servicing. This set of symbols is in the nature of an index, but different people viewing these symbols may give them different interpretations. This makes the problem complex, for the determination that there exists a meaningful relation between even two pieces of information depends on many differ-

ent, often subtle criteria which elude unequivocal symbolic representation.

The solution of the accuracy problem would appear to turn on the ability to develop a master set of symbols, a Code, large enough to cover an extremely wide variety of subjects and areas and small enough to be contained on an index card, one applicable to diverse documents containing fragmentary, fugitive and often seemingly unrelated information, and at the same time conducive to uniform application initially by those coding incoming documents and later by those seeking to retrieve them. To prepare such a Code is a tough assignment today. The job is not likely to be easier for some time.

It is relevant at this point to invite your attention to the views on this subject of the Working Party organized last year [redacted] to examine the possibility of establishing a common reference service:

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[redacted] *books of reference and finalized intelligence reports. It would be impracticable to try and include the welter of documents from which such finished reports are built up; even if it were practicable, it would be an immense task beyond our resources.*[1]

I disagree. Not as to the difficulty of the task or its relatively high cost, but as to its impracticability. I believe the solution lies in a) selectivity in identifying those documents to be held by the Center, and b) the organization of those documents into discrete collections, each controlled by an index suitable to its particular requirements. This is the approach we have taken, more by accident than by design. Such an approach makes it possible to cope with small problems, even though the big problem may still be unmanageable.

Reference Service and the Research Function

Where central reference services have been organized independent of research offices, it soon becomes evident that the functional line of demarcation between them and the research units is not clear. This becomes important when it results in

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[1] [redacted] *Modern Methods of Handling Information,* 15 Oct. '57 (Confidential), para. 6.

duplication of effort or, worse, in non-use of reference materials by the researcher laboring under the misimpression that he has all relevant documents in his possession. Today's researcher, like his predecessor, feels insecure without files which he can call his own. In such a situation we must have a proper regard for tradition, but sometimes it is difficult to distinguish tradition from inertia. Recently our Biographic Register, receiving a report published by a research office, found that failure on the part of the author to check the Register files had resulted in some one hundred errors or omissions.

It must be decided whether a reference service is to be active or passive, dynamic or static. To take a simple case, a passive approach to reference service would mean that reference personnel would merely keep the stacks of the library in order, leaving it to research analysts to exploit the collection. Under the active approach, on the other hand, reference analysts would discuss the researcher's problem with him and then proceed, as appropriate, to prepare a bibliography, gather apparently pertinent documents, screen them, check with colleagues in other departments for supplementary materials, make abstracts, have retention copies made of popular items in short supply, initiate a requirement for supplementary field service, or prepare reference aids. In CIA we aim at active rather than passive reference service. How active we are in a particular case is a function of the customer's knowledge of our services, his confidence in us, and how pressed he is to get the job done.

Once a separate facility has been set up to provide reference services it is not long before it publishes. This comes about for several reasons, the least controversial of which is that a customer has made a specific request. Thus our science analysts may call for a compilation of biographic data on the individuals most likely to represent the Soviet Union at a forthcoming international conference on the peaceful uses of atomic energy. We call this type of publication a research or reference aid. Some are quite specific; others are more general, being prepared in response to a need generally expressed. A number of different customers may, for example, make known that it would be very helpful to have a periodic compilation of all finished intelligence reports and estimates for ready refer-

ence. Or the need may be implied rather than expressed: the reference analyst may note that over a period of time the demand on him for biographic data about Soviet scientists is heavy, many requests calling for much the same information furnished earlier to others. The result: the production of a major reference aid along the lines of our "Soviet Men of Science." And naturally it isn't long until a revised edition is called for.

Criteria for determining when and when not to summarize information holdings in a general reference aid are elusive. It is similarly difficult to define the proper scope of the general reference aid. How far can it go before the researcher considers it an infringement on the research activity for which he is responsible? This question has implications beyond those readily apparent. Quite basic is the feeling among research personnel that they and their mission are a cut above the reference officer and his role. A manifestation of this attitude is the steady flow of competent people out of reference into research, with only a trickle coming the other way. I doubt whether the inconsistency of this position is appreciated in view of the joint effort required by research and reference activities to provide the soundest base possible for the research effort.

In my view the legitimate limits of the reference aid can best be arrived at in terms of the highest level of service expected of the reference officer. Stated simply it is this: to make known the availability of services and information the existence of which may be unknown to the researcher; and, given a task, to make the preliminary selection of materials to meet the particular need of a particular user. This may involve bulk-reduction operations (such as abstracting) to leave a smaller quantity of material containing everything pertinent to the user's problem, or conversion operations (such as translation) to get information in usable form. I would even say that the reference function includes evaluation, evaluation of the reliability of information. To the researcher must be left the determination of its significance for the present; to the estimator its significance for the future; and to the policy-maker the indicated course of action.

Machine Application to Documentation Problems

In processing intelligence information, increases in efficiency may depend upon the adoption of techniques involving automata. This is especially the case when savings of time are sought. But as soon as you consider automation, that is, the inclusion in your processing system of a machine as an integral part of it, you are faced with the need to make decisions different in nature from those made with respect to the desirability of expanding staff or restricting functions. It is a difficult problem to achieve an optimum balance between man and machine. Among the many considerations involved there are two important ones which ought to be, but seldom are, fully explored before you commit yourself to a particular machine—you should accurately determine the *net* gain or loss in terms of time, space, manpower, and money; and you should be fully aware of the limitations of the machine and of its use by man. It is often more important to know what cannot be done with the machine than to look wholly to what can.

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Nevertheless, I would again incline to disagree

In view of the great initial investment needed to launch [a mechanized reference system], the very large and persistent requirement for coding, maintenance and other supervisory skill and the inevitable limitations of machinery when applied to intelligence processes, we do not think the introduction of such a system merits further examination.

No one would argue that large investments should be made in schemes unless they hold promise of relieving major problems. And the demands of a mechanized reference system for special skills are admittedly both high and persistent. However, these factors should be weighed in terms of the relative costs, not only the cost of alternative ways to solve the particular documentation problem, but also the cost of not solving it at all. We take exception to the conclusion that the limitations of machinery when applied to intelligence processes are "inevitable." We also believe it unwise to categorically dismiss the introduction of machinery as not meriting

further examination. Limitations there are today and will continue to be. But those which are inevitable are fewer than is generally supposed. Only by daring and risking will we come to know how few are the real limitations of a mechanized approach to documentation. This philosophy is yielding promising developments in the fields of microphotographic storage, automatic dissemination, abstracting, and translation, all fields of particular concern today.

Microphotography. Both Air Intelligence and CIA are testing a system developed by Eastman Kodak known as Minicard. This system in essence substitutes a 16 x 32 mm film strip for the present CIA system of IBM punched index cards corresponding to hard copy or film in the document storage file. Self-indexing Minicard document images are read electronically, not mechanically as IBM cards are. The characteristics of Minicard make possible a reduction of space requirements by a factor of 4, and an increase in speed of handling by a factor of 2. The new system is capable of a level of information manipulation and a degree of coding sophistication which gives promise of radically augmenting the contribution of the information fragment to the solution of reference problems requiring a search of the literature. And, contrary to present practice, the integrity of the file is maintained at all times.

Automatic Dissemination. Air Intelligence is testing a Document Data Processing Set designed by Magnavox. This is a general-purpose computer especially designed for problems requiring close correlation. Requests for information form the reference file against which incoming documents must be compared. Up to 20,000 words specifying the subjects and areas of interest, other qualifying data (such as evaluation or type of copy desired), and user identifications are stored to define the requirements of 160 users. When a document is to be disseminated, its subject and area coverage, previously coded and punched into paper tape, is fed into the machine. The machine searches its file of requirements and prints out a list of those who have requested such a document, the total number of copies needed, and the form in which it is wanted. Speed and uniformity of performance rather than financial economy is what the Air Force is after in this case.

Automatic Abstracting. Army intelligence and IBM are working on means for producing, entirely by automatic means, excerpts of Army field reports that will serve the purposes of conventional abstracts. At a recent demonstration the complete text of a report, in machine-readable form, was scanned by an IBM 704 data-processing machine and analyzed in accordance with a standard program. Statistical information derived from word frequency and distribution was used by the machine to compute a relative measure of significance, first for individual words and then for sentences. Sentences scoring highest in significance were extracted and printed out to become the "auto-abstract." Adoption of this method of producing abstracts of overseas reporting would require the use of a flexowriter in the field. When the original report is typed on stencil, a flexowriter tape would be produced simultaneously as a byproduct and would accompany the report to headquarters. There tapes in sequence would be fed into a computer and auto-abstracts printed out.

Mechanical Translation. The only successful Free World demonstration of machine translation to date took place on 20 August 1958, when a continuous passage of 300 sentences taken from Russian chemical literature was translated by the Georgetown University research group, under CIA and National Science Foundation sponsorship. An IBM 704 computer was programmed with the appropriate grammatical, syntagmatic and syntactic rules, and a Russian-English vocabulary was introduced into its memory system. The machine alphabetized the text, determined the lexical equivalents of the words, reconstructed the text, performed the necessary logical operations, and printed out the English translation. Only minor stylistic editing was required to make the product compare favorably with a translation made by a linguist. The rate of translation was about 24,000 words per hour. With improved input equipment (reading machines), rates up to 100,000 per hour are foreseen as possible. Research has already started on mechanical translation from Polish, Czech, Serbo-Croatian, French, Arabic, and Chinese. Soviet research in this field is considerably ahead of ours.

Outlook

In closing this general review of aspects of the intelligence documentation problem, we should look briefly at certain trends which affect us all. First, channels for procuring publications and techniques for storing and retrieving the physical document are extensive and well developed. The immediate outlook is for no basic change in ways and means in this field, but rather an expansion and intensification of present methods.

Second, the type of reference or information service coming to be required will demand action primarily in preparing reference personnel to give assistance of higher quality than is given today. Reference tools will need to be improved also, but this is likely to follow if there is a more sophisticated reference officer to create a demonstrable need for them. The increase in amount and kinds of material available will call for more intense exploitation of it by the research analyst; he in turn will by necessity rely increasingly on the reference officer for first-cut selection and evaluation. Reference officers will therefore need greater subject competence, more language ability, and a wider training and experience in all aspects of intelligence documentation. Already a number of American corporations are using information specialists as members of research teams. This approach deserves testing in intelligence.

Third, in the field of literature searching, specialized schemes will be developed to fit the needs of specialized users. While general theory will continue to be developed, pragmatic approaches to problems based on an analysis of the way users employ services and exploit materials will play an increasingly important role. Proved systems employed by reference centers will be simplified and adapted for use by the individual analyst to enable him to control the literature he requires in his immediate possession. The analyst in turn will provide the central system with the means of subject retrieval in his specialized field as a by-product of the way he controls his files. In this field, machines will long continue to play a secondary role.

Fourth, the present and future demands for reference service will lead to increased use of machines where these can be

introduced without jeopardizing the performance of essential intellectual operations. This fact and the increasing volume of information which must be processed will bring about more centralization. The problem then becomes one of insuring that central reference is at least as responsive to research needs as the reference facility which is an integral part of the research area. The solution is to be found in an approach which integrates the information-processing activities, wherever performed, into a single system within which collection, processing, and user components operate along well-defined lines.

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[redacted] *contemplates the tortured progress of a complex organism in getting its food from hand to mouth.*

THE GUIDING OF INTELLIGENCE COLLECTION

William P. Bundy

In tackling the subject labelled "Procurement" in the program for this conference, it seems most appropriate to discuss, for an audience predominantly of researchers or intelligence producers, not the whole range of collection activities, but simply the link between the people who use raw intelligence on the one hand and collectors of raw intelligence (or should I say "procurers?") on the other. To make even this restricted subject manageable, I have confined my illustration almost entirely to the procurement of positive intelligence on the Sino-Soviet Bloc, excluding other geographic areas and excluding also the effort in support of intelligence collection operations themselves.

The essential problem is of course simply one of communication between human beings. No one who has ever done research on his own will have the slightest doubt that the ideal unit is one—a single person doing his own collecting and producing with no intermediaries whatever. Or one might grudgingly accept as a model Mark Hopkins' picture of the true university—the collector on one end of a log and the producer on the other.

If these be only dreams, I do still recall one actual large organization that seemed to me to approach the ideal. During the last war I was at a place called Bletchley in England. There, in three low brick wings of the same building, side by side,—called, poetically enough, "huts"—were housed respectively a final producer apparatus, an intermediate processing apparatus, and a collection control apparatus. They were within easy walking distance, and the people in them knew each other by their first names and had been in their jobs long enough to have quite a knowledge of each other's problems. The result was a tremendously efficient collection oper-

ation, which balanced intelligence priorities and needs fully against the need to maintain assets for stand-by purposes, and all with what was—even by British standards—a minimum of red tape. As I recall, the weekly so-called control meeting used to take about an hour to dispose of all its business, including discussion and action on new ideas. I had never seen anything like it.

And I don't really expect to again. For that guidance system had two great advantages unlikely ever again to exist in combination in a large-scale effort. First, a relatively limited focus, almost wholly military, within which the basic substantive priorities were largely self-explanatory and seldom controversial. And second, a single collection system, and that of such a nature that its capabilities, though flexible in degree, were limited and readily tested for possible expansion. You knew pretty well what could be done, and if you didn't know you could find out fairly quickly. In other words, both the intermediate processor and the collector knew what the producer wanted, and both the producer and the intermediate processor knew what the collector could do. Where these conditions exist, and where you have continuity of first-class people, it would take a most imaginative management consultant to contrive a system that could gum the works.

There are in intelligence today a very few areas thus happily self-contained. Map procurement, I think, is one. But by and large we are now in a situation where the demands are manifold, the priorities difficult to keep clear, and the collection capabilities variable, hard to appraise and extremely limited relative to the demands. In these circumstances guidance becomes one of our major problems, one testing the competence, experience and knowledge of our people, and testing also our capacity to devise administrative methods than can assist the infirm and the temporary while not blocking the operations of the sophisticated and imaginative professional.

The Hydra-Headed U.S. Consumer and Collector

The complexity of the problem of guidance is indicated by the variety of consumers and of collection mechanisms in the U.S. intelligence community. (I am using the term "consumer" in the broadest sense, in order to avoid shades of distinction among the various stages of processing or intelligence production and the various policy-making levels of consumption. From the collector's standpoint the rest of us are, in truth, all "consumers.") On the consumer side the principal units are:

1. State
2. Army
3. Navy
4. Air Force
5. Joint Staff
6. AEC
7. CIA ORR—for Bloc economic and worldwide geographic matters
8. CIA OSI—for basic scientific matters
9. CIA OCI—for current intelligence at the national level, including indications, and for research in support of current intelligence
10. CIA ONE—for national intelligence estimates (usually via one of the other consumers)

On the collection side, the list is even more extensive. The collection activities can usefully be broken down into two categories: first, what I shall call "self-contained" systems, such as the Foreign Service (including foreign aid and information people) and the system of military attachés, which work primarily for their own parent organizations, and second, a larger number of "common concern" systems, service organizations which work primarily for others. Of these latter, some use technical methods of a classified nature, for example the Atomic Energy Detection System and ELINT. Others, who make use of unclassified technical methods or simply "people and paper," include the following:

OO/Contact (for domestic collection)
OO/FBID (for foreign broadcasts)
OO/FDD (for material that comes by subscription)
Publication Procurement
Map Procurement
OCR Liaison & Collection (representing government officials not directly connected with intelligence)
Clandestine Services

In addition some "common concern" services are not complete organizations, but make use of the facilities of one or more of the others:

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Defectors and returned German scientists
East-West Exchanges
Trade Fairs
International Conferences
Graphics

It would be pleasant to report the hitherto undisclosed existence of an IBM 704, or Hollerith Hurricane, that handled all requirements and steered them effortlessly to the right collectors. Alas, this is not the case! There is no central mechanism that attempts to do a thorough policing and sorting job on the requirements any one producer may choose to levy on collection. Basic to our entire system, in fact, is the principle that the individual producing agency—responsible for its aspect of total intelligence production—may levy upon any one, or upon all, of the collection facilities to meet its needs.

Whether this right is, in a given case, any more effective than Owen Glendower's ability to "call spirits from the vasty deep" is, of course, another matter. But at least the requirement can be levied, and unless patently outrageous it will reach the designated collectors. For almost all requirements levied by one agency on the collection facilities of another, this will be via the good offices of our CIA Office of Central Reference, which while not policing does fulfill an important function in registering, numbering, and transmitting requirements for most of the non-technical forms of collection.

In this, as in many other respects, it is useful—and historically important—to keep in mind the distinction between those collection systems that are organic parts of operating and intelligence producing departments—the "self-contained" systems—and those that exist for the benefit entirely of others. Foreign Service reporting and the attaché operations of the military services historically antedate the existence of any overall intelligence framework. An ambassador today hardly thinks of his reporting work as being the fulfillment of

a "requirement," and indeed in the formal sense it seldom is, for our senior department is understandably reluctant to tell its top people abroad what they should look for, at least in the political sphere, by the historic overt methods of diplomacy. As for the attaché system, the intimate ties between the attaché and his base are such that, armed as he may be with an apparatus of guides and requirements, most of his reporting is done, in practice, in accordance with a "felt necessity" derived from daily cable exchanges.

Not so with the other collection systems—overt, clandestine, and increasingly the various technical systems—operated as a matter of "common concern."[1] These have no direct base to report to (even those sharing CIA parenthood with producing offices must and do serve other masters with at least equal zest), and they must hence be governed by an unruly flow of requirements from their many consumers, and must make shift with this as best they can.

Agreed Objectives

To help reduce this state of potential anarchy to relative order, the U.S. community has evolved a commonly agreed framework for the overall intelligence effort at all stages—a set of Priority National Intelligence Objectives. These PNIO's have developed from a slow start. Originated in September 1950, largely on the initiative of the military services, they consisted at first of a short statement of about eight categories of key importance. Along about 1953, this statement seemed inadequate to cover the breadth of factors involved in the cold war, and it was decided that the Board of National Estimates, from its Olympian vantage point, should coordinate an effort to set up a longer list with more clearly defined categories. Substantively, the aim was to include political and economic objectives in perspective with military-related ones, and to separate the really crucial military-related objectives from those of more routine nature.

Since that time, the Estimates Board has continued with the assignment, revising the list annually in a far-from-per-

[1] This term has a precise statutory meaning in our National Security Act of 1947, from which many functional charters derive. It is used here more broadly, to cover all collection work not done predominantly for the account of the collecting agency itself.

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functory exercise culminating in review at the top intelligence level and circulation for information to top policy-makers as well. The document now consists of three categories of priorities, with a total listing of about 50 items. The PNIO's set priorities for all intelligence activity, production as well as collection. Their greatest weight, however, is almost certainly in the collection field, where they serve as a basis for adjusting major priority questions, especially in the guidance and direction of the "common concern" collection systems.

But there are also many things the PNIO's do not do, things that no document of the sort can well do. One is to forecast what may turn out to be crisis areas at any given time. If a Communist revolt breaks out in Ruritania, common sense dictates a top-priority effort which in practice would be undertaken irrespective of Ruritania's normal status as a third priority. The PNIO's cannot select the Ruritanias of the year to come—or at least they haven't reached that point yet, in spite of their being drafted in the Estimates shop.

More generally, the PNIO's are only statements of *objectives*. In themselves, they are only a most general guide and framework within which individual levies or major collection projects can be judged. Many stages of translation are required before they can become anything like true guidance, in any specific sense, for collection effort. One of those stages, for certain areas of intelligence, is provided within the PNIO framework itself, by a series of Annexes dealing with the priority economic, scientific-technical, atomic energy, guided missile, and international communism objectives, and in addition, in a crucial field which Mr. Patton will describe, one comprising the General Indicators List.

These subordinate annexes, drawn up by the several subcommittees of USIB charged with the respective subjects, vary greatly in bite and effect. Those on atomic energy and guided missiles get pretty well down to cases, and I have no doubt have a marked effect on the allocation of effort. The scientific and technical one reads largely in generalities, but does usefully highlight some of the important technical breakthrough issues. There is similar generality in the economic one, though it too has useful specifics on the Soviet penetration problem. Clearly any document of this sort runs a major risk

of boring the collector with what seems to him largely boilerplate, and thus getting no effective impact.

So much for attempts to state objectives. When the effort started, I find from the historical files, many powerful voices were raised prophesying nothing but a waste of time. I think it has not turned out so: certainly the blood on our Estimates conference tables every year looks real, so somebody must be getting hurt; and that is a good sign. Nonetheless, there are clear limits to what can be done along these lines.

Generic Practical Problems

There are certain problems of a day-to-day nature in the consumer-collection relationship common to most forms of collection which it will be worth while to look at one by one. They seem to be associated mainly with five steps in the process of levying requirements:

1. Defining the requirement, or locating intelligence gaps.
2. Stating the requirement for the collector.
3. Selecting the appropriate collection system.
4. Servicing the return, including supplemental requirements.
5. Making specific evaluations and appraising the collector's reporting.

I should say, by the way, that I shall be talking solely about consumer-originated requirements, leaving out the handling of requirements originated by collectors themselves for the purpose of testing or developing a source, or to take advantage of spot opportunities. This latter type of self-levy is common and often very important today—particularly, for example, when our overt collectors learn of projected travel behind the Curtain by knowledgeable legal travellers—but it raises no real machinery problem.

Defining the requirement. In the field of modern history writing, and I am sure other areas of scholarship as well, it is a commonplace that the great bulk of writers choose a subject because the available materials are ample, rather than ask what the key questions are and then seek out and work on materials however slender. This is a natural human tendency, and in scholarship the immediate cost may be no worse than massive cases of publisher's indigestion. In intelligence,

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however, the tendency can be fatal, with the massive indigestion falling to the policy-making reader, while the poor collector goes about his business with no help from the producer in the middle.

Making the producer stress his gaps rather than his satisfactions is of course largely a problem in education of the individual, and toward this education the various priority lists certainly make some contribution. Yet something more intensive and specific is needed. In essence, the intelligence analyst must be taught not to begrudge time spent in pointing out gaps in information (and how they might be met) as an essential part of his job—and one to be done as early as possible. It seems to me that the difficulty in educating the analyst varies directly as the amount of material available to him. Our scientific analysts, having lived for years on a very thin diet indeed, seem to become collection-minded very easily. So too with our economic analysts in earlier years. But our political analysts, and lately, with the flood of published materials, our economic ones as well, need fairly constant tending and reminding of this aspect of their jobs.

We have a number of devices on this score that may be worth mentioning. Our current intelligence office has long had its men do a periodic four-month review of priority requirements (called Periodic Requirements List, or PRL) which for economic matters draws heavily on the Bloc economic analysts in ORR and which is also now reviewed in draft by State. In our estimative process, we have had for some years a system of post-mortems, in which the estimate writers state in broadbrush terms where they thought the available information was inadequate to support good answers to key questions—or, more realistically, as good answers as they thought might be obtainable by more or different effort. These are then taken by each agency and, we hope, made the basis of intensified collection.

Recently our Bloc economic analysts have instituted a promising procedure under which each division is responsible for a periodic statement of its gaps in intelligence. These must be stated not merely in general terms, but in terms of possible avenues of approach to solution—target lists and so on. And most broadly of all, our whole National Intelligence Survey operation—with a formal research framework, bibliographies,

etc.—serves to highlight excellently gap areas in our worldwide knowledge. Significant as these devices are, however, we are surely a long way from erring on the side of overemphasizing the problem of gap-detention.

Informing the collector. Once you have your gaps spotted, you must make perfectly sure that they cannot be filled by some available materials. The analyst who reaches for the requirement sheet before he has picked all the brains within reach and made a truly conscientious search of the open literature and available reporting (using Mr. Borel's massive tools as they should be used)—such an analyst is indeed a deplorable species. But unfortunately, I am told, not non-existent or even perhaps on the decline. Granted that the need has been found real, however, it must then be stated precisely and intelligibly to the collector, and must ask him for something within his potential capacity to provide. Thus this step may in practice often follow the next one, the selection of a collection method.

In the drafting of requirements we have increasingly stressed the inclusion of as much background as possible to make what is wanted absolutely clear to the field collector. But the ultimate questions must, at all costs, be firm and specific. A requirement that asks the production capacity of a Soviet plant, without more, is of no use whatever to the collector. Rather the requirement should seek feasible particular answers that bear on this desired conclusion. Moreover, great things can sometimes be accomplished if the requirement can be pitched so as to elicit useful responses by an untrained as well as a trained observer. You may not have a returnee scientist, but only a layman, so it behooves the analyst to think in terms of a layman's capacity to remember floor spaces, height of stacks, size of loading facilities, and so on. And even if you have (and can personally brief) an expert collector, you must still stress your precise gaps and go over ways to meet them.

Choosing the collector. If our analyst is fortunate enough to have one of the self-contained collection systems at his disposal, we need shed no tears for him. If he is in State, he may not be able to induce his department or the Kabul Embassy to share his interest in a full count of the goats in Afghanistan, but his only problem will be persuasion. A far more serious

case is that of the Bloc economic analyst who, in pursuit of his top-priority study of rocket-fuel inputs, finds that he lacks any real dope about the most prominent known Soviet producing facility. To what collection agency shall he turn?

This, frankly, is a major problem with us. I am told that something over 50% of the requirements that come through our inter-agency machinery now arrive "cold"—that is, without prior warning to the collectors or discussion of what they can or cannot be expected to accomplish. Such a requirement may often name multiple possible collectors, and each of these may conscientiously accept the requirement, try to find out more about it, and then make an effort to fill it. It would almost be better if they did not—and in practice we do find blanket requirements increasingly queried. A consumer should care enough about his need to do a lot of follow-up on it, and only if such follow-up produces no indication of the best collection method is he entitled to call broadcast upon many collectors.

This problem, like so many others, gets back in the end to the individual analyst's consciousness of collection problems and capacities, assisted and advised by requirements staffs—to whose importance I shall return. That analysts are not sufficiently collection-conscious is due to physical separation, security precautions often largely legitimate, and not least to personnel turnover. Perhaps a shade too to the academic tradition of self-help and solo effort. In any case, the fact remains that this particular link of collector selection is probably the weakest one in our process at present. It is of course a far from unique organizational problem. Perhaps its parallel could be found in the relationship between Production and Sales in any manufacturing business. But it certainly is one on which we can profit at this conference by a few shared experiences.

Servicing the return. Moving to the next stage, let us suppose that the requirement, in usable form, reaches a collector in the field (whether in an Embassy, in a clandestine station, or within the semi-overt collection complex in the United States) and that the collector is then able to do something about it and assemble some information. At this point, there arises the problem of servicing the return so that it can be

most useful. This problem is not serious if there is no great time pressure and if the source will be readily available for re-interrogation, further visits to the target, or more search of his files. In questioning returned German scientists we have been able to work through several stages of refinement, so as to be fairly sure of having tapped the collection capability to the maximum.

In other cases, however, we have often had disastrous experiences of misunderstanding and incomplete collection discovered when the source was no longer available. In seeking to avoid such failures we have found it useful, at major stations, to have a reports officer right on hand ready to put the take into at least semi-finished form, set the product against the requirement, and direct immediate follow-up to catch the gaps. I suggest that this device may have more uses than we have yet turned it to, perhaps including an area of concern to all of us, the handling of legal travellers from the Bloc, including Communist China.

Evaluating and appraising. From what might be called specific "intermediate" or "field" evaluation it is only a short step to the final major problem in the normal process, that of final evaluation and appraisal, a subject to which I shall return at the conclusion of this paper.

The need for specific evaluation may sometimes be voiced in an urgent plea from the collector who has developed a new source and wants to know whether it is worth further cultivation. That type of evaluation raises not too much difficulty with us. Provided he is not tackled too often, the consumer does respond adequately. But in the more routine case of information collected in response to general requirements, our collectors complain bitterly about the lack of steady evaluation, and I suspect it is one of the parts of our process that needs a lot of attention and perhaps a device or two.

In a community as far-flung as ours it is perhaps too much to strive for any uniform system or form of evaluation, and this we have never attempted. Moreover, there will always be the problem of reluctance to criticize, or appear to criticize, a collection service under separate command. Yet this is just the crying need, and felt by none more strongly than the collector himself.

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Within what I have called the self-contained systems the evaluation job appears, on my brief survey, to be extremely well done. State and the military services appraise the reporting performance of their overseas posts quite rigorously. State, for example, does it by despatches on a spot basis, by periodic evaluation of its people from this standpoint, and by an annual critique of each overseas post's intelligence performance. And on all of these they may and do consult with other major consumers of the take. The CIA collection services, on the other hand, both overt and clandestine, find their consumers, CIA producing offices as well as others, limited in their evaluation efforts; and as a result the collectors are never too sure of just where they stand with respect to adequacy in their job.

In all of these five day-to-day problems, much depends on the personal competence and savvy of our requirements and liaison people. In our system, we maintain requirements staffs at both ends of the line, at least in the CIA production and collection services. In State and the military services they stand, I believe, more in the middle, attached organizationally neither to the producing offices nor to the offices charged with giving instructions to the collectors. What is clear, in either set-up, is that they must have the broadest possible knowledge of the capabilities of various collection units or of their own particular one, and must be able to interpret the collector to the consumer and vice-versa.

At the same time, I venture that the really good requirements officer should have a king-sized lazy streak in him, leading him to avoid interposing himself where he is not needed and to permit, indeed urge or compel, the analyst to get together directly with the collection agency, as far down the line as possible, so that he can make clear what his need really is and tailor it to the capacities of the collector.

So far as organization goes, I have sought in vain, in talking to all I could get my hands on, for any generalized formula. I do know [redacted] has a practice that our clandestine services have always resisted, namely having consumer representatives detailed directly to the collection shop and actually in on the planning of operations. This practice prevails to some extent in our military services' covert activities in support of field commands and similar missions within the

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sphere of what we call "agreed activities," but it is not used in the main CIA clandestine collection service. The advantages and disadvantages of the two systems may deserve some discussion at this conference.

Problems of Clandestine Collection

All the problems I have just discussed are common in some degree to all forms of collection. But there is a very great difference between the guidance problems of the overt and semi-overt systems and those of clandestine collection. Here, I should say, is the *ne plus ultra* of guidance and requirement problems, where all the types of problems, from basic allocation of effort to the attempt to meet specific requirements in relation to available resources, are at their maximum. This arises from the simple fact that clandestine assets cannot be laid on the table for inspection.

In the U.S. community our most important coordinating device is an Interagency Clandestine Collection Priorities Committee (IPC), on which all the major consumer agencies are represented. This committee, founded in 1950, has as its principal function the preparation of continuing guide lists of key specific targets in the USSR, Communist China, and the Satellites. (IPC's responsibilities are worldwide and may on occasion lead to work on other areas, such as the UAR, especially where a Soviet element is present.) These lists are based on, and under present practice stated in terms of, the basic First, Second, and Third Priority Objectives set forth in the PNIO's.

The IPC lists have evolved a great deal over the years. They were originally massive shopping lists, in which pistols were doled out more or less indiscriminately to the mole, the rat, and the badger on a sort of *prima facie* showing of relevance to Soviet striking power or some other key aspect of Soviet power and intentions. Particularly within the past two years, however, they have become a far more meaningful selection which we believe really does take in virtually all of the key physical targets of which we are aware. Moreover, the frighteningly encyclopedic character of the lists has recently been reduced by the production of special lists of installations of absolute top priority, and admission to these lists is very carefully screened indeed. The result is that today for the

first time our clandestine collectors have a fairly reliable frame of reference against which to judge the incoming spot requirement of consumers. Moreover, the lists have become of increasingly greater usefulness in a function they have always filled to some extent, that of providing a framework for long-range planning in the development of clandestine assets.

Yet there obviously remain major defects and problems. Although the IPC lists are pitched in terms of clandestine collection, each important case has to be shaken out to be sure there are not other forms of collection that can better take on all or a part of the job. We have made great progress in some fields in deciding what should be gone after by the clandestine route, but there have still been ghastly fiascos where great clandestine effort was applied to obtain results that were available all the time through careful analysis of the open literature, and conversely I am sure there are many cases where clandestine effort is not being pushed to the maximum in the belief that other sources are of some use, when in fact they are not. In this, as in so many matters in this field, the security fears of the collector (not by any means only the clandestine collector) play a large part.

Naturally, the consumer's dream is a situation where he could go to the collectors, get a full layout of their assets, and go back and frame his requirements accordingly. This can be done to some extent in areas such as East Germany, where the clandestine assets are considerable and of a general character that can be presented without much security problem. But in the key areas of the USSR itself and Communist China, assets are so relatively few that they cannot be usefully described without tending to pinpoint them in a way that does clearly present major hazards.

The result is that in this area, above all, there is a premium on use of the competent middleman, or Requirements Officer, who can master the possibilities of an asset and then, by some obscure process of osmosis and double-talk, get the consumer to use his imagination and frame requirements that will elicit useful responses. The premium on well-framed questions is tremendous, sources are not easily accessible for a second round, and often a great deal of collateral research is needed to think of things that the particular type of source is really in a position to observe and report. Thus the need for consumer and collector to be close together is nowhere more acute, and yet nowhere is it made more difficult by the problems of security, physical distance, and the number of go-betweens involved.

Apart from their intrinsic difficulty, these problems suggest a larger question in the theory of clandestine collection—whether in fact it makes the best sense to have a system of consumer-originated spot requirements for clandestine collection. As a practical matter, virtually no spot requirement can be met without a great deal of follow-up contact as direct as possible between the analyst and at least the headquarters of clandestine collection. The tail does wag the dog, more than in any other form of collection, and it is a question whether requirements work should not be done almost wholly by laying out the general nature of the asset and then canvassing consumers to see what needs that asset can be brought to serve. This of course should not mean that clandestine planning and major direction would not continue to be done within as strong an overall framework of priorities as possible, but only that spot requirements would not be levied except after more general statements supplemented by all the personal contact and consultation possible. This relates to the organizational question I mentioned earlier, whether the consumer might not have his people right in the requirements shop of the clandestine collector.

Overall Evaluation

Last, and perhaps most important, I come to the problem of overall appraisal of the collection system and top-level work to set in motion major new developments and changes. Of all human activities, I suppose intelligence may be about the least susceptible to accounting methods or to attempts, at any given moment, to figure out just how well or badly you may be doing relative to the possible. Any businessman would despair if he tried to get the equivalent of a department by department profit-and-loss statement such as General Motors gets from Cadillac, Buick, and so on; and he would succumb to total frustration if he set out to take a measure of how the whole vast holding company was really doing.

Yet though we may be rightly skeptical of quantitative or even qualitative appraisals on an overall scale (I have earlier

remarked the importance of appraisal in a more specific context), we have become increasingly conscious over the past five years of the need to draw back from the operating picture and take stock to see if we are not leaving undone really big things that we ought to be doing. For this purpose the ordinary machinery of government has severe limitations. For two years I had the dubious experience of chairing a working group to inform our National Security Council, on a most discreet basis, how intelligence was doing. The report has become better over the years, but the amount of uncandour, ellipsis, and just plain backside protection is still formidable. You simply can't get people to confess their sins in front of others.

Within the structure of government the one device we have found useful is the creation of a gadfly post at a high level. Given a self-starting, inquiring, and energetic individual with power to open all doors, this can be quite profitable. For the large tasks of appraisal, however, we have found it most useful, in many cases probably indispensable, to bring in groups of more or less expert outsiders to advise us. They are a nuisance while in the inquiry stage, but they bring together people from all corners of the community, put their work into greater focus than it had, and on many occasions come up with extremely important recommendations.

Lastly, we have embarked during the past year on a significant experiment in seeking to deal with our most serious collection gaps. This is the creation, last March, of a Critical Collection Priorities Committee, chaired by CIA's Deputy Director for Intelligence and with high-level representation from all the main agencies. This committee, chartered to look into any aspect of collection on key priority objectives and to recommend action, has taken as its first task the field of guided missiles. Aided by the fact that the overall requirements in this field had been built up with exceptional care and thoroughness by our guided missile committee, the CCPC has achieved as a first step what may be the first single-document inventory of all assets being employed on the guided missile problem. Its work has great promise—which I can say the more easily as I have no connection with it—and it may well be the forerunner to future exercises in really comprehensive collection planning, though I doubt if the approach fits any but the most cleanly focused substantive problems.

A Look Ahead

Let me conclude with a word on the future of collection against the Sino-Soviet Bloc. I suspect that in terms of method the future will see an increasing emphasis on the technical collection methods, and that as to targets we should be focusing more and more on Soviet scientific plans and progress. From my viewpoint as an estimator it appears that our information on the Soviet Bloc economic picture, while of course still far below what we would like it to be, has sorted itself out tremendously in the last few years. On the political side we must go on trying, but are not likely to succeed beyond modest limits in getting advance knowledge of inner political developments or changes in foreign policy and plans. And as to military hardware, we are not in too bad shape on the conventional weapons and forces.

It is in advanced weapons and scientific progress that we find at once our most critical area and the one where our present status is least good. Though our hopes lie in the expansion of technical collection systems, it is also true that in this area we have a much greater number of opportunities for getting at the fringes, and sometimes more, through contacts with Soviet scientists, the expanded Soviet scientific literature, and a host of other sources that can be tapped through the more orthodox overt and clandestine methods. Yet the use of these methods, in turn, will require a degree of education and training well beyond past needs. It is one thing to train an agent to count the flatcars going through Brest-Litovsk; quite another to train and give the right questions to an agent in a low-level position in a scientific establishment. From a guidance standpoint, this seems to me to present the greatest challenge to our ingenuity, industry, and machinery. The need is greatest, perhaps the response will be also.

[redacted] *the U.S. strategic warning watchtower still under construction.*

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THE MONITORING OF WAR INDICATORS

Thomas J. Patton

To provide warning of any surprise attack against the United States and its allies is our first national intelligence objective, but one, it has been our experience, that cannot be adequately served by the normal processes of estimative or current intelligence. We have therefore found it necessary to develop a somewhat specialized intelligence effort for advanced strategic early warning. This effort, which we have termed "indications intelligence," seeks to discern in advance any Soviet or other Communist intent to initiate hostilities, whether against the United States or its forces, its allies or their forces, or areas peripheral to the Soviet Orbit. It also seeks to detect and warn of other developments directly susceptible of enemy exploiting action which would jeopardize the security of the United States; and this effort has been extended in practice to any critical situation which might give rise to hostilities, whether or not there is an immediate threat of direct US or Soviet involvement.

We maintain a sharp distinction between this intelligence early warning—a strategic warning in advance of military operations, based on deductive conclusions about Soviet preparations—and operational early warning, tactical conclusions from information on Soviet operations now obtained largely by mechanical means. I like to think of the indications activity as having four aspects:

First, it is the cultivation of a mental *attitude* which leads to first assessment of all Soviet or Communist action in terms of preparation for early hostilities.

Second, it is the development of a body of *doctrine* which can serve as guidance for the collection of warning information, for its physical handling, and for its evaluation. Basically this is the isolation of those actions which would be most likely to constitute preparations for hostilities, whether

deliberate or in response to the immediate international situation. It is the creation, through experience, of a body of "common law" applicable to the selection, evaluation and analysis of information pertinent to warning.

Third, it is the development of *new techniques* and methods for the collection, processing, evaluation, and analysis of information significant principally or solely for purposes of strategic early warning. These techniques and methods range from finding new sources to analysis by electronic devices. With the development of missiles and the consequent sharp reduction in the time lag between an enemy decision to attack and the attack, we must give this aspect of the activity increased attention. The alternative would be a degree of abdication by intelligence to "operations," with a consequent loss to national flexibility.

Fourth, it is the *organization* of the intelligence community at all levels so that it can process most rapidly and effectively information from every source which could provide insight into Soviet preparation for hostilities. This processing involves every step from initial screening, or even collection, to the reporting of conclusions to responsible officials of the executive arm of the government. This continuous process is an integral part of, and yet different from, the current intelligence and estimative processes. When a threat appears great, as in moments of considerable crisis, the indications process tends to coalesce with both the current intelligence process and the estimative process, at least at the national level.

Before treating these aspects in detail I shall outline the organization and procedures for advance strategic warning which have evolved in the United States. Far from perfected and still evolving as they are, they will at least illustrate one national effort to provide intelligence indications of threatening war.

The Watchers and Their Work-Week

The Director of Central Intelligence and the US Intelligence Board, who have the ultimate national responsibility for this warning, have in effect delegated the function to the USIB Watch Committee. The Watch Committee is composed of senior intelligence officers at the general officer of senior colonel

level representing the major intelligence agencies, and is chaired by the Deputy Director of Central Intelligence. Although it meets only weekly during normal times, or perhaps daily during crises, its function is continuous, exercised through frequent liaison and contact and through a constant routine exchange of information and evaluations, formal or informal.

Serving the Committee is a permanent staff in the National Indications Center, the physical locus of Committee functions. The NIC staff of 25 is composed of intelligence officers at the colonel or naval captain level representing each of the major intelligence agencies, assisted by administrative, communications, and graphics personnel. The Center itself is linked by electrical communications to the major agencies. It receives from the USIB agencies a flow of possible indications information, both on a routine across-the-board basis and as evaluated and selected for possible pertinence. It has a 24-hour intelligence duty officer who is in frequent contact with duty officers in other agencies and with members of the staff. Through these contacts and communication links there is a constant interchange of information and views, but formally the Watch Committee functions on a weekly cycle which can be telescoped during crises to a matter of minutes. The cycle is rather elaborate, and while imperfect it at least aims at thoroughness. It runs roughly as follows:

Friday to Monday noon: Screening and processing information, in the NIC and in each member agency.

Monday afternoon: The NIC staff reviews available information, compiles a preliminary agenda for the Wednesday Watch Committee meeting, and teletypes it to member agencies.

Tuesday: "Pre-watch" meetings in each member agency, attended also by NIC staff members, at which available information is reviewed and selected for the Watch Committee meeting. Final agenda and graphics are prepared in the NIC.

Wednesday morning: Watch Committee meeting. All intelligence and operational information considered pertinent and its interpretation is reviewed, orally and graphically, in a two- to three-hour session. The Committee drafts its conclusions at the table.

Afternoon: Watch Committee members check its conclusions individually with USIB members. The conclusions, when coordinated through the medium of the NIC, are then published as USIB views and transmitted to responsible government officials and other recipients around the world. NIC prepares the draft body of the Watch Report, a summarization of the evidence considered by the Committee, and sends it by courier or teletype to USIB member agencies.

Thursday morning: The draft Watch Report is reviewed, updated, and commented on by USIB members and by responsible analysts at the desk level in all major agencies.

Afternoon: The NIC staff, on the basis of agency comments, prepares a final draft report and submits it to USIB members for approval.

Friday morning: The printed report is disseminated to all recipients; all concerned breathe deeply and plunge into the cycle again.

This fairly exhaustive procedure is complex, sometimes ponderous and time-consuming. But in addition to the production of the formal Committee reports, it has served another very important purpose: it has accustomed all those involved to the joint hammering-out of all the issues, including minor or particular ones. This means that when time is pressing and the issues really urgent we can arrive at joint evaluations and conclusions very quickly. Upon occasion a Committee conclusion has been passed to the White House less than an hour after the Committee was summoned to meet.

Within most of our agencies, the normal internal intelligence processes and organizations are relied on to flush out and evaluate the information which is passed to the NIC or utilized by Watch Committee members at their meetings. Several agencies, however, maintain small internal groups whose sole function is to screen out warning information and seek or stimulate evaluations of it. They are parallel pieces, by way of insurance, to the normal internal intelligence organization and process. In Air Force, for example, a 24-hour indications center is maintained to serve USAF Headquarters and to act as central for a net of small indications centers in the major geographical air commands.

Each of our major joint military commands outside the continental United States has a replica of the national Watch Committee. These are responsible to the theater joint commander, but forward their reports to Washington, where they are regularly considered by the Watch Committee. Thus in our national intelligence warning process the Watch Committee cycle has its concurrent parallels abroad dealing similarly with local warning problems. In some instances the timing of the process abroad has been adjusted to that of the Watch Committee.

With these mechanics as a background, I return to the four aspects of indications intelligence which I mentioned earlier: mental attitude, doctrine, the development of techniques, and organization. My remarks constitute an amalgam of the experience and ideas of a small number of us who have worked in indications intelligence for some years. Some of these ideas have yet to be adopted throughout our community, but our experience leads us to believe that in time they may be more widely accepted.

Attitude of the Watcher

Ideally, for the purposes of indications intelligence, some or all of the following assumptions must be made as basic working hypotheses, though each can be legitimately challenged in any given situation:

The Soviets, together with the other Communist states, are seeking an opportune time to initiate hostilities to achieve their ends.

The attack will attempt maximum surprise, possibly during periods of international calm.

The decision to initiate hostilities may be made without the military capability which we would consider requisite.

Any estimates which argue from other assumptions may be quite wrong.

If intelligence officers dealing at any stage with potential warning information can be conditioned to these assumptions, we feel that we have a greater chance of detecting that pattern of developments which may attend preparations for an attack. Intelligence officers need not be ruled by these assumptions, but they should be conscious of them when any possibly relevant information is considered: for instance, military exer-

cises should always be considered as deployments and as changes in degree of military readiness or as rehearsals for an impending attack.

We must instill and maintain this attitude in all personnel dealing with potential warning information, particularly during non-critical periods or during the fading days of a crisis. This is a difficult task, especially in a large intelligence organization with a high degree of specialization and compartmentalization. There are two obvious alternative ways of going about it. One is to wage a relentless educational campaign among the body of our intelligence personnel. This method faces some of the obstacles of a highway safety campaign or a campaign against sin; and it is possible that in laying extensive general stress on the warning problem we might overdo it and give rise to unbalanced or unduly alarmist intelligence reporting and estimates.

The other approach, which I favor, is to develop a small group of indications intelligence officers, either working together as a body or spread among various organizations but maintaining close contact. Such officers would consider information from the warning point of view only, would provide continuity in the development of doctrine, would serve as missionaries among both collectors and analysts, and would keep pressing for adequate attention to fragmentary information of potential but not necessarily apparent significance to warning. Such officers need not achieve great depth in any regional or functional intelligence field, since they could rely on experts for the necessary support. It has been our experience that intelligence officers given this responsiblity become enthusiasts, if not zealots, of the indications hunt, and extremely sensitive to those visceral signals which in the last analysis may well be the vital factor in our judgment as to the imminence of a Soviet attack.

In the United States several intelligence agencies have made use of this approach to a greater or less degree. Others depend largely upon having their representatives in our National Indications Center and upon the fact that our major joint current intelligence committee, the Watch Committee, focuses on indications of hostilities and does not spread its considera-

tion to all matters of general intelligence significance. Although it might appear that this specialization could develop a predisposition to a too-frequent crying of "wolf," we feel that the joint nature of the considerations which precede the forwarding of our warnings tends to preclude the danger. In practice, we have found that the nature of our system has served to reduce the number of alarmist "flaps" which arise, particularly outside intelligence circles, from undeliberated interpretation of developments.

Doctrine of the Watch

In the development of a doctrine to guide and assist us to provide warning of an attack, we have sought first to identify in advance those actions which would constitute preparations for hostilities. Such pre-identifications, useful to both analysts and collectors, we have compiled into Indicator Lists. An *indicator* we define as a major action which the Soviets must take before they are ready for hostilities, whereas an *indication* is evidence that such an action is being or has been taken. The distinction is an essential one which all of us tend to lose sight of in common usage.

In isolating those actions which we designate as indicators or potential indicators, we are seeking answers to several key questions:

- What are the essential steps the Soviets and their allies must take in their preparation for early major hostilities?
- Which of these steps represent a degree of national commitment which would only, or most likely, follow their decision to initiate hostilities?
- In the light of the nature of information currently available to us, or which can be expected, what sort of information will we accept as evidence that these preparatory or implementing steps are being taken?
- How do we distinguish, during periods of crisis, between those actions which are precautionary and those which are preparations for deliberate hostilities?
- What actions constitute evidence that the Soviet decision-making process is in action, possibly considering the question of hostilities?

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We have attempted to distinguish a series of preparation phases representing progressive steps toward a decision to attack or progressive commitment of the enemy state to war. We group the indicators in four such stages as follows:

Long Range: Actions involved in the intensified achievement of specific military capabilities, offensive or defensive, essential to the prosecution of general hostilities which are either generally anticipated or deliberately planned.

Medium Range: Actions or developments which might accompany or follow a decision to ready the nation or the military forces generally for any eventuality, or which might follow a deliberate decision for war but precede formulation, issuance or implementation of specific operational plans and orders.

Short Range: Actions which might follow or accompany the alerting and/or positioning of forces for specific attack operations or to meet an estimated possible US attack.

Immediate or Very Short Range: Actions which might accompany or immediately precede a Soviet attack (frequently combined in practice with the preceding stage).

These stages can, and have been, defined at greater length or quite differently, but the purpose is the same—to arrive at a listing which groups at one end those actions which may represent long-range preparations for hostilities, but not necessarily a commitment to them, and at the other end those actions which, by their urgency and costliness, appear to connote a commitment of the enemy state to war. It also gives us a sensing of the imminence associated with such indications as we may detect, and of the phasing in time among them.

In our listings we attempt to give not only the major actions which constitute indicators, but also some of the contributory indicators which, if noted in concert, would comprise evidence of a major indication otherwise undetected. Our phased approach also serves to isolate actions by which we hope to gauge the extent and danger of Communist reaction to a particular, perhaps seemingly localized, crisis.

Our proposed schedule of lists will include:

First, a general indicator list stating in broad terms the major actions we would expect.

Second, a series of functional lists in much greater detail. There will be separate lists for Long Range Air Force preparations, ground force preparations, political and diplomatic activities, clandestine activities, civil defense, military medicine, weather service, etc.

Third, a series of lists which address themselves to specialized sources, including the technical sources. These lists, in effect, are an application of the preceding lists to information provided by individual sources, particularly to changes in a routine take whose warning significance might not be immediately apparent. One such list addresses itself to monitored changes in the conduct of Soviet broadcasting. Another might concern radar monitoring. Another would cover observations our embassy personnel in Moscow might make in the normal course of their daily routine: closure of some subway stations, for example, and an absence of fire engines from normal stations might provide confirmation for suspicions that late-stage civil defense preparations were under way. A similar list for legal rail travelers would include actions observable from a train window which might fit into indicator patterns.

Fourth, a series of target lists naming those installations or outfits by whom or at which *certain* activity would be of major significance, and those by whom or at which *any* activity would have major significance. Examples of the latter might be an elite Long Range Air Force unit or an air transport unit suspected of a role limited to the ferrying of nuclear "pills" to operational commands.

This is an ambitious program, reflecting primarily the paucity of available information, particularly information on the major instruments of Soviet attack. When completed, it will be a massive document. We also plan, however, a highly condensed one-sheet version of each list, perhaps in tabular form.

Such lists must be looked on only as guides, and quite often they rapidly become obsolete. In some instances we have failed so far to come up with anything really satisfactory—most notably in the missile field. But when we have had sufficient experience with our own missiles and with information on Soviet missile operations, we expect to be able to list actions

which would serve to indicate the operational readying of the Soviet missile system.

Another aspect of doctrine is formulation of the answers to these questions:

How early, or at what stage, and how often in a given situation do we inform officials of the executive arm of the government?

What general criteria do we use to determine that a warning situation exists?

Our first premise is that we should provide executive officials with the earliest warning possible. This means, in effect, a progressive series of warnings—from a generalized one, perhaps conveying only our sense of uneasiness, through a contingent one pointing out that if certain further actions take place it may be that hostilities are imminent, to an unconditional one conveying our conviction that an attack is forthcoming.

The criteria of a warning situation lie in patterns, in configurations of Soviet or Communist activity which might be consistent with some stage in preparations for early war. Once an apparent pattern is detected, giving an indications situation although not necessarily an alert situation, the hypothetical patterns which we have constructed in the preparation of our indicator lists suggest further developments to look for. If information on such developments is subsequently received, we have then progressed toward an alert situation.

When we note apparent patterns of preparation we alert our field collection, particularly to our need for information on major indicators. When we receive information on the accomplishment of one or more isolated major indicators, we also alert the field, this time to our need for information on those other indicators we might expect to see patterned with them. In both instances we feel that we have the basis for some form of warning to the government, even though we may have no conviction that a pre-war situation exists.

The pattern approach is particularly applicable to the surprise attack; it has limitations in situations of localized tension, where the buildup for a limited attack may be as complete as it will ever be, but where there may have been no political decision to make the attack. The indications effort

may suggest refinments in our collection, and it may assist in narrowing the field we must search in order to detect evidence of the decision; but it cannot go a great deal further. Subsequent developments are sometimes almost exclusively matter for tactical or operational intelligence. Indications intelligence is looked to, however, for warning of preparations to broaden a localized situation or to cope with an expected broadening.

Techniques and New Techniques

Our attempt to develop techniques has thus far been aimed at facilitating the processing and analysis of information and the detection of patterns, and at exposing areas requiring further analytical investigation or more extensive collection efforts. We have used extensively the more orthodox methods, although despite their usefulness we have had to abandon some because of their expense in time and personnel. To describe a few:

Card files of information extracted only for apparent or potential indications significance—one item to a card in three separate files, according to functional fields, date, and the apparent axis or targets of Soviet/Communist attack.

Running lists constituting highly condensed summaries of apparently significant developments arranged according to the apparent axis of attack.

"Shelf-paper" rolls of charts with summarized information of apparent indications significance entered according to date of activity, area and functional field, or in other arrangements.

Highly condensed summaries of apparent current indications, negative and positive, bearing on particular situations.

Quarterly summaries of indications, including only selected developments of apparent medium- or long-range significance.

There have also been efforts, some only experimental, at posting developments on display charts or boards categorized variously according to area, functional field, date of activity, and degree of imminence or hypothetical length of pre-attack time remaining. Through the use of colors

and other devices, such displays serve to call attention to possibilities which need further investigation. The Air Force, which has been the most active among our departments in the development of indicator techniques, devised such an indicator display board for use in all Air Force indications centers and is now experimenting with other graphic means of calling attention to trends and potential warning situations.

There have been a number of suggestions for the use of electronic devices which could store information so coded and weighted that when queried they would respond with a "temperature" reading and a predicted area and time of danger. We have been hesitant to plunge into this sort of thing, because the information fed in would in many cases be so uncertain, and its weighting—which would reflect immediate judgment as to its significance—even more uncertain. I do not believe, however, that we should rule out this approach forever. In many respects, our most important warning information is becoming more and more fragmentary and more and more of a technical nature. It is hard information, such as detection of radar emanations, but difficult to evaluate, analyze and record by our conventional methods. It may be that an imaginative and judicious use of machines will enable us to put such information quickly into meaningful patterns which can contribute to our warning.

In developing these techniques we are merely seeking aids to analysis and to presenting the situation. In no sense do we believe that intelligence warning can be performed mechanically, although there are a surprising number of people who believe that this is possible or that it is what we are trying to do.

There is also a need for development of new collection techniques for warning purposes. One thing that can be done is to formulate a coordinated series of collection requirements and reporting directives which would be put into effect only during periods of alert or international crises, when certain types of information would assume new significance. Another is to direct a series of routine monitoring-type missions against selected targets for indications purposes only, with a view to detecting any changes from normal activity. The targets

themselves might be of minor importance, but changes in their activities might reflect far more important activities elsewhere. A series of somewhat riskier pre-planned monitoring-type missions could be reserved for periods of alert, when the risks could be justified by the depth of our suspicions.

It may be possible to devise new technical collection systems or adapt some now in use to the purposes of warning intelligence. Electronic intelligence, for example, I understand now produces chiefly information on capabilities, new technical developments and order of battle. We must rethink it to see if it can produce unique information on changes in day-to-day activities which would be meaningful to indications intelligence. Early in the development of any new collection device its possibilities for indications intelligence should be examined. This is frequently done far too late.

There is also a need, presumably through communications techniques, for reducing the time lags between collection of information and its effective presentation for evaluation. Our air defense has found it necessary to develop methods for automatic or semi-automatic presentation, and even analysis, of tactical air warning information. But intelligence warning information, although we have been able to cut down actual transmission times for a few highly select messages from field collection points, is too often subject to completely unacceptable, even though understandable, delays.

Organizational Devices

I have touched in the foregoing sections on some of the organizational devices introduced in the National Indications Center and member agencies in support of the Watch Committee's function, devices which range from the establishment of the NIC itself and the USIB coordination mechanism to the creation of small parallel indications staffs in individual agencies. I believe that certain other organizational measures might in some form or combination further facilitate our warning efforts. One would be a sort of national directory of intelligence assignments which would locate and fix responsibility for analysis and reporting of potential warning information for every segment of our intelligence coverage, no matter how minor.

Then there might be created a body of collection experts, perhaps even supported by a collection coordination center, which would work in harness with the Watch Committee and the National Indications Center. This might assist, particularly during moments of crisis when time is short, in the coordinated search for missing elements of information or in the rapid clarification of uncertain information.

Finally, we could organize against emergencies a thoroughgoing phased national intelligence alert, making provision for availability of intelligence personnel, extent of 24-hour staffing, availability of administrative support (including communications), comprehensive situation reporting by field collection and by intelligence agencies, and the initiation of preplanned collection measures such as the assignment of new priorities and targets and the activation of reserve or one-shot sources. Such a total alert would be very difficult to arrange and to keep current, but it could save precious hours.

There is such great change either present or impending in methods of warfare and the balance of power between East and West that the task of providing warning is increasingly difficult. The two major factors in this increasing difficulty are a) the accelerating compression in time between the enemy decision to launch an attack and its launching and between the launching and its delivery, and b) the concurrent reduction in the amount and variety of discernible pre-attack activity. It seems to me that now, as never before, we must subject our intelligence organization and processes for collection and evaluation to continuing scrutiny, and must improve or adapt them to cope with the changing conditions. We must ensure that we are collecting and considering the proper information and that we eliminate every possible delay in the processing of the potentially vital information. Furthermore, in order to provide warning, no matter how contingent, at the earliest possible stage, we must improve our understanding of Soviet Bloc decision-making and strategic doctrine.

The intelligence officer turns salesman to tap the potential of big business and the suspicious refugee.

TECHNIQUES OF DOMESTIC INTELLIGENCE COLLECTION

Anthony F. Czajkowski

The process of getting intelligence information out of people is normally associated with overseas operations, but it was demonstrated during World War II that this clandestine activity can usefully be supplemented by collection in the analyst's own back yard. Potential sources of intelligence within the United States are myriad. US concerns have been active in various parts of the world for many decades and their records often contain information which a clandestine agent would have little hope of obtaining, especially in war-time. Representatives of industrial plants travel continually and compile expert reports and evaluations on foreign economic and financial affairs. The current increase in East-West contacts has sent thousands of US citizens as travellers to countries of the Soviet Bloc. Scientists and academicians attend international meetings and conferences, where they meet and exchange information with opposite numbers from all parts of the world. Refugees from the Soviet Union and its satellite nations continue to enter the United States for permanent residence.

For more than ten years the Contact Division of CIA's Office of Operations, with its network of field offices throughout the country, has been tapping this vast potential of information on behalf of the intelligence community. Since 1948 over forty thousand individuals and companies have supplied information ranging into every field of intelligence. Through this collection operation the community has at its disposal the expert analysis and commentary of the most knowledgeable people in the academic, scientific, professional and industrial fields.

Getting information from these individuals calls for techniques different from those employed in clandestine collection. The contact specialist, as the domestic field collector is known, has no control over his Source. The Source provides the information voluntarily, with no hint of pressure or threat, because he has been convinced that he can be of singular assistance to the US Government; but mere waving of the flag does not automatically trigger the cornucopia of intelligence plenty. US citizens, as a rule, know little of intelligence organizations and intelligence needs. A visit to a businessman by a government representative arouses instinctive fear that the company books are about to be examined for tax purposes, that an anti-trust suit is pending, or that an investigation is being conducted against a friend. Academicians and missionaries are apprehensive that their cooperation with US intelligence will become known and hinder their future activity in a foreign area. The alien, wise to the ways of intelligence and security services, distrusts the contact officer (credentials are easily forged, he claims) or fears for the safety of relatives still living behind the Curtain.

To convert the hesitant businessman or fearful alien into a cooperative Source, the contact officer must have a wide diversity of skills. He must be a salesman, selling his prospect on the importance of the intelligence function; he must be an intelligence officer, knowing the needs and the gaps in the community's information; he must play the practical psychologist, handling dissimilar personalities with dexterity; and finally he becomes a skilled reporter, putting the Source's information into a concise and readable intelligence report.

Locating and Contacting the New Source

Since the contact officer cannot hope to approach all the commercial, banking, educational, and scientific institutions, as well as all the aliens, in his area, he must learn to select from among his possible sources. He obtains leads from trade journals and directories, from established sources, from Agency headquarters, and from other government agencies. Matching these leads against his knowledge of current intelligence requirements, he tries to pinpoint those individuals and companies in his area which have the best potential for filling the requirements.

Once he decides or is directed by his field chief to "open up" a new company, institution, or individual, his first step is to brief himself on the company and if possible on the individual he is to contact. At the same time he reviews intelligence requirements in the prospective contact's field, making preliminary exploration of its potential for his purposes. He will offer no pretensions to expertise in the Source's field of specialty, but will be able to win confidence and rapport by recognizing the Source's professional interests and understanding his terminology. He cannot walk in cold on a new Source and hope to establish the proper rapport for a continuing contact.

No security clearance is required for initial contact with a US citizen. The existence of the Central Intelligence organization and its general purposes are public knowledge, and no classified information is discussed in the initial interview. Contact with an alien, on the other hand, must first be cleared with the FBI as a matter of internal security.

In approaching a new company or institution, the contact officer always goes to the top man, to the president, the chairman of the board, or whoever determines broad policy for the company. Once cooperation is obtained at the highest level, it is assured at all subordinate levels. The president will not ordinarily have the information intelligence is seeking, but he will designate the official in the company who does have it and who will be the future contact. If a subordinate is contacted first, experience has shown, an embarrassing situation can arise when the president inquires why his company is being "penetrated" by the US Government.

To interview the executive an appointment is of course necessary, and executives have secretaries whose function it is to keep unwelcome visitors away and screen phone calls to the "boss." The secretary wants to know who is calling and why. The contact officer gives her his name and identifies himself as a representative of the federal Government who wishes to speak to her boss on a confidential matter. Few secretaries dare to block such a call except in companies which have frequent contact with government agencies. The persistently inquisitive secretary is told that the caller will explain his purpose fully to the boss.

Once he has been put through to the executive, the contact officer identifies himself more fully by revealing his association with US intelligence or, if pressed, with CIA. He outlines briefly why he desires a personal interview. Most individuals, when first approached, associate a government official with one of the enforcement agencies, and the contact man therefore seeks an early appointment.

The First Interview

Since the contact officer's objective is to convert the prospect into a continuing and cooperative Source, he must take especial care to make the best initial impression. Temperaments and social customs vary in different parts of the country, and the officer must comport himself according to the Source's taste. Whereas a ten-gallon hat and a string tie may be acceptable in Texas or in Arizona, they cause raised eyebrows in Boston and New York. It has become axiomatic that the contact man should dress as conservatively as the most conservative of his contacts for that day. Religious or fraternal pins are better not worn. In calling on a missionary or religious source discussion of religion is avoided. The intelligence officer cannot allow himself the liberty of drawing racial, color, or religious lines.

When, promptly at the time of his appointment, the contact officer arrives and is ushered into the Source's office, he immediately shows his credentials and underscores his association with CIA to emphasize that he does not represent the FBI or any other federal agency. The Source is naturally curious about the visit, and may even have been troubled since the first phone call. The officer tries to put him at ease immediately. The approach will vary, depending on circumstance, on the personality of the Source, and even on the area. In the North and West, and to some extent on the West Coast, the typical Source is a busy man who has sandwiched this appointment into a tight schedule. The contact officer must talk fast and convincingly, in a business-like manner, to win his cooperation. In the South and the mid-West a certain amount of pleasantry or chit-chat may be in order before getting down to the issue at hand.

Whatever approach he uses, the contact man must accomplish three things during his initial visit—explain the intelli-

gence mission, assess the potential of the company for his purposes, and show the Source how he or his company can be of assistance to the cause of national security.

Private citizens have varying amounts of knowledge about intelligence, and the first task is to orient the Source on Central Intelligence purposes and its place in the federal Government. The contact officer brings out the Director's advisory function to the National Security Council headed by the President, stressing how necessary it is for policy makers to be well informed on conditions and events throughout the world. He also explains that he represents all the intelligence agencies in the Government, so that needless duplication in visits by other intelligence representatives can be avoided. The Source can contribute to the welfare of the country, he says, by making available whatever information on foreign plants, research and development, or other matters he may possess or acquire.

The assessment of the company's potential then follows naturally. The Source is usually willing to cooperate but may fail to see how any information he has will be of value to the intelligence effort. The contact man then introduces questions on the company's foreign branches or affiliates, the extent of its foreign business, and the degree to which the home office is kept aware of conditions in areas in which the company operates.

At this point the Source may become apprehensive that any information he provides may boomerang against his interests, through punitive action by another federal agency, through revelation of proprietary information to a competitor, or through embarrassment of his future dealings with foreign companies or governments. The contact man convincingly reassures him that a guiding principle of all relations with informants is Source protection. The name of the Source is never connected with his information. Nor is data provided by a Source ever turned over to another federal agency for any regulatory or punitive action. Information given by the Source is circulated only in intelligence channels within the United States, and the Source need not have any apprehension that his name or his information will get into unauthorized hands. His cooperation with intelligence, as well as the information provided by him, is kept classified.

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Conversely, the Source is requested to treat the contact as classified and not to reveal to anyone the purpose of the visit. It is pointed out that the need for security is mutual. Further, since this confidential contact may be followed by other visits in which classified requirements may be used, biographic information on the Source for security assessment is requested. Ordinarily, if the contact officer has laid the proper basis for a continuing contact with the Source, whether the top executive or one of his subordinates, he has no difficulty in securing biographic data.

The officer cannot rely on his memory to retain the information divulged during the interview. He inquires whether the Source has any objection to note-taking—an inquiry which is generally academic, for it adds to the Source's feeling that he is doing something important if his words are taken down. On biographic and technical data note-taking is naturally a matter of course.

The length of the first interview is governed by the time available to the Source and the contact officer's estimate of the Source's intelligence potential. The experienced contact man can assess the company's potential in a short time, and if his assessment is negative he arranges for a graceful exit as soon as possible. If he believes that the company does have access to useful information, he explores the possibilities as completely as time and circumstance allow. In this case, the length of interview must be gauged by the Source's attitude and his appointment book. It sometimes happens, on the other hand, that the Source has time on his hands and relishes having the ear of a government representative into which to pour all his ideas on what he thinks is "wrong with Washington." Here the contact officer politely steers the conversation to the purpose of his visit, creating the impression that he himself is a busy man.

The first interview is terminated with the understanding that the officer will probably return to explore the company's information further. If a return is actually contemplated, he leaves a personal card which bears his name, his field office's postoffice box number, and his (unlisted) office telephone number. The name of the Agency does not appear on this card. About a week or ten days later he writes the Source to thank

him for his cooperation, mentioning that he is looking forward to another visit. The letter serves to remind the Source of intelligence interests and gives him again the officer's name and phone number, should he have misplaced the calling-card.

After the initial interview the contact officer must estimate the future usefulness of the Source and his company. Should he follow up or not? If after consultation with his field office chief he decides that the company has insufficient potential to warrant further expenditure of time and effort, he sends a complete account of his visit, plus the biographic data he has obtained on the Source, to Division Headquarters, with a notation that further contact is not contemplated. A copy is of course retained in the field office, for the guidance of other contact officers who may some day obtain a lead on the same company. If, on the other hand, he decides that the company and the Source can and will supply intelligence information of value, he submits to Headquarters not only an account of his visit but also a request for security clearance on the individuals with whom he will be dealing. The secretary, if she is witting to the intelligence contact, may also have to be cleared.

Continuing Contact

How often the contact officer calls on a company depends on several factors—the amount and type of information it has available, its distance from his field office, his own work-load, the Source's own preferences and schedule. If the contact officer has determined that a company has information periodically, he makes it a point to pay it several visits a year, even though each visit may not produce intelligence. An ideal Source is one who has been "trained" to such a point that he will telephone when he has information of interest or when a company official has returned from a trip abroad. But the contact man is well aware that a company official thinks in terms of his own daily business needs and tends to forget intelligence needs. Like the salesman, the contact specialist must periodically revive interest in his product.

Subsequent visits to a company are relatively easy to handle. In a large company the contact officer utilizes as principal Source the person designated by the president, but also continually attempts to become acquainted with the

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head of every department in which foreign intelligence may be found. This intelligence may take the form of reports from managers of overseas branches or affiliates, contracts or neogtiations with foreign companies or countries, or interviews with returning officials. Travellers abroad are an important font of intelligence, and the officer tries to arrange for regular immediate notification when such travel takes place.

When the contact officer learns that a cleared company official is about to travel on company business abroad, he is faced with the often difficult question of whether to brief him, that is, to instruct him beforehand in specific intelligence interests in the areas to be visited. The decision to brief, involving security and psychological hazards, is an infrequent one. Sometimes the business traveller is outraged at an attempt to recruit him as a "spy." But if the officer has worked with a Source for some time, considers him reliable, and is confident that he will not interpret the briefing as a mandate to engage in cloak-and-dagger activity, then he requests the entire intelligence community, through his headquarters channels, to provide questions for which the Source may be able to obtain answers. If he decides that a specific outlining of intelligence gaps is not desirable, he reminds the prospective traveller of the general needs of the community and suggests that whatever is of interest to him as a specialist in his field will be of interest to intelligence as well. In either case the Source must be discreet enough—and not all business travellers have been—to avoid advertising abroad that he is out to get "inside dope for CIA."

After the traveller has returned, the contact officer seeks an interview as soon as mutually convenient. If there was a briefing, the same questions may be used in debriefing. If the Source was not specifically primed with requirements for the trip, community requirements may be obtained for the debriefing. Formal requirements, however, are only guides to the interview rather than limitations on it. The contact officer tries to get as much detail as possible on all items of interest the Source may have encountered. Since a detailed interview takes time and the returned traveller is generally preoccupied with business matters that have piled up during his absence, a copy of the trip report which he must usually write for his company may be helpful. This report, however,

will deal exclusively with his company's business, and interviews will still be necessary to explore any other subjects or areas on which the Source may be competent to report.

Mechanical aids are occasionally used to expedite the interview process. Although the modern businessman is well acquainted with the tape recorder or dictaphone and generally has no objection to their use, the contact man makes it a point to get advance permission for them. Some Sources, suggesting that an outline of the type of information desired be left with them, offer to dictate the answers as time permits into a tape recorder. Under this procedure the Source must be reminded to specify which questions he is answering and to spell out proper names.

Intelligence collected is not limited to the spoken and written word, but often includes maps, flow charts, photographs, graphics, floor plans, etc. These items are of most use to intelligence analysts when they are obtained for permanent retention, preferably in the original copy; but the Source usually has only a few copies and may balk at providing any for retention. Here the persuasiveness of the contact man must again prove itself. If he cannot talk the Source out of a copy, he tries at least to obtain the item on loan for 30 days so he can send it to Washington for reproduction.

Intelligence collection is essentially a one-way street, with the Sources giving and the collector receiving, but occasionally a Source requests reciprocity. The contact officer does have such unclassified items as the FBIS daily report on foreign broadcasts and translations of Soviet scientific abstracts at his disposal for distribution to selected Sources, and this *quid pro quo* helps to cement a cordial relationship. A greater strain on the relationship with a firm occurs when the Source requests specific information in return. A company may be opening a new branch overseas and desire information as to whether its proposed indigenous branch manager is pro-Communist or unreliable in some other way. Or a firm may request assistance in arranging for the immigration of a skilled worker. Such requests are especially embarrassing when they come from a company which has been thoroughly cooperative and which may itself have provided covert support to the Agency. The contact man extricates himself from such situations by referring the requestor whenever possible

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to the appropriate federal agency. If that does not work, he agrees to take the matter up with his Washington headquarters and throws on Washington the blame for inability to comply with the company's request.

The many foreign specialists who visit US firms and institutions also have information of intelligence interest. These, however, the collector cannot talk to directly; intelligence policy forbids interviewing aliens in the United States on temporary visits. If time and occasion permit, the contact officer enlists the aid of an established Source within the firm visited to act as a cut-out or middleman. He briefs the cut-out on intelligence interests and encourages him to intertwine intelligence questions into his conversations with the visitor. The cut-out is also in a good position to assess the visitor's technical competence and personal idiosyncracies. Interviewing through a cut-out, even more than interviewing through an interpreter, is less satisfactory than a direct encounter, but is preferable to creating an impression that visitors are invited to the United States only for intelligence exploitation.

University Exploitation

Thus far we have dealt almost exclusively with commercial or industrial firms as sources of intelligence. Other fruitful Sources are found in universities, research institutes and hospitals, pharmaceutical houses, etc. The contact officer often finds that he must approach these Sources somewhat differently than he approaches industrial ones. In the industrial firm he deals with Sources as officials of the company. In universities and similar institutions he deals with professors and researchers as individuals.

The basic approach is nevertheless the same. The president of the university is the initial point of contact; the contacter needs his blessing for the exploitation of university personnel and records. Lesser officials and faculty members also tend to be more cooperative when they know that the president is aware of the intelligence collection activity and approves of it. The deans of the schools, the dean of students, and department chairmen are worth cultivating, for most of the day-to-day activity of the university filters through their offices. They can, for instance, provide information on special

research projects, foreign travel of faculty members, visiting foreign scholars, foreign graduate students, and other points of intelligence interest.

But the best Source is usually the individual professor who has just travelled abroad, attended an international conference, or entertained a foreign visitor. Like the businessman, the professor must be convinced that his information will receive the highest degree of protection.

The contact officer finds it rewarding to consult a *Who's Who* or some other reference work to obtain personal data and to determine the Source's professional stature and specific field of research interest. The Source is usually flattered that his professional competence is known to a layman. At the same time the officer must not pretend to knowledge he does not have on a technical subject, for such a sham is easily and quickly detected by the Source. Every man, and especially a professor, likes to talk about his work; and the interviewer's manifested interest in learning more about a subject of which he knows little usually kindles the academic spark. As a novice in the subject, the contact officer has ample excuse to ask for explanation and detail on each point made, even though the information may appear elementary to the Source. The officer must, however, take especial care to record faithfully this kind of data, for technical information has little value unless it is accurate. This may require another visit to the Source to verify the accuracy of the officer's report after he has finished writing it.

A problem the contact officer may encounter in his visits to a university is the lack of privacy. Few universities have individual offices for all members of the faculty. Doubling-up is frequent, and in some schools general faculty rooms or departmental offices are used in common. The officer makes every effort to arrange a meeting in private, soliciting the aid of the professor himself in trying to find a private spot. Even a quiet corner of the cafeteria or a meeting in the officer's automobile is preferable to one in a room where the interview can be overheard by other individuals. The professor is usually impressed by the officer's insistence on a secure meeting, and the confidential nature of the relationship is thus underlined.

The Alien

Getting information from the alien involves techniques vastly different from those used in dealing with US citizens. For collection purposes an alien is defined as a recent arrival for permanent residence in this country, as opposed to the visitor or foreign student. In practice, alien Sources have been refugees from eastern Europe, with a small sprinkling of immigrants from the Far East. Initially the displaced persons of World War II, driven or escaping from lands occupied by the German military forces, were exploited for their knowledge of areas which were under Communist rule after 1945. The influx of Hungarians after the events of October 1956 presented another golden opportunity to collect current intelligence on an inaccessible area. More recently the increased travel between the Soviet Bloc and the United States and the greater emigration of Satellite nationals to visit or rejoin relatives here have given impetus to the alien exploitation program.

Because techniques in contacting and exploiting aliens are so different from those used in dealing with industrial or academic Sources, alien specialists with language ability and particular adaptability and perseverance have been assigned to field offices where alien concentrations are greatest. Adaptability is needed because of the varied types of alien with whom the contact officer must deal, ranging from a former minister in an exiled government to the janitor in a munitions factory. Perseverance is required to spend the time and effort needed to track an alien as he moves from one address to another. The interviews must usually be conducted in the evening or on weekends, since the alien in most cases cannot be interviewed at his place of employment.

In addition to the difficulty of locating the alien, and the odd hours involved, the contact officer faces the much greater problem of eliciting the cooperation of the Source. The greatest barrier is the alien's suspicion. He is likely to have lived by his wits almost continually since 1938, and to have been interrogated and reinterrogated by various intelligence and security services, not always in friendly fashion; his instinctive reaction is to have nothing to do with an intelligence agent. A second barrier is the language, for few

aliens speak enough English to carry on a detailed interview. The contact officer's language ability may overcome this handicap, but he should be aware of the danger that a native fluency may cause the Source to suspect him as the agent of a foreign security service. Frequently the alien has greater trust and confidence in a contact man whose crude working knowledge of the foreign language betrays him as obviously American. If there is no mutual language in which to converse an interpreter must be obtained. Field offices maintain lists of cleared Sources who can act as interpreters, but here again the alien may doubt the *bona fides* of the interpreter. He may trust the contact man but be suspicious of his co-national.

The contact officer tries to make an appointment with the alien, by telephone if any, or by letter. Often, though, he must knock on the door without previous appointment, hoping that his prospect is at home. The scene that greets him when he enters the alien's home is that of the entire family arrayed behind the man of the house, who, they fear, is in trouble. He realizes that he cannot possibly speak to the alien in private, for any attempt to lead him away from the family group confirms their suspicion that something is wrong. He is forced to present the purpose of his trip to the entire family in an effort to allay their fears. Most aliens are quick to grasp the needs of an intelligence service but they must still convince themselves that their caller is actually a representative of the US and not a foreign intelligence service. The officer tells them that if they have any doubt about the authenticity of his credentials they should call the local office of the FBI. He stresses very emphatically, however, that he is not an FBI agent, but represents an intelligence organization interested only in foreign intelligence.

Once the hard shell of suspicion and distrust is pierced, the alien becomes a most cooperative source. He is flattered that the US Government has sought him out and pleased that he can contribute to the fight against Communism. He is useful both in supplying information from his own knowledge and experience and in giving leads on co-nationals who may have additional information. Aliens also correspond and send pack-

ages to relatives abroad and the correspondence may be of intelligence interest, but the contact officer must first overcome their fear that harm may come to a relative if they reveal too much.

The officer is very often the federal Government's only contact with the alien, who therefore tends to look to him as a general father confessor, employment counsellor, psychiatrist and sounding board for pet ideas or pet peeves. His immigration and citizenship problems, obstacles to the immigration of his relatives, or his dissatisfaction with his employment he presents to the contact man for solution, since in his mind an intelligence service is above the laws and regulations established for ordinary citizens. The contact officer is careful not to make any commitments, referring the alien to the appropriate federal agency. He must also take care not to involve himself in the politics of ethnic groups, for most of them are split into hostile camps.

The matter of payment sometimes arises here. The vast majority of alien Sources are happy to make available whatever information they have as a contribution to their new country. Occasionally, however, having spent a considerable amount of time in preparing a detailed and important report, an alien may express a desire for compensation. The contact officer must obtain an evaluation from Headquarters before he can make such compensation; and even with Headquarters' approval he is treading on dangerous ground, for there is an effective grapevine within the nationality groups, and his future requests for cooperation from others may be met with similar demands for payment. In general, an occasional lunch or dinner should constitute the extent of financial outlay on an alien.

* * * *

This discussion of domestic collection techniques has of necessity been cast in terms of averages and stereotypes. Every contact specialist in the field could point out many exceptions to the generalizations here drawn and show the peculiarities of dealing with Sources in his own area. The techniques which have been developed remain individual and flexible, varying with three variable factors, the collector,

the Source, and the material to be collected. Each collector applies those personal techniques, gained through experience, which are called for in a given situation to extract the greatest amount of raw intelligence from his Source; but his methods are likely to fall roughly into the patterns outlined above.

The estimator must cure the raw findings of the social sciences in the light of history in order to weigh soundly the probabilities for the future.

HISTORY'S ROLE IN INTELLIGENCE ESTIMATING

Cyrus H. Peake

A major responsibility of the intelligence analyst is to make estimates or forecasts of developments in the field or country of his specialty. What can a knowledge of history contribute to the accuracy of his estimates? It is frequently said that history cannot instruct the contemporary generation because it never exactly repeats itself. This negative viewpoint, held even by some professional historians, is of little comfort to the harassed analyst who is required to forecast economic trends and anticipate uprisings, election-results, coup d'états, and even wars, when all too frequently he has observed that his effort to forecast an economic or political development on the basis of specialized knowledge provided by the methodology of economics, social or political science, or some other particular discipline, has missed wide the mark.

The reason for his disappointments in relying on these sciences, the historian might inform him, is that coming events, like past ones, are brought to occur through the decisions of men, men reacting to a complex milieu of interwoven economic, social, political, psychological and historical forces. There are no simple direct cause-and-effect relationships among these forces which might form the basis for a precise logical calculation of their composite resultant. Therefore the estimator has to be more than a specialist. He needs to have a grasp of all aspects of a developing situation combined with an understanding of the personalities of the decision-makers involved.

There are two ways to acquire the broad and balanced sensitivity needed by the estimator, one through long residence in the area in question, with close observation and participation in its life and fortunes, and one vicarious, through

thoughtful study of its history. The vicarious way is the practical one for most intelligence analysts, and it has the advantage of bringing a perspective which might be distorted in on-the-spot experience. Particularly in reaching this perspective, there is really no substitute for a profound understanding of the past in general, as well as the history of the particular nation or people with which the estimator is concerned. Armed with such an understanding, he will be able to protect himself against a number of fallacies to which the functional specialist falls prey.

Capabilities and Intentions

He will be better able to resist the temptation to project into the future simple cause-and-effect relationships and logical or rational deductions which have not been found valid for human affairs in the past. He will be protected, for example, against the assumption that an "objective" appraisal of a nation's capabilities is the same as that held by the nation's ruling elite, as well as the more fallacious assumption that the rulers' intentions are necessarily formed and limited by their capabilities.

Back in 1950 the opinion was widely held in the Washington intelligence community that the Chinese Communists would not enter the Korean conflict because their logistic capabilities were patently inadequate to win it and because they would want to devote their energies to consolidating politically and economically the hold over China newly acquired through military action. They ignored these inadequate capabilities, however, and came to the aid of their fellow-Communists. By hindsight, it seems clear that, aside from considerations of national security, their objective of political consolidation was served by the psychological effect on the Chinese people of fighting in defense of the "motherland" against "imperialist" America, and meantime the USSR was required to supply them with modern weapons and facilitate their development of modernized armed forces. The limitations on their capabilities need not have entered their calculations, since these advantages could be gained without driving the UN forces out of Korea, and the limited objective of forcing the invader back from the Yalu involved appropriately limited military requirements.

Similarly bad estimating resulted from too much attention to the capabilities at the disposal of Hitler, Mussolini, and the Japanese militarists. Their war goals were far more ambitious than those of the Chinese in Korea, and many prominent and responsible individuals in their countries knew they did not have the capabilities to attain them. Yet with the willfulness, wishfulness, or desperation of human rulers, these men made the decision to go to war.

Historically speaking, the intentions or objectives born of men's ambitions, conceits, and hopes have more often influenced their decisions to go to war than an objective appraisal of their capabilities. Intelligence should of course estimate capabilities, but should use such estimates to determine whether courses of action would be successful or how long they could be pursued, not as the sole determinant of decisions on courses of action.

More Than Bread Alone

The estimator with historical perspective will be on guard against the error of extending a narrow unilinear analysis of a current situation into a general forecast, of automatically extending, for example, the analysis of an economic situation to cover the political and psychological future, on the mistaken assumption that economic laws determine the course of human affairs. Karl Marx, the most successful of the economic determinists in getting his theories tested in practice, has been strikingly unsuccessful in getting them confirmed by history. He theorized that Communism would come inevitably to those advanced industrial societies where capitalism was most developed; but approaches to Communism have taken best hold in the least capitalistic and industrialized societies, Russia and China, and have been most successfully resisted in advanced industrial societies, both East and West. And the nineteenth-century Communist prophecy that the rich would become richer and the poor become poorer in capitalistic economies has in the twentieth century proved patently false.

Human motivation is no more exclusively based on economic factors than on Freudian principles. Even *economic* courses of action do not necessarily derive from economic motivation, as witness those of the materialistic Marxist

states themselves, where "commercial considerations alone are seldom the moving spirit of [foreign economic] policies.[1]" And elsewhere history has repeatedly shown that man is capable of denying himself immediate economic advantages in order to maintain dignity and self-respect or to acquire independence. In short, while everyone may have his price, his price or what he prizes is not always primarily economic.

How is one fully to explain the historical lag in the economic and technical development of areas such as pre-bolshevik Russia, pre-Communist China, and Latin America, all relatively rich in natural resources, as compared with the rise of modern industry in Japan or England, without a study of historically developed political and social factors? Economic factors alone cannot explain it.

The Elephant's Tail

The reading of history will keep the intelligence analyst aware that the interpretation of a development in isolation from the matrix of forces from which it arose can be used as the basis for only the most limited and strictly qualified estimate. Every development or issue or crisis has to be viewed and appraised in broad context; it cannot be "scientifically" separated out for sterile test-tube analysis.

The 1956 intelligence failure, for example, to gauge Nasser's reaction to the withdrawal of Western financial support for his Aswan dam project apparently arose from estimative concentration on domestic Egyptian reaction to the US–UK decision, with a view to Nasser's prospects for staying in power. The State Department analysts who were asked to consider this limited range of consequences[2] apparently did not feel obliged to take into account the international aspects of the situation and the motivations of world position and prestige which led Nasser to his dramatic seizure of the Suez Canal in answer to this Western "humiliation." The partial estimate that Nasser would be able to retain power, correct as it was, proved confusing and embarrassing in the light of subsequent events, if not definitely misleading. The

[1] Stanley J. Zyzniewski, "Soviet Foreign Economic Policy," *Political Science Quarterly*, June 1958).

[2] The question was not introduced at the National Estimates level.—Editor.

analyst as estimator should not voluntarily view developments in isolation from their total setting, and should always relate his findings to the whole configurative environment historically considered.

World Views and the Man

A detailed knowledge of history will bring home to the analyst the need to place decision-makers at the focal center of his thinking, rather than abstract concepts of the laws governing human affairs. The economic determinism of Karl Marx and his intellectual descendants, the Providential guidance pictured by Bossuet and others, the random chance of chroniclers and some contemporary historians, the inevitable progress of Turgot, Condorcet and Comte, the cyclic rise and fall of nations, dynasties, and civilizations conceived by Vico and others, the organic society of Spengler's biological analogy, even Toynbee's excessively abstract challenge and response, inner and outer proletariat, etc.—all these philosophies, whatever their validity or appeal, throw into the future a light too dim and uncertain to guide the estimator.

The estimator does, however, need to be aware of these grandiose general concepts of the past, because one or more of them may frame the historical thinking of the decision-makers in his area; and a man's views of the past, whatever they are, are important in determining his decisions for the future. For man, endowed with memory and imagination, is capable of living simultaneously in the past, the present and the future. And his views of the past, which condition his actions in the present, he tends in turn more or less consciously to shape in such a manner as to justify his hopes for the future.

An estimator who does not consider with attention the personality attributes and characteristics of the decision-makers in his area and their views of the past has greatly reduced his chances of making a valid estimate. But biographic research needs to be an intimate and closely related part of economic, social, and political research, since an individual cannot be properly appraised apart from his time and milieu any more than the events which arise from his decisions and actions can be evaluated apart from the time and situation out of which they emerged.

Specific Parallels and Broad Trends

A grasp of the comparative history of civilizations, social and economic orders, empires, states, and societies will create in the analyst an imaginative awareness of the constancy of change. He will learn to look for trends in the society or state or institution he is studying, and for indicators of the direction in which it is moving. Is the trend one of flexible growth, enabling the organization or state to overcome the forces opposing it, or is it approaching the rigidity characteristic of economic, social, political or religious monopolies which suppress all competition and become inflexible in the face of changing circumstances? An awareness of trends and indicators of growth or senescence will help the analyst estimate not only the decisions which will be made, but the vigor of courses of action and the significance of events consequent upon these decisions. In other words, he will also be in a better position to assess decision-makers' capabilities to carry out their intentions.

Here we should return in conclusion to the statement that history never repeats itself and examine more carefully the validity of historical parallels. It would of course be absurd to suppose that any complex historical development is likely to be repeated in every exact detail; but it would be equally absurd to maintain because of this that developments separated in time and space are wholly dissimilar in their consequences and therefore cannot show parallel characteristic trends. One danger in using historical parallels lies in the tendency to jump to the conclusion that the end result or consummating event capping two similar developments will be logically the same. Another is the even more deplorable practice under which an interpreter of current developments, having made up his mind by other processes, searches the past for a roughly similar development to prove his point. This is a very easy and tempting thing to do: history is so rich a storehouse of strikingly parallel developments that it does not take long to find one to suit such a purpose.

If the analyst has a real grasp of history, however, he will be on guard against this easy temptation and will be able to utilize roughly similar developments of the past to stimulate reflection on the relative probabilities of a number of possible alternatives. He will be on the lookout not only for the striking parallels, but also for wherein the complex of factors and personalities entering into a current development differ from those composing the historical ones. With the aid of this process of detailed objective comparison and evaluation of historical events he will arrive at his estimate of the most probable outcome of a current development. In other words, a knowledge of history aids the estimator to employ as "scientific" a method as it is possible to devise for prognostication in the realm of human affairs. The social sciences provide the methodology, but history offers the only laboratory—unfortunately lacking the exact measurements and controls at the disposal of the physical scientist—in which to test the theories and findings of the social scientist. The intelligence estimator, in utilizing the findings of the social and political scientist, needs to superimpose on them his own imagination, insight, and understanding in order to arrive at useful and valid estimates; and this insight he will have slowly gained through study of the past.

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Your professional adversary is not only a dedicated and disciplined Communist, but a learned one, with a specialty in the area where he faces you.

SOVIET INTELLIGENCE TRAINING

Sherman W. Flemer

The younger generation of Soviet intelligence officers now operating around the world have received a professional education probably unequaled anywhere. They were energetic Party activists when the intelligence services spotted them. They were already college graduates, in our terminology, thoroughly grounded in the social sciences, history, foreign affairs and languages. Beyond the college level they had done graduate work in Party schools on the theory of human social evolution—*i.e.*, Marxist-Leninist ideology—and had received some training in intelligence techniques and revolutionary tactics. Then they had been selected for their good characters, intelligence aptitude, and clean records from among many with similar educational qualifications to attend one of the intelligence institutes, where they spent at least two years in full-time study of tradecraft, the organization and methods of Soviet and foreign intelligence services, and the area and languages of their planned operational assignments. Those that have been in the business for some years have probably also taken a full-year refresher course by now.

The older generation is dependent on refresher courses to pick up what they have not learned by experience, for the intelligence institutes were not established until late in World War II days. There are now two main ones for foreign intelligence, run respectively by the military and civilian members of the Soviet intelligence community—the Armed Forces' Chief Intelligence Directorate and State Security's Foreign Directorate. The missions of these two intelligence services, and therefore the curricula of their institutes, considerably overlap: the military service collects not only military

but also scientific, technical, and economic intelligence. State Security runs also a third main Soviet intelligence institute, one training officers for the internal security services.

The Military Diplomatic Academy

The military school is called a Diplomatic Academy, in allusion to the practice of using diplomatic cover for intelligence officers abroad. It accepts candidates from all the armed forces, but they must have graduated from secondary school and a military academy, have had two years' command experience and some intelligence service, and be Party members. Their health, security, and service records must be outstanding, and they must not be older than 32.

Recognizing that its matriculants from the armed forces, for all their schooling, may not have the polish or professional scholarship expected of a military attaché, the Academy spends two years giving them as it were a B.A. in liberal arts, with courses in music and literature, philosophy and logic, psychology, and law, and some military science and military history thrown in. Only then does it get down to serious intelligence training, so its whole course lasts four years.

Beginning in the third year, the Academy's Diplomatic Preparation Department schools the student primarily for his cover duties, offering courses in diplomatic etiquette and attaché observation, collection, and reporting; but it also touches on covert tasks, operational as well as informational reporting, and the organization of deep-cover operations. Another Department teaches him about the organization of foreign armed forces and their intelligence divisions, with emphasis on the American. Meanwhile he is learning tradecraft in classes of the Special Preparation Department. Here the third year is devoted to subjects like intelligence history and methodology, comparative organization, comparative techniques, Soviet intelligence objectives, procedures under official cover and under deep cover, and the organization of third-country operations. Tradecraft proper comes in the fourth year, with courses such as agent recruitment and direction, operational techniques, communications—radio, photography, secret writing, microdots—camouflage and concealment, and counterintelligence evasion.

Practical operational exercises are carried out in Moscow and its suburbs after the techniques have been mastered in laboratories and classrooms. Theoretical exercises are also organized with the help of a *spetsfond*, a collection of classified materials including sanitized operational case histories; these are studied, analyzed, criticized, and debated with a view to developing skill and ingenuity in the establishment and operation of intelligence networks.

In preparation for his particular future assignment the harried student—for he has been attending regular political lectures and physical culture sessions on the side—is at the same time pursuing courses in the Area Studies and Foreign Language departments. He learns about the geography, politics, economics, industry, agriculture, and the communication and transportation networks of the country where he is scheduled to go and of its immediate neighbors. He learns at least one foreign language, perhaps two, with the aid of a system which divides language students into groups of no more than five for study and instruction. Finally he graduates—brain-weary, one imagines—and is assigned abroad in an attaché office of one of the military services, or perhaps in a foreign trade mission or a TASS bureau overseas.

The RaSh (Higher Intelligence School)

State Security, we noted, has separate institutes for foreign intelligence and internal security; the civilian counterpart of the Military Diplomatic Academy is the RaSh. Candidates for the RaSh, like those for the Diplomatic Academy, must belong to the Party or Komsomol, must pass a special security clearance, must be physically fit and show particular aptitudes for intelligence work. Educational prerequisites for RaSh are higher, or at least broader, than for the Academy, since the two-year RaSh curriculum offers nothing comparable with the Academy's first two liberal-arts years: candidates for enrollment must be graduates of schools of higher learning, *i.e.*, the equivalent of M.A.'s, notably in foreign trade, international relations, or foreign languages.

Our most recent detailed information on the RaSh curriculum, dating from 1953, shows the first year, like the Academy's third, filled with the more general professional subjects and a good deal of world-wide area study. RaSh seemed to

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offer no equivalent of the Academy's courses on individual areas, apparently seeking to make its graduates area generalists rather than specialists; but area study nevertheless got down to details, including even foreign customs and social etiquette. Training in operational techniques was reserved for the second year, except for those of countersurveillance, a subject in which theoretical lectures were supplemented by actual tailing practice wherein the student tried to evade experienced teams shadowing him about the Moscow streets.

The second year was packed with tradecraft—Locks and Picks, Flaps and Seals, secret writing, photography, audio-surveillance, operational communications, and the spotting, development, recruitment, handling, training, and indoctrination of agents. Three categories of agent motivation were examined in order of preference—ideological, material, and blackmail. Officers with experience in foreign operations gave lectures on the organization and practices of the police and counterespionage agencies of individual countries. In the meantime, throughout the two years, the student was gaining an oral mastery of at least one foreign language, together with some reading ability. As in the Military Diplomatic Academy, the language classes were restricted in size to five students or fewer.

We have some glimpses of student life at the RaSh as of 1945–53. Students used cover names, but the married ones were allowed to live with their families in Moscow. In addition to a subsistence allowance fixed on the basis of rank, students were given free issues of civilian clothing. Radios were furnished and foreign movies shown as an aid to learning languages. Students attended lectures from 0900 to 1300 every day but Sunday and spent the afternoons and evenings doing homework, participating in exercises, and listening to Party political lectures or to special professional presentations, frequently scheduled on short notice, by outside officials from State Security or the Foreign Ministry.

The Higher School (Security)

State Security has a whole network of schools at various levels to support the discharge of its responsibilities for counterintelligence, domestic operations, investigation, and the development of foreign-language capabilities. They include a

special school for security personnel in the Satellite countries and China, a school for sergeants attached to the State Security staff, a variety of technical schools for all ranks, a Higher School for Investigators, and the Leningrad Institute of Foreign Languages. Here we shall consider only its main staff institute, the Higher School, which operates under law institute cover and is actually so accredited.

Except for its law courses, however, this school is pitched at a lower educational level than the two foreign intelligence institutes, being designed to give advanced operational training in internal security methods to officers who have already had a good deal of practical experience. Nevertheless it requires graduation from secondary school and passing a university-level entrance examination of its matriculants. As in the foreign intelligence schools, these must be Party or Komsomol members and meet high physical and security standards. They must be under 35 years old and have one or two years' experience with the security organization. They continue to get their full pay during the three-year course.

Aside from the law courses, a few general subjects such as "Party History" and "International Politics," and professional lectures on topics like "Anti-Stalinist and Deviationist Movements" and "Ecclesiastical Milieux," the course names that have reached us suggest concentrated work on security tradecraft—self-defense without weapons, recruiting agents, the guidance of networks, handling informers, field observation, surveillance, investigation techniques, radio direction finding, documentation, recognition of false documents, search, communications, operational records. Lectures are supplemented by seminar discussion sessions and by part-time assignment of individual students to operating security sections by way of practical training exercises.

The Product

Our information, detailed if somewhat dusty and remote, thus enables us to reconstruct the bare bones of Soviet intelligence training, the skeleton of the *deinosaurus*. The fearsome reptile's frame is a strong and massive one, but what counts is the flesh that clothes and the spirit that moves it. Education can enlarge a man's or a nation's capac-

ity to fulfill its creatively conceived ends, but training can also crystallize its pattern of action into a series of unimaginative automatic responses; and the individual and group capabilities which constitute the Soviet intelligence challenge cannot be measured by counting up curricula only. One must somehow gauge also the inspiration, flexilibity, devotion to a cause, self-discipline, and drive of the professional graduate. This should be the subject of another article.

A Nazi intercept officer traces the development of illegal listening-in in World War I, ascribing to its successes a monstrous influence on the course of world history.

THE EARLY DEVELOPMENT OF COMMUNICATIONS INTELLIGENCE

Wilhelm F. Flicke

For three thousand years history has offered examples of great political and military successes due solely to methods of spying on the transmitted thoughts of an opponent. Alexander the Great, Caesar, Cleopatra, Napoleon, and Metternich owed their successes to the extensive use of this kind of spying. But in modern times the invention of the telegraph, telephone, and finally radio communications has enormously increased its possibilities and given birth to organized systems of illegal listening-in, to the intercept services.

France and Austria were the leaders in this field. As early as 1908, during that period of strained relations with Italy, Austria undertook to intercept all Italian radio traffic and began regular cryptanalytic work on it. In 1911 the Austrian service was put to work on military communications, following move by move the Italian campaign against the Turks in Libya. In similar detail it reported the course of the Balkan wars of 1912–13.

France also maintained surveillance of foreign radio traffic but had little opportunity for practice on military operations before World War I began. Its principal success was in the cryptanalytic field. Having solved the cipher used between Berlin and the German ambassador in Paris, the French read Berlin's telegram transmitting the 1914 declaration of war and so garbled it before delivery that the ambassador could make nothing of it. They gained some time thus while he was asking for repeats.

Elsewhere the British had had some success with cryptanalysis; the Germans had done practically nothing; and the

Russians hadn't given intercept a thought. German field regulations did suggest that radio operators might listen in on foreign traffic when they had none of their own, but this suggestion had not been put into practice.

The War in the East

When the war broke out a few German operators began to listen to Russian army traffic for fun, but didn't know what to do with the intercepted messages; there was no regulation covering this point. Radio was still a novel and mysterious thing both in Germany and in Russia. In the Russian army the idea had not even become general that its own radio messages could be heard just as well by the enemy, and on the German side the possibility of formulating tactics on the basis of intercepted enemy traffic had not occurred to middle and lower commands.

In the first month of the war, however, the potential of military intercept was dramatically demonstrated at Tannenberg, where Hindenburg's Eighth Army faced the First and Second Russian Armies. The Russians were using plain-text radio with abandon for operational orders. The chief of the fixed German radio station at Thorn, on his own initiative, began before the battle to monitor the Russian traffic and to supply Hindenburg by motorcycle with copies of intercepted messages. Later in the course of the battle the fixed station at Königsberg and the two heavy stations of the Eighth Army staff joined in the work. The German command learned through dozens of messages the strength and organization of the enemy, his objectives and his immediate plans, and was able to make its own dispositions and adjust its tactics accordingly.

After the war the role played by this intelligence in the Tannenberg victory was minimized. Ludendorff, Hindenburg's chief of staff, acknowledged grudgingly that he ". . . had received an intercepted enemy telegram which gave us a clear picture of the enemy's moves for the following days." Hindenburg himself described the battle in such fashion as to give the impression that he was in the dark about the enemy's objectives and organization. The German Archives publication *Der Weltkrieg* admits that the German command "was advised of the objectives of the enemy in a way rarely possible

in wartime" but insists that "the critical decisions and orders for the battle . . . were made independently" of this information.

The general has not yet been born who, after winning a battle, would admit that he had won it thanks to a well-functioning intelligence service. At Tannenberg the contents of the intercepted messages played a decisive role and developments without them would have been entirely different. On the losing side, the Russian General Danilov spoke of an "unpardonable negligence" in the Russian radio service and declared that faulty communications had been the chief reason for the catastrophe.

At any rate, the success at Tannenberg gave a fillip to the German intercept work. Both the fixed stations and the army radio units were instructed to perform intercept duty when not engaged in their own traffic. Channels were set up for forwarding intercepted messages to command headquarters. The Russians were now enciphering their orders, but the Austrian cryptanalytic service was so far advanced that it had solved the Russian cipher by 19 September. The Germans did not begin regular cryptanalysis until the end of 1914.

The Russians used the simple type of cipher, invented by Julius Caesar, which substitutes a group of digits for each letter of the alphabet. This type is solved by knowledge of the relative frequency with which each letter occurs in a given language; in a ciphered German text, for example, the most frequently encountered cipher element will represent the letter *e*. Another simple system replaces syllables, endings, prefixes and other word elements with cipher; but these elements also occur with regular frequencies in a given language. Similarly full-word substitutions. More complex systems conceal these frequencies by varying the cipher element substituted, by burying the meaningful ciphers among meaningless ones, by transpositions—"box," "comb," "grille," "double box"—by reencipherment with additive sequences of meaningless symbols. All of these can be solved; it is only a question of trying enough alternative possibilities. For the cryptographer the trick is to make the number of alternatives enormous and then to change cipher so often that the cryptanalyst can never catch up with him.

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During the German-Austrian operations on the eastern front in late 1914 and 1915 the military intercept service came into its own. Preparation for the joint operations was initiated by a radio deception. Once before, in the late stages of the Battle of Tannenberg, the Germans had tied up Russian reserves on their north flank when preparing to attack on the south by sending a garbled plain-text message referring to the arrival of reinforcements in the northern area. Now, after the Austrian defeat near Lemberg in September, it was necessary to withdraw elements of the German Eighth Army in East Prussia for the formation of a new Ninth Army to support the Austrian front. This weakening of the defense of East Prussia was successfully masked by referring in two garbled plain-text messages to an unloading of reinforcements which implied preparation for a new German offensive in the north.

Meanwhile the Austrians had been heartened to learn from intercepted messages that the Russians, contrary to expectation, did not intend to pursue them beyond the Wisloka, but they were worried by reports of strong enemy cavalry forces between the Nida and the Vistula. The intercept service found, however, that these were only a reconnoitering cavalry corps under General Novikov. At 0840 on 24 September Novikov transmitted a full report on his reconnaissance to the Russian High Command in Warsaw. While the Russians were deciphering this message in Warsaw, Austrian cryptographers were working on the same text, and before noon laid it deciphered before the Austrian High Command. It was probably the first time in the history of warfare that the result of enemy reconnaissance was revealed so swiftly to those against whom it was directed.

In the next few days intercepted messages showed that the Russians were regrouping and shifting their main weight north to the middle reaches of the Vistula. The German-Austrian forces, in an effort to catch the enemy off balance during this regrouping, mounted an offensive which for a time went well. But Russian traffic now betrayed the fact that enormous forces—94 divisions against the German-Austrian 52—were being assembled for an advance toward the heart of Germany.

The German and Austrian armies withdrew south to a line based on Krakow and the Carpathians. Hindenburg, appointed commander in chief of the forces in the east, ordered the Ninth Army, with all available reinforcements from East Prussia, to undertake an encircling movement on the Russian right flank. The movement began on 13 November. The Russians, their traffic showed, had no idea of the extent to which their right was threatened, and on 19 November began their general grand offensive. By this time their right wing near Lodz was almost encircled.

At this climactic juncture the German communications intelligence failed. The Russians had captured the German cipher key and deciphered enough messages to know that their own traffic was being read; they now changed their cipher. The German command had for the present to work in the dark. New Russian forces came up from the Warsaw area, and the German divisions which were supposed to encircle the enemy found themselves encircled. In the resulting battle of Lodz the annihilation of the German forces, fighting in ice and snow without any supply, seemed almost certain. Indeed, the Russians had already prepared transports to carry the remnants to captivity.

But the Austrian and German cipher bureaus had been working feverishly, and late on 21 November accomplished the solution of the new Russian cryptographic system. Current Russian messages revealed a relatively weak spot in the ring encircling the German forces; a sector near Brezeziny was held only by cavalry units. General Litzmann undertook to break through this sector, and to everyone's surprise was successful. The German troops escaped, leaving behind only their heavy materiel. The feat won for General Litzmann the nickname "Lion of Brezeziny"—a captive lion but for the cryptanalyst.

All during 1915, particularly in the German break-through and victorious advance from May to September, the interception of Russian traffic was of decisive importance. All Russian countermeasures were known in advance. Ludendorff had become so accustomed to making his dispositions on the basis of intercept results that he was impatient and nervous if he did not get them. His first question was "Any radiograms?" If no messages of importance were handed him, he

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used to growl that they had not been paying enough attention and would they kindly do better. If a new cryptographic system was not promptly solved, he called it a "damned mess" and said the cryptanalysts had become "absolutely stupid."

This was the period of glory for the intercept services; it is inconceivable under the strength ratios which obtained that the summer offensive could have succeeded as it did without their intelligence on Russian dispositions. Of course, the Russians were always changing their ciphers, but the Austrian cryptanalysts were so well tuned to the Russian systems that every new key was broken within a few days. And in this the Russians afforded wonderful assistance: often they sent one and the same message in the old key and the new one; or they would send an inquiry in the old cipher and get the reply in the new one; or they would send messages in plain text referring to encrypted messages.

The consistent German and Austrian anticipation of Russian measures did not escape Russian notice. The cry of "Treason!" ran through all Russia and the Russian army, and a search for traitors began everywhere. Every Russian officer with a German-sounding name was suspect, and many of them were courtmartialled. The fury went to such lengths that finally it had to be stopped by cabinet order of the Czar. The real "traitor" was never found, and in that lay the great tragedy for the Russians; for those summer days of 1915 decided the campaign and decided it against them. And this defeat was the opening act of the revolution of 1917.

The slowness of the Russians to recognize the insecurity of their communications was amusingly illustrated as late as the spring of 1916. To veil their withdrawal of two corps from the Austrian front they had several stations carry on deceptive plain-text traffic. But they announced this plan in advance in transparent cipher, and prefixed to each of the fake messages the warning "Do not be alarmed; this is just deception."

Blitzkrieg in the West

When the war began the Russian plan on the eastern front and the German plan on the western front both called for what came later to be known as "Blitzkrieg." The Russian armies were to fight decisive battles in East Prussia and then

advance quickly on Berlin. In the west the German armies were to dash through Belgium and northern France and deliver a crushing defeat to the French army somewhere east of Paris.

There is a certain irony in the fact that at the very time when the Russians in the east were exposing themselves by clumsy use of radio so disastrously that the course of the Battle of Tannenberg wrecked their entire blitz campaign, the Germans in the west should be making the same mistake with the same result, so that although the war continued for years the fundamental idea had already been hopelessly wrecked. In the east it was the Battle of Tannenberg; in the west it was the Battle of the Marne.

Few battles in military history have had so much written about them as the Battle of the Marne. There are many names for it, of which one of the favorites among the French is "Miracle of the Marne." People have sought and found all sorts of explanations for the seemingly inexplicable bogging down of the German advance, and German Lt. Col. Hentsch has been made a scapegoat for recommending the "unnecessary" retreat. Glimpses into the archives of the French Deuxième Bureau provided by Polish Lt. Col. Szieszynski and French Col. Calvel reveal what the "miracle" was.

The invading German forces relied heavily on radio communications but devoted very little effort to making them secure. Every transmitter attached to a particular army had the same initial letter in its call sign, and call signs and frequencies were never changed. Corrections and answers to encrypted messages were often sent in plain text, and frequently the signature of the commander was carried in clear. Occasionally entire messages were sent in plain text.

The French had committed their intercept service in full even before the beginning of the war. By mere checking of call-signs they were able to identify the staff transmitters of the armies, the staff transmitters of most of the cavalry divisions, and the staff transmitters of some of the army corps and infantry divisions. Enciphered messages were all quickly solvable because of references in plain text to their contents. In the course of fourteen days the French service picked up some 350 messages from the cavalry corps under General von der

Markwitz alone. These revealed not merely all this corps' movements, plans and deployment, but those of the whole First Army to its north, under von Kluck, and of the Second Army to the south under von Bülow.

The First Army had had to move north to avoid being outflanked by the French Sixth Army, and this had overextended the German line, leaving a gap between the First and Second Armies which von der Markwitz' cavalry corps was trying to fill. The intercepted messages showed where the weak places were, and the French and English broke through the two armies on 8 September, threatening to encircle von Kluck and outflank von Bülow. The Germans had to retreat. Their attempt to gain a quick decision in the west had failed, and in the resulting war of position the eventual superiority of the Allies in materiel decided the entire campaign.

After the Battle of the Marne the French and Germans continued trying to outflank each other to the north in the famous "race to the sea." The focus of French reconnaissance lay in the intercept service, whereas the Germans had to rely exclusively on patrols and scouts along the front, who of course were able to make observations only after the enemy units had already been committed. The French service recognized the movement of the German Sixth and Seventh Armies from the southern front to the extreme north and to the Aisne sector respectively. With the help of the British intercept service, which had now become active, it identified the formation of the new German Fourth Army in Belgium and anticipated its 18 October offensive in time for countermeasures which stopped it at the Yser. Then the attempt of the redeployed Sixth Army to break through toward Ypern was prematurely betrayed in radio traffic and failed. These battles ended the war of movement in the west.

Stabilized Fronts and New Devices

Late in 1914, after their experience in the east, the Germans also began systematic interception of enemy radio traffic in the west. Both sides now developed extremely great activity in the invisible struggle between camouflage, concealment, and deception on the one hand and interception, evaluation, and cryptanalysis on the other. Of utmost importance for com-

munications security was attention to details. A German message ordering a change of call signs sometimes gave the old and new signs in parallel. Or when they changed signs German stations might not break the sequence of message numbers. One German divisional transmitter could be recognized by its habit of noting the sending time and word count at the end of the message instead of at the beginning. Another could be identified by its stereotyped greeting, "Can you hear all right?"

The French were also leaders in the field of radiogoniometry, that is transmitter direction finding. The principle is simple enough: the way a directional receiving antenna faces to bring in the strongest signal shows the point of the compass from which the signal comes. The intersection of this directional line with that from another DF receiver is the location of the transmitter. The line from a third DF receiver should theoretically intersect the others at the same point; in practice, it shows the margin of error. There were practical difficulties in correcting for local and magnetic deviations of the radio beam, in placing DF receivers at a sufficiently wide angle for distant direction-finding, and in developing mobile equipment of sufficient accuracy. The British and Italians, as well as the Germans, were well advanced in this field also; the Russians had not got beyond modest beginnings by the end of the war.

DF operations achieved their greatest importance in the naval intercept service; the sinking of many a German submarine could be credited to the British DF service. But the course of raiding Zeppelins could also be observed by the British DF with great ease because of their low speed, the continuous radio traffic verifying their bearings, and the fact that they used a set frequency and a fixed system of call signs.

As the vulnerability of radio communications became generally recognized and as the war of position on both fronts made possible the establishment of wire networks, the intercept services began to devote most of their effort to tapping telephone lines. Single-conductor telephone lines were still in general use, with the return circuit through the ground. Metal stakes driven into the ground as close as possible to the enemy lines would pick up these ground circuits for monitor-

ing in a dug-out connected by wire to the stakes. One such intercept station might supply as much as twenty pages of significant information a day.

In the east this activity was an important one-sided factor from the summer of 1916 to the end of the war. German and Austrian stations were located at intervals of about ten kilometers along the entire front and could monitor all Russian telephone calls as far as five kilometers behind the front. The strategic exploitation of this source of intelligence was the withdrawal of a large portion of the forces of the Central Powers from the eastern front, since there was now no danger of a surprise move by the enemy. Except for the intercept service it would not have been possible to keep the front stabilized with the remaining forces, whose strength ratio to the enemy was in many sectors no greater than one to ten.

In the west the German and allied intercept services now largely neutralized each other, with advantage to one side or the other depending upon whether the intelligence was properly exploited. On one occasion the Germans, having learned by listening to French artillery telephone calls the hour of a planned French attack, made the mistake of passing the information and appropriate orders to their own units by telephone in plain language. The French in turn heard these calls and made a completely successful attack several hours in advance of the original time.

In the half-year of battles before Verdun in 1916 telephone lines were so badly damaged by the uninterrupted artillery fire that new methods of communication had to be found. Everywhere along the front they used "ground telegraphy" instruments, which sent buzzer currents short distances through the earth. Nearby interception was easier than for telephone, but units which had been accustomed to intercepting voice now had to learn Morse and sometimes cryptanalysis. The English, on the other hand, invented an apparatus called the Fullerphone, which they considered a secure combat-zone communications device; but even it could be intercepted under certain conditions.

The German intercept service achieved strategic significance only once in the West. It learned of the preparations for the grand Allied offensive on the Somme in the spring of 1917, pinpointing the direction and areas of attack. For once the German supreme command drew the correct conclusions and immediately before the attack ordered a withdrawal to the "Siegfried Line." The target was thus withdrawn from the crushing superiority of the Allies, and the attack petered out in empty space. The Allied intercept services had advance information of this German maneuver, but their command failed to adjust its tactics accordingly.

The German command missed its greatest opportunity during this same spring. The French army in its unsuccessful attack on the Aisne and east of Reims had suffered such severe losses that its morale was badly shaken. Intercepted messages revealed that there was mutiny in numerous army corps, that individual soldiers and whole units were leaving the front or deserting to the enemy. In this situation they could not have resisted a German attack. But the incredible happened: the German command, seeing in this situation a parallel with the Russian front, expected the French power of resistance to collapse without any further German action. It missed the chance which was never to return. While the Germans waited for capitulation Petain resumed command, the crisis came to an end, and the French front stood firm again. The scale of victory now tipped slowly in favor of the Allies.

The War at Sea

The naval intercept war was highly developed from the very beginning. The British and the Germans used cipher and disguise here far more than ashore. A message from a coastal command station intended for a ship at sea would ostensibly be directed to another coastal station while the warship stood by for it on the same wave length.

Through mishap the Germans were long at a disadvantage in this activity. The Russians had sunk the German cruiser Magdeburg in the Baltic late in 1914. The Germans did not know for years that a Russian diver had recovered the code book from the radio cabin of the sunken vessel. The Russians reconstructed the cipher system and passed it to the British. Consequently, at the Doggerbank in January 1915, the British were able to follow the movements of the German fleet and sink the armored cruiser "Blücher."

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The British had also succeeded in solving the German cipher used in submarine traffic, and could follow the movements of the German submarines precisely from day to day. While in Germany people were doubling and tripling security precautions in connection with the movements of submarines in a downright convulsive fear of English spies, the English had only to listen to the radios of the submarines and their command stations. It was only this which made possible the British blockade of the North Sea coast with meager forces.

The Germans were at a disadvantage too in the relative effort they devoted to the naval intercept service. It employed at its height a few dozen cryptanalysts and evaluators under the command of a naval lieutenant, whereas the British Admiralty had several hundred commanded by an admiral, handling an average of 2,000 messages daily. The British were the first to create a technically exact and fast working system of evaluation. Their DF stations were connected with each other and with the central office by teletype. Every reading was promptly registered at the central office on a great orientation map. All intercepted call signs were carded and systematized, so that the British were able to determine the pattern according to which the German call signs were changed and so to know in advance what sign a particular German transmitter would be using today or tomorrow or next week. The Germans never achieved, even during World War II, such well organized collaboration among direction finding, decipherment, and evaluation. People never got away from petty preoccupation with their own interests and rivalry with other units.

Nevertheless there were some German successes. Von Spee's cruiser squadron had been pursued into the Pacific by superior Allied naval forces. In their search for him the English used their radios with unconcern, with the result that he was always posted on the movements of the enemy. On the other hand, he was able to mislead his pursuers by radio silence and occasional deceptive traffic from the little cruiser "Emden" in Australian waters. His appearance at Coronel in Chilean waters came as a complete surprise to Admiral Cradock, who supposed him far away toward Australia. The German warships struck so unexpectedly that the British armored cruisers

"Good Hope" and "Monmouth" were quickly sunk, and several other units were badly damaged. Allied shipping in this area was almost completely paralyzed for a number of weeks.

The Diplomatic Front

Better known are the intercept activities on the diplomatic front during World War I. Both the German and the Austrian diplomatic ciphers were compromised, not through cryptanalysis but by traditional cloak-and-dagger methods.

One Alexander Czek, a Belgian resident of Austrian and English parentage, was employed at the heavy German radio station in Brussels, one of the direct links for traffic from the Foreign Office in Berlin. He began as a technician, but was so capable and conscientious that he was soon entrusted with operations and later came to be called on as an extra in the cipher office. In the summer of 1915 the British Intelligence Service began to work on him with the help of a young lady of the Belgian liberation movement. He was finally persuaded that it was his duty to work not for the Germans but for the Allies. He was unable to make off with the radio station's code book, but saved the work-sheets he used when called in for decoding. By the time he became suspect to the Germans, having been seen in company with members of the liberation movement, he had enough of these work-sheets to reconstruct the cipher. He escaped across the border and turned them over to the British. It did not occur to the Germans to change their cipher, and the messages from the German Foreign Office could be read in London from about the end of 1915 on.

The most famous use of this source of intelligence was to expose publicly the negotiations early in 1917 for an alliance of Mexico and Japan with Germany, an exposure which helped precipitate the entry of the United States into the war. In mid-January the German Foreign Minister, Zimmermann, sent a message with instructions to undertake such negotiations to his Ambassador in Mexico, offering to Mexico the inducement of repossessing its lost territories in Texas, New Mexico and Arizona. The message was transmitted enciphered through three separate channels to the German ambassador in Washington for forwarding to Mexico City: by radio via New York,

by radio via Stockholm and Buenos Aires, and by cable via London, appended through trickery to a cable of the American Ambassador in Berlin. At the Berlin Foreign Office they thought themselves pretty sly to have devised this last method.

All three messages were intercepted and read in London. The United States must be informed, but the source could not be revealed. The British therefore ordered a fourth copy of the message obtained in Mexico, and when it arrived after five weeks showed it with the translation to the American Ambassador in London, acknowledging only that they had come into possession of a cipher key. President Wilson was not convinced of the authenticity of the message until the British agreed to redecipher it in the presence of an American representative.

On 1 March the President made the message public, giving out that it had somehow been obtained in Mexico. There was a storm of indignation in the United States and one of apprehension in Germany and Mexico. Von Eckhardt, the German Ambassador in Mexico, cabled on 2 March in the same code:

. . . This was not revealed by me here. Treachery or indiscretion must have occurred in the United States. . . .

The exchange of messages seeking to fix responsibility lasted through March, with von Eckhardt suggesting again that secret messages were carelessly handled in Washington; and Berlin was finally convinced of his innocence. But traffic continued in this code to the end of the war. The Germans retained the firm conviction that ciphers of other nations were capable of solution but not their own.

It was perfectly marvellous how the British intercept service was able during the entire war to keep its work so secret that not the slightest hint about it reached the outside. It even went so far in camouflaging its work that it had inserted in the British press violent attacks on the antiquated methods of the Secret Service, to which it belonged. The press articles pointed to the American intelligence service as much more thorough and efficient, lamenting the fact that the Zimmermann affair had been uncovered in Washington rather than in London. The Austrian aristocrat whose son had made all this possible tried to find him after the war. He applied to

the British Secret Service and received the following reply from its chief:

. . . I must inform you this is the first time I have ever encountered the name Alex Czek . . . I cannot tell you anything whatsoever regarding your son. . . .

The Austrian diplomatic code was betrayed similarly, if with less dramatic results. Count Czernin, the Austrian ambassador in Bucharest, was a diplomat of the old school, a cavalier who not only knew his job but also knew how to live agreeably. Once when spending an hour with a lady of his acquaintance he left his briefcase, containing among other things the cipher he used for dispatches to Berlin, in his cab outside. Unfortunately the driver also found it necessary to leave the cab for a time, and when the Count returned the briefcase was gone.

Conscientiously Count Czernin informed Vienna and offered his resignation. Emperor Franz Joseph in his courteous fashion declined to accept it, calling the matter a regrettable oversight; no real damage was done, since the Rumanian police found and returned the briefcase with contents intact after three days. In Vienna it never occurred to anyone to change the cryptographic system. Not until 1917, when the Austrians occupied Bucharest and found the photographic negatives of Count Czernin's documents in the Prime Minister's attic, did they realize that the Rumanians and their Allies had been reading Foreign Office traffic since the war began.

It seems almost incredible that the two powers which developed the intercept service to a high degree of perfection during the war and whose military operations were based to a very great extent on its results, which therefore knew very well how vulnerable the communications of a country are to penetration by the enemy, should have displayed such utter unconcern about the security of their own communications.

You might think that possession of this cipher would have given the Rumanians more advantage in the four-month German-Austrian blitzkrieg against them. Actually it only made them overconfident, feeling that the collapse of Austria was imminent. In the military operations the Rumanians used

their radios in a way that paled even the Russian practices at Tannenberg. The German and Austrian intercept services were overwhelmed by the flood of intercepted messages. The strength, organization and all the intentions of the Rumanian forces were written clear for the enemy to read. General Falkenhayn crushed them in one swift battle after another.

The Rumanians, like the Russians two years before, were convinced that treachery was involved. They replaced men in various positions and court-martialled a number of high officers, but for the most part did not change their radio practices. They did get the French military mission to help them set up a new cryptographic system, but this was broken in six days by two German cryptanalysts who had worked on French systems before. If the lightning defeat of the Rumanians was a "judgment of God," as they used to say in Germany and Austria, for their perfidious declaration of war, we can see here what divine instrument was used in execution.

The Peace Negotiations

The intercept services continued to play their decisive role even at the peace conferences. At the Allied headquarters in the Forest of Compiegne the French Deuxième Bureau deciphered all the telegraphic traffic of the German delegation, even the famous instruction to "Try for milder terms; if not obtainable, sign nevertheless." All the German cards were on the table.

Earlier, at Brest-Litovsk, the German and Austrian delegations had the benefit of three intercept sources. A large radio intercept center was set up to monitor traffic inside Russia. The teleprinter put at the disposal of the Russian delegation for communications with Moscow was tapped, and the fifteen cryptanalysts assigned had broken the Russian cipher by the third day of negotiations. And microphones were concealed in the chandelier of the Russian conference room and in the walls of the living rooms of all the Russian delegates. The Russians changed cipher once, after the negotiator for the Central Powers seemed to know so much that they became suspicious, but the new code was broken in six days. Thus at this conference it was the Russians who found their hands hopelessly exposed.

COMMUNICATIONS TO THE EDITORS

Dear Mr. Riposte:

Your reply to Mr. Tidwell's article in the summer issue of *Studies in Intelligence* leads me to suspect that you are more of a sabre man than a foils devotee. In your game of fencing with ideas you have applied the blade with gusto, but in your enthusiasm I am afraid that you have neglected your opponent's point and that it is now waving dangerously over your head.

Just to be sure that you and I are fencing our own match on the same mat I will recapitulate what I believe to be the main points of "Kim or Major North." I will then explain why I think you have exposed yourself unnecessarily.

Mr. Tidwell said that it is essential that America understand people who live in alien cultures and that if American intelligence personnel do not understand them, nobody else will. He pointed out the natural, human difficulties that must be overcome if we are to think our way into another culture, and listed a number of additional, artificial barriers that we have created for ourselves. He then suggested a number of ways that might help to make it easier for our people to work toward overcoming cultural barriers. His most important point, however, was that we should recognize the need to understand other cultures and to consider this understanding as the goal toward which our personnel policies and operational procedures should be oriented.

Your use of the term "Procrustean" in this connection is mystifying. Far from recommending uniform conduct, Mr. Tidwell was recommending agreement on a common goal toward which individuals would work according to their personal attributes and the needs of a given situation. *Ça va sans dire.*

You advocate asking Arabs about Arab plots. Mr. Tidwell was suggesting ways in which it would be easier and more profitable to ask Arabs about Arab plots.

You say that Germans were sometimes suspicious of persons who spoke their language too well. The Germans are noted as being somewhat power-conscious. He who controls the

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transfer point between languages, *i.e.*, the interpreter, liaison officer, cut-out, middleman, go-between, etc., wields tremendous power. I don't blame the Germans for being suspicious under the circumstances, but your argument is circular. He would be even less suspicious of Americans if we stayed home.

Your comments about curved dictionaries are all too typical of the difficulty that we have in thinking our way out of American culture. It is very hard for us to talk about sex without a snicker.

The best item I have saved for last. You say that our people abroad have to act like the others in their cover organization. This is fine within reason. I have seen people, however, who were perfect at maintaining cover, but so perfect that they never did anything else. The real point is the nature of their mission abroad. Do we send people overseas so that they can play games at hiding their identities from the Russians or do we send them overseas because we need the information that we hope that they can collect? If our cover organizations inhibit our doing our job then perhaps we might consider changing our cover arrangements.

Mr. Tidwell's article attacked a problem that has come to mind frequently in recent months. The same problem in somewhat different context has been raised in the recently published book, "The Ugly American." I think that he has suggested some ideas that should be thought about seriously. He may not have the right answers, but please, sir, do not be a sabre-wielding Pangloss.

Sincerely yours,

R. E. BUTTALL 25X1

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AGENT RADIO OPERATION DURING WORLD WAR II

During World War II the use of clandestine radio for agent communications was widespread. Literally hundreds of agent circuits were operated during the war. On the enemy side they ranged in type from highly organized nets involving German diplomatic installations to single operations in such widely scattered places as Mozambique and isolated locations in the United States. On the Allied side there was no part of Axis territory where we did not have clandestine communications representatives—"Joes," as they were called. It was almost impossible to tune a communications receiver of an evening without running across signals which were so obviously not what they were trying to seem that you wondered why they were not wrapped up the first time they came on the air.

On both sides the signal plans (call signs, frequencies, and times of transmission) and procedures used by agents were for the most part of utmost simplicity. One service was also easily distinguishable from another by their different characteristics. The random contact times and frequent changes in wavelength considered so essential today were represented by uncomplicated regular patterns simple to reconstruct. In many cases the rota—the cycle in which the plan repeated itself—was of only a week's duration. Often only the list of call signs was carried out to a 31-day rota.

The agent was generally given a reasonably good range of operating frequencies, usually between five and ten, to help protect him from detection and arrest, but he was often his own worst enemy. Certain times and frequencies, because they afforded better operating conditions either radiowise or from a personal standpoint, became his favorites. Almost nothing his base could say or do would convince an agent that he was endangering himself when he abandoned even the simple non-repetitive pattern of his signal plan in favor of the convenience of operating day after day on the same frequency at the same hour. It must be said, in all fairness, that in some cases this practice was almost unavoidable because of the agent's need to live his cover. In others, however, it was stupidity, laziness, or complete incomprehension of the need

for good radio security. Security laxness was particularly foolhardy of those who operated alone and without benefit of "watchers" to warn when enemy personnel were approaching.

Four types of agent radio operators can be distinguished—those who operated in metropolitan areas in concert with well-organized watcher organizations; those who operated on their own in cities; those who were with the guerrilla groups; and those who worked alone in isolated rural areas.

The City Mouse

In cities a variety of techniques was employed to protect the operator. In one case as many as five operators in widely separated areas were geared to function as one station. All had transmitters on the same frequency and copies of the traffic for a given schedule. If the enemy approached the vicinity of a particular operator, he would stop transmitting when signaled by his watcher, and at the same time another operator in a remote part of the city who had been listening to his colleague would, with hardly a perceptible pause, continue the transmission. As necessary, a third would take over from the second and so on, much to the frustration of the opposition. In another instance long-abandoned telephone lines were used to key distant transmitters, whose remoteness from the operator greatly increased his security. These and other sophisticated devices were employed successfully in target areas where an extensive and highly organized underground was able to create the conditions for them.

In the main, however, a less imaginative but equally effective means of protecting the operator was used—teams of watchers strategically placed in the streets around or on the roof of the building in which the agent was working his set. When enemy direction-finding trucks or personnel with portable sets were spotted approaching, a signal would be sent to another watcher either in the room with the operator or close enough to warn him to stop transmitting. Usually the warning was enough; but one agent was so intensely anxious to get the traffic off that he repeatedly ignored the warnings of his watcher on the roof above him. A string had to be fastened to this man's wrist, with the roof watcher holding the other end, so that he could literally yank the operator's hand away from the key!

Less is known about the singletons who operated in cities. They lived lonely, frightened lives, particularly tense during their transmissions. Frequently they had the feeling that the enemy was just outside the door waiting for the right moment to break in, and sometimes he was. The most grateful moment in the singleton's day came when he heard the base say "Roger. Nothing more." Sometimes the base operator would impulsively end with the letters GB ES GL—"Good bye and good luck"—even though he knew it was against the rules.

The lone agents who survived owed their lives to a highly developed sense of security and intelligent use of the resources available to them. They went on the air only when they had material they considered really important and they kept their transmissions short. They either were or became such good operators that they approached the professional level in skill. Sometimes they were able to change their transmitting procedure from what they had been taught to one which enabled them to reduce greatly their time on the air. They took advantage of unusual operating locations and moved frequently. In addition, they undoubtedly owed something to good fortune: many who were caught were victims as much of bad luck as of enemy action. One German agent in Italy who had most skillfully and successfully evaded Allied apprehension over a long period was caught only with the casual help of an Italian woman. After watching with curiosity the efforts of a DF crew in the street for some time, she finally approached the officer in charge and diffidently offered the suggestion, "If you're looking for the man with the radio, he's up there."

Some singleton agents who were unable to live alone with their secrets were spotted because of their inability to keep their mouths shut. Their compulsion to tell a sweetheart or a friend or to draw attention to themselves by living or talking in a manner out of keeping with their covers resulted in their apprehension. And yet they sometimes got by with incredible indiscretions. There was one case in which the base, having taken traffic from a "Joe" in northern Italy, was about to close down when Joe, in clear text, asked if it would take traffic from "George," an agent who had been trained and dispatched from a completely different location. The base operator was flabbergasted, but took down the transmission and

then asked the man in the field to stand by for a short message, which was being enciphered, to the following effect: "Where did you get that traffic and where the hell is George?" The answer was prompt and again *en clair:* "From George, he's on leave." For several days Joe continued to send in George's messages, evidently prepared in advance, as well as his own, until George showed up on his own schedule and resumed business as usual. To the best of our knowledge these two agents remained unmolested and free of control; they were contacted regularly until Allied troops overran the area.

The Country Mouse

The radio operator with a guerrilla group came in for his share of difficulties too. First of all, he usually arrived at his destination by parachute. Often his equipment was damaged in the drop. Many times he had to lug it over almost impassable terrain in a wild scramble to protect it and avoid capture. Sometimes he never got on the air at all, and he and his teammates would be the subject of melancholy speculation on the part of his comrades at headquarters until some word trickled back as to what had happened to them. The radio man was expected to do his share of the fighting when the situation demanded it; and injured or sick, he was supposed to keep at his radio as long as he was strong enough to operate it.

The singleton in the country usually had a specified mission such as the retraining of an already infiltrated agent or the transmission of information being gathered by specific sources. He frequently could use some city-type methods of operation, being protected by watchers as he worked in some lonely spot, or had the advantages of the guerrilla type, in that he was among friendly irregulars or in their territory. Very often he had little privacy, let alone security, of operation, and his sole protection was the good will of the populace of the area through which he was travelling. Frequently he had to meet contact schedules in the open in broad daylight, with interested indigenous bystanders looking on. Given good will, however, this circumstanding was not bad; it provided volunteers to crank the generator and hold up the poles on which his antenna was strung.

The country singleton was usually no worse off than his counterparts in other situations, and sometimes much better

off; occasionally he was treated as an honored guest. But his status varied with the moods and political views of the so-called friendly leaders of the area, and at times he was viewed with suspicion or open hostility. The agent or agents he was supposed to retrain often resented him and added to his difficulties. He developed skills beyond those he had brought with him: equivocation, tact, flattery, subterfuge, and downright dishonesty became abilities essential to the doing of his job. His one thought was to get it done and get out in one piece and on to the next assignment.

Occasionally the agent operator interjected into his otherwise anonymous transmission bursts of temper, displeasure or eloquent disgust. Usually these outbursts were spontaneous profanity, unenciphered, directed at the quality of the base signal, the base operator's poor sending, or some other immediate cause of annoyance. They most often came in the agent's mother-tongue, but a certain group of German clandestine agents used to swear at their base operators with great eloquence in beautifully spelled-out English.

Not all such expressions of opinion were sent in the clear. Over the years, enciphered messages have been generously spiked with agent invective and profanity. One such message received during the war, a marvel of succinctness, spoke volumes on the subject of what makes an agent tick. The agent in question had been trained as a singleton. It had been planned, with good reason, that he should be dropped several hundred miles ahead of the bulk of his equipment, of which there was a great deal, and make his way to it later. The operation went according to plan except in this respect; all the agent's gear was dropped with him. In due time the base heard him calling, established contact, and took a brief but carefully enciphered message, which when decoded was found to consist of one extremely vulgar French word. The agent was never heard from again.

The Ingredients of Partnership

What kind of person made a good agent operator? His special qualifications required that he be young or old, tall or short, thin or fat, nervous or phlegmatic, intelligent or stupid, educated or unlettered. His political views were of no conse-

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quence. If he had a burning resentment at having been thrown out of his country, of having lost family or friends to the enemy, so much the better—or maybe worse: uncontrolled hatred could create security problems. He didn't even have to like radio very much. About the only attributes he really needed were: ability to put up with all the unpleasantness of six weeks of radio training to get at least a nodding acquaintance with the subject; a willingness or desire to go anywhere by any reasonable means of conveyance—"reasonable" includes dropping fifty feet from a plane into water—and stay for an unspecified period of time; and the abiding conviction, in spite of feeling constantly that someone was looking over his shoulder, that it would always be the other guy who got caught. In short, he must come to like his work and take, with the well-educated call-girl, the view that he was just plain lucky to get such a good job.

At the base end of a clandestine circuit a good operator was, in his own way, different from any other radio operator developed during the war. And he was proud of it. In the first place he had to learn to live in a world of noise, an experience which occasionally resulted in permanent psychoses or suicide. The agent transmitter was and is a miserably feeble communications instrument, capable under the best of circumstances of putting only very small amounts of radio energy into the ether. Being illegal, it had to compete with jammers, commercial telegraph, and broadcast stations, whose signals often exceeded its power tens of thousands of times. If the reader can picture himself surrounded by the brass section of a large orchestra playing one of the lustier passages from Wagner while he is trying to hear and identify a different melody coming from a piccolo played by an asthmatic midget in the balcony, he will in some measure approximate the auditory frustrations of the base radio operator searching for and copying some of the typical agent signals.

Yet this small group of men not only took pride in their work, but because they understood the problems of their unseen friends on the other end of the line, went out of their way to make sure that their agents got the best service possible. Frequently they would become so concerned about a certain agent that they would get up during off hours at what-

ever time of day or night their particular Joe was scheduled to come on, to make sure that he would be properly copied, even though the base operator assigned to that watch was thoroughly competent. And the regular operator never resented this interference with his watch; he probably had done or would do the same thing himself.

The devotion and skill of these otherwise apparently undedicated and average men was equal to almost any demand. Sometimes as many as five operators would voluntarily concentrate on one agent transmission, piecing together the fragments each made out, so the man could get off the air as fast as possible. They learned to recognize the agent's signal as he was tuning up, in order to shorten the dangerous calling time. They managed to make sense of the spastic tappings of obviously nervous agents and through their own efforts and example frequently instilled confidence in them. If they did not accept with good grace the often unwarranted criticism leveled at them by the agent, at least they did not reply in kind.

They recognized their special friends by the way they sent their characters and were in many cases able to tell when the agent was in trouble or had been replaced at the key by an enemy operator. In many instances they developed a sixth sense which enabled them to hear and copy signals correctly through prolonged bursts of static or interference, and they developed shortcuts which further reduced the agent's time on the air. Many of these shortcuts became the foundation for more efficient and sophisticated methods of operation.

Their patience was truly marvelous. When necessary, they would sit day after day listening for a man who had never been contacted or who had disappeared for months. That he might be without equipment, drunk, or dead made no difference to them. As long as his schedule was on their contact sheet, he was real and they looked for him. If he showed up they nearly always established contact.

Not every man assigned as radio operator to this type of base station made the grade. Some tried and just didn't have it. These nobody criticized, and other useful duties were found for them; but those who didn't take the work seriously

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were not tolerated and soon left the station. The good ones came from all walks of life. Unlike the agents, they were trusted nationals of the country operating the station. They were draftees, professional communicators, amateur radio operators, philologists; but almost without exception they had imagination, skill, and a deep (if frequently unrecognized) love for both radio and that type of radio work in particular. They were in short a new breed, the clandestine intelligence service radio operator.

CRITIQUES OF SOME RECENT BOOKS ON INTELLIGENCE

THE ZIMMERMANN TELEGRAM. By *Barbara W. Tuchman.* (New York: Viking. 1958. Pp. 244. $3.95)

On January 17, 1917, the German Foreign Secretary, Arthur Zimmermann, abetted by British decoding experts, placed a steaming hot potato into the hands of Admiral William Hall, the director of British Naval Intelligence. The shrewd juggling of this gift by Admiral Hall and its impact on the American public, poised on the brink of entry into World War I, are the focal themes of this novelized but scholarly and documented account of a famous diplomatic interception. Zimmermann's secret telegram to the German minister in Mexico, made public in *The New York Times* on March 1, 1917, has frequently been cited as one of the causes for American intervention in the war in Europe. Zimmermann told his minister that Germany would shortly begin unrestricted submarine warfare, and that if the United States were to declare war Germany would seek an alliance with Mexico and sound out Japan. Mexico would have the prospect of recovering its "lost territory in Texas, New Mexico, and Arizona."

At first glance the six weeks' delay in releasing news of such a blatant German proposal seems curious: the American public, wavering between a deep desire to remain at peace and a strong urge to come to the aid of the Allies, would be decided by proof of the German intent to dismember the United States. But to Admiral Hall, as he held the decoded message in his hands, the problem was not so simple. A decoded enemy message of such portentous content would require the greatest assurance of authenticity before it could be believed, and giving such an assurance involved revealing how it was obtained and thereby jeopardizing a rich source of future information. The way the Director of Naval Intelligence did manage to make use of the intelligence while keeping his source secure is from the professional point of view the most intriguing aspect of the story.

The source was straightforward communications interception. The British had obtained, by combining the results of

three distinct intelligence operations, a major part of the German diplomatic code. Since September 1915 the cryptographers of Room 40 in Whitehall had been engaged in successful decoding of Berlin's messages to all German embassies in the Western Hemisphere. The value of such a source was of course immeasurable. Hall considered its value so great that for two weeks, while he worked out his own solution to the problem, he didn't reveal the existence of the decoded message to his *own* government. His solution rested partly on knowledge of the routes German telegrams took to reach their destinations in the Western Hemisphere. It was determined that many messages were sent to the United States in the guise of Swedish diplomatic cables, and the German embassy in Washington used commercial lines to forward telegrams to Mexico City. Hall's operatives penetrated the telegraph office in Mexico City and obtained a copy of the Zimmermann telegram. The slight changes that occurred during transmission would give some credence to the story he was creating that the telegram was discovered in America.

Once he had the copy of the telegram as received in America, Hall permitted an American official to use the reconstructed German code key and personally decode the German message, thereby establishing the authenticity of the message in the eyes of the U.S. Government. To establish a plausible source for the telegram in the eyes of the American public and of the Germans, Hall went further. When Count von Bernstorff, the German Ambassador to the United States, embarked on his return trip to Germany after the break in diplomatic relations, a mysterious trunk, reputed to be full of Swedish diplomatic papers, was found in his baggage. According to the story released to the newspapers, it was taken into custody by the British when the Danish liner, Frederik VIII, docked at Halifax. The Swedish diplomatic seal had already been broken, British authorities told the press, before the liner reached Halifax. The bait was swallowed, and the source of the Zimmermann telegram became, as far as the Germans and the American public were concerned, Von Bernstorff's mysterious trunk.

Admiral Hall's coup cannot, of course, be considered the immediate cause for the U.S. entry into World War I. Mrs. Tuchman analyzes with great insight most of the major factors affecting the decision to go to war. She chooses with discrimination from the vast amounts of historical data those elements that most vividly characterize the atmosphere in which the Zimmermann telegram played such a significant role.

From the historian's point of view her book represents sound scholarship and balanced judgment, for all its popular form. As a case study in intelligence operations, *The Zimmermann Telegram* presents in detail the complex problems of an extraordinary case and their successful solution.

ALLIED INTELLIGENCE BUREAU. By *Colonel Allison Ind.* (New York: David MacKay. 1958. Pp. 304. $4.95.)

Colonel Ind describes in dramatic detail the principal activities of the AIB, an agglomeration of British, Australian, Dutch, and American clandestine services which performed in the World War II Pacific theater roughly the same functions as the OSS in other theaters of war. His book shows how clandestine operations in the Pacific were developed pretty much by ear, without the benefit of counsel from experienced men in the field. The magnificent daring of those who undertook the work cannot be overstated, and their exploits make exciting reading; but Colonel Ind's account—pardonably, perhaps, coming from the AIB's "deputy controller"—is apt to lead the reader to attach more importance to the value of this segment of intelligence in the advancement of the war than it actually had. There was comparatively little in these operations that is instructive for today's professional intelligence officer.

The first half of the book is devoted to the work of the Australian Coast Watchers in the southwest Pacific islands. The members of this service gave a magnificent demonstration of selfless courage and daring. Colonel Ind does not cover the organizational and recruitment phases of the Coast Watchers, perhaps because these have been well reported by

Eric Feldt, the brave and able Australian officer most responsible for the effective functioning of the service.[1] The perils and privations of a white bushman on a fetid jungle island occupied by a vicious enemy whose strength and movements he observes and reports make suspenseful anecdotes of adventure. The situation was basic, dangerous, and cruel; but it was not attended by any of the complex nuances of sophisticated espionage operations.

From the tradecraft point of view Colonel Ind's chapters on operations in the Philippines are the most useful ones. These required well-rehearsed cover and organized partisan resistance. Fragments of the story have been published from time to time, but to my knowledge this is the first history available to the general public covering the whole organization and all its activities.[2]

The final major section of the book, "The Commandos," deals with the several isolated operations of the so-called "Services Reconnaissance Department," an outgrowth of the British SOE. They were a small group of able, courageous, and experienced British saboteurs who pumped adrenalin into their systems while pleading for action. It is a great pity they were not used more freely. In their anxiety to ply their specialties in the theatre they staged a splendidly shocking show by planting dummy limpets on our own shipping in Townsville harbor, and it was touch and go for a while as to whether they would be expelled unceremoniously from the area. Finally they were permitted to destroy shipping in Singapore harbor, some 3,000 miles away, and they accomplished their mission with fine finish.

Stylistically, Colonel Ind's book is one for a lover of vivid phrase and brilliant color. The casual reader may find it too dazzling, kaleidoscopic to the point of vertigo.

[1] Eric A. Feldt, *The Coastwatchers.* (New York and Melbourne: Oxford University Press, 1946. 264 pp.)

[2] Colonel Ind was largely responsible for an official documentary account, *Operations of the Allied Intelligence Bureau, GHQ, SWPA,* published under "restricted" classification in 1948 as Vol. IV of *The Intelligence Series,* GHQ, FEC. Most of this material is now designated for official use only.

MAN HUNT IN KENYA. By *Ian Henderson,* with *Phillip Goodhart.* (New York: Doubleday. 1958. Pp. 240. $3.95.) Also under title THE HUNT FOR KIMATHI. (London: Hamish Hamilton. 1958. 21/–.)

Man Hunt in Kenya is a fascinating and well-written book about the last important operation against the Mau Mau rebellion in Kenya. Its British title is more precise; Dedan Kimathi was the undisputed leader and guiding spirit of the largest and most dangerous Mau Mau gangs, and this story shows how he was also a master of bushcraft of the highest order. The fact that it took 10 months to capture Kimathi even in the Mau Mau's dying days in 1956 gives some indication of the problem the security forces set for themselves when they elected to make an all-out effort to get him one way or another.

Phillip Goodhart, British Member of Parliament for Beckenham, who prior to his election had been covering the Mau Mau revolt for the London *Daily Telegraph,* has written a three-chapter Background for the book, and apparently collaborated with Ian Henderson, its principal author—and actor—throughout its preparation. But the Background does not make clear to the unfamiliar reader the origins of the mass rebellion, the character of its heyday in 1953, and its dwindling course to the end of 1955.

One might argue that the main reason the Mau Mau revolt got out of hand was a collapse of British intelligence in the Kikuyu reserve. Its system of African informants had pretty much broken down. Only a handful of Europeans—among them notably Ian Henderson of the Kenya Police—knew how to speak Kikuyu and had any meaningful contacts with the tribe. It had been known since 1950 that, in addition to the overt political resistance centered around Jomo Kenyatta and his Kenya African Union, a secret society was at work among the Kikuyu; but it is doubtful that Kenya officials really had any indication of the seriousness of the Mau Mau oathing or of how widespread it had become. In 1953, after the outbreak of the Emergency, everyone was taken aback by estimates that 90 per cent of the million-odd Kikuyu had taken some kind of Mau Mau oath. The British have relied successfully for centuries on a system of indigenous informants and infiltration agents, usually supplemented, however, by officials with a firm

grounding in the language and culture of the indigenous people. This combination had been allowed to deteriorate in Kenya, and the Government had lost intimate contact with what was going on in the Kikuyu Reserve.

At the height of the nightly Mau Mau raids for food and vengeance on Europeans and Africans alike, a period studded with incidents like the Lari Massacre of March 1953, when some 150 loyal Kikuyu men, women, and children were wiped out in a single night because the local chief was friendly to the Kenya Government—during this time a retired British Army colonel argued most persuasively with me that one Russian saboteur could have brought the Colony to its knees in two weeks. It certainly was true that communications, water supplies, radio stations, etc., were all woefully unguarded. Why the Mau Mau failed to strike at these vulnerable spots remains one of the mysteries in what must be counted among the strangest rebellions in the history of the British Empire.

Later in 1953 the security situation began to improve. The introduction of British troops and the strengthening of the Kenya Police and Provincial Administration began to reduce the Mau Mau gangs in number and put them on the defensive. Operation Anvil, the massive operation in April 1954 around Nairobi directed by Sir Richard Turnbull, now Governor of Tanganyika, led to the detention of some 30,000 Kikuyu, thus strangling a crucial Mau Mau source of money and supplies. Most important of all, the Kenya Government organized an effective group of tribal policemen known as the Kikuyu Guard. It was the Kikuyu Guard's denial of food and support for the Mau Mau gangs that began to tell. No longer were large gangs able to run roughshod through the Kikuyu reserve stealing and plundering. The years 1953 and 1954 also saw a prodigious collection of intelligence from detainees at the various screening centers. The processing of this intelligence gave the Kenya Government details on the people involved with Mau Mau gangs, a catalog of the bestial Mau Mau oaths, and frequently step-by-step outlines of past rebel operations.

By the beginning of 1956 the movement had about run its course, and the security situation had improved so radically that a major action to eliminate Kimathi, the last important

Mau Mau leader still at large, was all that was needed. The natural leader of this operation was Superintendent Ian Henderson, whose record during the Mau Mau revolt was truly outstanding. In 1954 he had made repeated unarmed trips into the forest to negotiate surrender terms with Mau Mau gangs. These talks were abortive, but they demonstrated the man's skill and bravery, and won for him the George Medal. Born and raised in Kenya, Henderson was in fact about the only British official who could have led the Kimathi operation.

Henderson's book is particularly vivid in portraying the incredible Alice-in-Wonderland world in which most of the hunt was conducted—the primitive jungle lore of tracking and survival, the thin irrational line between friend and foe, the minglings of bestiality and childish magic. In the almost impenetrable forest wild game was as much of a problem as any offensive action by terrorists, and Henderson suggests by indirection that the only effect of the much-vaunted RAF bombings of the forest was to make the wild beasts even more dangerous than usual. He gives us a good picture of what life is like in the middle of a tropical rain forest: the Aberdare Range rises to over 13,000 feet and when the sun is not shining it can be extremely inhospitable.

The importance of witchcraft both to the Mau Mau and to the Government teams of ex-terrorists is well illustrated. Two puff-adders falling out of a tree on the back of a collaborator, though they glided away harmlessly, were such a bad omen that they threatened to stop one whole operation. Kimathi's insistence on praying to the Kikuyu god Ngai while facing Mt. Kenya under a wild fig tree meant that one could pinpoint for ambush the dozen or so fig trees to which he would go.

Ironically, Henderson had had to leave the jungle hunt to be presented to Princess Margaret at a tea party at Government House in Nairobi on the very day Kimathi was captured, and was called away from that elegant atmosphere to interrogate Kimathi at Nyeri. Contrasts like these are introduced into the story with a minimum of flamboyancy, and with the traditional British understatement which characterizes the whole account.

One aspect of the operation that still defies full comprehension is Henderson's success in inducing Mau Mau terrorists to change sides and go back into the forest to hunt down their one-time friends. Time and again Henderson converted or at least recruited individual terrorists and sent them armed and supplied with government weapons and provisions to seek out the gangs they had just left. Although some leniency was promised them in return, there was never any suggestion that they would not still be liable to prosecution for the crimes they had committed. One of my strangest impressions from this period I got during a visit to the Athi River Detention Camp in 1954, where several Mau Mau detainees described in some detail to our party their individual roles in the terrorist movement and their participation in several murders. Their psychology is a mysterious one to the Western mind, and Henderson's success in handling them is fascinating and confusing.

The direction and control of the Kimathi operation remained in the hands of the European officers; but it is obvious that no European, not even Henderson, would ever have been able to live and fight in the forest with the same skill as the Mau Mau terrorists. Ultimately, therefore, success in wiping out the last remnants of the Mau Mau gangs rested in the hands of these ex-terrorist recurits. Dedan Kimathi emerges as one of the masters of self-preservation. Henderson shows how extremely knowledgeable as trackers and hunters the last few Mau Mau terrorists had become. As masters of the African bush he rates them higher than the Wanderobo, a tribe of hunters who are excellent in the forest and have traditionally been regarded the finest hunters in East Africa.

I would agree with Henderson that "Kimathi was hardly a political figure, but he was a criminal of the first rank." Goodhart's assessment that "if the Kikuyu are the Germans of tribal Kenya, Kimathi was their Hitler" is patently overdrawn. Still, his stature as a leader, even in 1956, and the possibility of his dying a martyr were reason enough for mounting the operation against him. With his death on the gallows at Nairobi Prison the last active spark of the Mau Mau rebellion was gone. Much of the credit for this accomplishment must go to Ian Henderson, and he has written a first-rate book about it.

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Difficulties and new proposals
[redacted] in a dozen
military geographic fields.

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GEOGRAPHIC INTELLIGENCE

K. C. Duncan

Geographic intelligence is one of the oldest forms of military intelligence, and one of the most important. From earliest times, when man first conspired against man, through ancient history and mediaeval conflict to the most recent wars of our own time, an accurate knowledge and appreciation of geographical factors has been an essential part of strategy and tactics. But today, instead of merely giving some simple information on what lies beyond the neighbouring hill, geographic intelligence is required to provide knowledge on a world-wide basis and in infinitely greater variety, detail, and (above all) precision than ever before.

In the face of unlimited conceivable demands from planning and operational staffs it is essential that our geographic activities should be carefully guided and controlled, so that none may be wasted on aspects which, though previously important in military thinking, have now lost their importance in modern strategy and tactics. It is in the light of this thesis that I propose to examine several fields of geographic intelligence and discuss problems encountered in each.

Cross-Country Terrain

Assessing the suitability of terrain for cross-country movement has been a major problem in modern warfare. Of the many instances when failure to appreciate this factor has proved disastrous, one is perhaps outstanding. In 1917 Lord Haig launched his Flanders offensive in disregard of his engineers' warning that the ground would revert to bog under the necessary preliminary bombardment and his weather experts' advice that the autumn rains, then due, would further aggravate conditions. His failure to take into account the terrain requirements for cross-country movement led to the

costliest battle in British military history, Passchendaele, involving the sacrifice of some 400,000 men.[1]

The suitability of cross-country terrain is today in some ways more critical than ever because of heavier equipment, increased speed and mobility, and probable need for dispersal off surfaced roads as a precaution against tactical nuclear attacks. Its assessment, however, is a most difficult matter, involving a matching of the characteristics of various types of military vehicle to a wide range of detailed information on the terrain—local or seasonal variations of bearing capacity, width and depth of water obstacles, height and steepness of their banks, and the effect of day-to-day or seasonal climatic influences. The task is rendered especially difficult when no practical precedent exists: take for example the movement of [redacted] tanks across ricefields.

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The military geographer really has two major tasks—first, to acquire and collate the necessary mass of factual data on the terrain, and second, to apply those data to foreseeable military operations on the basis of proved vehicle performance. For both, I suggest, careful liaison with planning staffs is essential. It is beyond our resources to acquire and collate detailed information on all areas; we must concentrate on areas where the planners consider movement most likely to occur. And we must keep aware of movement plans for particular vehicles in order to spot the need for experimental maneuvers as basis for an adequate assessment of the practicability of these movements.

Ports and Beaches

An outstanding feature of World War II military operations was the extensive use of beaches for landing troops with their arms and supplies. New techniques led to operations of this kind on a far greater scale than had previously been thought possible. It became the policy to by-pass the seaports in the opening stages of a campaign, relying on the beaches until harbors were captured and reopened to the use of conventional vessels. It was found possible to land stores and equipment on beaches and clear them inland at remarkable rates, averaging 2,500 tons per day per mile of beach. Thus performance over a good beach compares favorably with

[1] *Cf.* Leon Wolff's *In Flanders Fields*, reviewed on pp. 134–138 of this issue.

that of a medium-sized seaport, and in some cases can be better: on the basis of the wartime formula a two-mile stretch of beach west of Tourane, in South Vietnam, would have a capacity of 5,000 tons per day, as against only some 500 for the port.

The importance of beaches for military operations has probably increased since the war. Modern weapons seem likely to damage seaports more effectively and thus delay their rehabilitation for longer periods, while improved equipment for beach landings will probably permit the movement of tonnages far in excess of the figures achieved in World War II. In these circumstances, I suggest that our organizations should consider carefully whether they are over-concentrating on detailed studies of ports and their capacities to the neglect of beaches.

We should at least aim at a high standard in respect of those beaches which the planners consider may be used in operations. Experience in Melbourne indicates that accumulated beach intelligence is generally sufficient as a guide to planners, but lacks the detail required for mounting specific operations with confidence. It is a fallacy to suppose that observations made years ago are necessarily accurate today and adequate for present requirements. The characteristics of some beaches can change surprisingly overnight in a storm, and the heavier equipment available today poses problems not previously encountered. Factors such as bearing capacity (involving assessment of the sub-strata), slope at various tides, variations of surface and slope at different seasons, effects of tide and local currents on inshore approaches—these are typically deficient in our present information.

These deficiencies could be reduced, I suggest, by carrying out special technical reconnaissance, whenever practicable, in respect of those beaches which are of interest to our military planners on the evidence of present information. Where this reconnaissance is not possible (*e.g.*, beaches in potential enemy territory) our procurement channels should be activated far more than at present. If this is not done, we can only continue to plan on imperfect data, risking uncertainties and perhaps jeopardizing the success of vital amphibious operations.

Railways

An important problem in the study of railways is the assessment of route capacities. In ideal circumstances this assessment would be made by analyzing the physical characteristics of the lines—gauge, number of tracks, weight of rail, length and spacing of passing loops, speed or weight restrictions, and so on—to arrive at a theoretical physical capacity. The practical operational capacity would then be determined by such factors as size and type of locomotive and rolling-stock park, fuel availability, quality and location of repair shops and engine sheds, etc.

In foreign countries, however, particularly those which are behind a "curtain," acquisition of all the detailed information necessary for these analyses is most difficult, and present assessments of the practical capacities of railways in those countries can at best be regarded as approximations based on very imperfect data. Unfortunately, there is little prospect of obtaining the detailed information required to fill our gaps, and it is therefore worth considering whether some short-cut method might improve our assessments.

One such method might be to make an all-out effort to acquire working timetables of those lines which have importance in planning. These working timetables—not to be confused with passenger timetables—contain details of all classes of traffic, both passenger and freight, and are available in one form or another on all railways. An analysis of them in conjunction with other textual and photographic information might give reasonable accuracy in the assessment of practical capacities. It would not be easy, but if our agencies agreed on a standard approach it seems likely that the assessments achieved would be more soundly based and adequate at least for the purposes of war potential appreciations.

Roads

The great effort devoted to reporting on roads has amassed a considerable amount of information, which, however, is deficient in certain technical aspects critical for accurate assessments of road potential. This deficiency is due chiefly to the fact that reports come from nontechnical observers, but a contributing cause is that reporting officers not unnaturally tend to judge the condition of roads in foreign countries on

the basis of road standards in their own, so that their assessments tend to vary inversely with these standards.

The effect of inaccurate reporting can best be shown by a practical example. Let us take a road across undulating country with an overall width of 20 feet and a waterbound macadam surface in bad condition. Applying the standard NATO Road Capacity Table to these details, we arrive at an estimated capacity:

$$550 \times \frac{30}{100} \times \frac{80}{100} = 132 \text{ vehicles per hour.}$$

If 3-ton vehicles are used for a 10-hour running day, the estimated capacity becomes 3,960 tons per day.

But if the reporting officer, because of the bad condition of the surface, mistakes the waterbound macadam for crushed rock, our calculations would be:

$$280 \times \frac{25}{100} \times \frac{80}{100} = 56 \text{ vehicles per hour.}$$

With 3-ton vehicles and a 10-hour running day, the estimated capacity is only 1,680 tons per day. A simple mistake on the nature of the surface has thus resulted in an error of 57% in the capacity of this particular road. Cumulative errors in the NATO Table factors, applied to a number of roads in a given area, might seriously affect logistic planning.

But the full assessment of a road's potential requires also consideration of the maximum live-load capacity, *i.e.* the weight of the heaviest vehicle that can use it. This involves other technical reporting, in particular on the strength of bridges and culverts, which not infrequently impose strict limits on traffic. In the example we gave just now I assumed that 3-ton vehicles were used, but planners might well want to know whether they could move 10-ton trucks or even 50-ton tanks along a given road. This problem is one of educating reporting officers so that the technical details they supply are far more accurate than at present, or of obtaining this necessary information in some other way.

A secondary problem in this field, as in many others, is to ensure that procurement and research are conducted in accordance with the priorities of planning requirements, for the potential areas to be covered are so vast that with the

limited resources available we cannot hope to achieve detailed results on everything. If this control is not exercised, there is a real danger that essential work will be neglected.

Inland Water Transportation

Compared with railways and roads, inland water transportation is being neglected by intelligence. This, I believe, stems largely from a natural tendency to think first of rail and road transport for military movement because of their greater speed. Moreover, railways and roads, being able to traverse natural obstacles such as mountain ranges, can link widely separated regions and provide local access in any direction. Rivers and canals cannot provide the same through access or choice of direction, and the capacity of rivers normally decreases as one proceeds upstream. Another reason for the preoccupation with rail and road transportation systems has been the relatively large reporting on them in connection with Western aid to backward countries, in which the construction or rehabilitation of these systems has loomed large.

This neglect of waterways has meant that we have acquired insufficient detail to permit a rational reconsideration of the validity of our preferential emphasis on railways and roads. The situation, in short, presents a vicious circle. The vulnerability of rail and road transportation networks, particularly around major cities and ports, to modern techniques of attack suggests that greater attention should be paid to the capabilities of waterway systems as a means of moving supplies inland. They merit at least sufficient procurement and research that their role may be more accurately assessed in those areas which have the highest priority in over-all planning.

Airfields

The basic problem of airfield intelligence is the assessment of the capabilities of a given airfield, *i.e.* to decide what aircraft can operate from it, and in what circumstances. Before this assessment can be made it is necessary to know in detail such physical characteristics of the airfield as the dimensions, surface, and weight-bearing capacity of the runways, taxi-tracks, and dispersals, the nature and disposition of supporting facilities, the location and height of obstructions to the approaches,

the altitude, and the temperature. It is necessary to know, too, the seasonal variations in some of these factors.

Except when photoreconnaissance and detailed reporting are available, it is extremely difficult to get this information with the required accuracy, and even then a full knowledge of bearing capacity is practically impossible. Detailed tests have been conducted at a negligible proportion of the airfields in which we are interested, and we are therefore compelled to base our opinions largely on a knowledge of what aircraft have operated from the fields, without any real means to assess their surplus of bearing capacity. In addition, we all too often have no knowledge of how a runway will stand up to intensive or prolonged usage, or of how its capacity will vary at different seasons.

The rated requirements of aircraft which use the field, moreover, may bear only a very indirect relation to operational requirements. For example, [redacted] publications state that the MIG–17 requires only 2,640 feet to take off and clear 50 feet. Yet intelligence research shows clearly that the Communists, having built their runways for these aircraft to an original length of 6,560 feet, subsequently lengthened them to at least 7,200. For the MIG–19 the technical handbooks give a requirement of 2,240 25X1 [redacted] and 3,000 feet [redacted] whereas research indicates that the Communists are lengthening some runways for these aircraft from 7,200 feet to at least 8,200. There is thus a wide margin between the minimum length of take-off run and the length of the runway itself. 25X1 25X1 25X1

There is no easy solution, but I feel that considerable improvement would be achieved if our respective air forces and airfield intelligence could reach some agreement on the total lengths of runway from which enemy or friendly forces would be prepared to conduct both sustained and limited occasional operations. If lists could be agreed, showing on a country-by-country basis the full runway requirements for the operation of various aircraft likely to be used by that country, then the airfield intelligence branches would at least have a basis for their assessments and could write with far greater unanimity than at present.

Climate

Climate of course affects most other aspects of geographic intelligence, but some applications of its study in modern warfare may not yet be generally appreciated. For example a full knowledge of *local* wind variations is necessary for the study of the movement of radioactive fallout from nuclear explosions. Important as this is in strategic nuclear attack, it is even more so in tactical applications, when friendly forces are relatively close to the point of impact or may have to advance towards it. The same principle applies to chemical or bacteriological warfare. The study of local temperature inversions and local rains will also be very important should gases be used by either side in a future war.

You will note my repetition of the word "local." Intelligence is on the whole fairly well provided with generalized data on climate, normally based on long periods of observation, which gives a reasonably accurate basis for regional appreciations. What is lacking—and I suggest it is the main deficiency in this branch of geographic intelligence—is information on local peculiarities or variations within the broad regional pattern.

Mapping

The need for accuracy in mapping has always been important, but today this need is greater than ever before. Whereas minor inaccuracies can reasonably be corrected by visual observation in conventional air operations, the concept of guided-missile warfare highlights problems which have hitherto been only marginal. One of the greatest limitations to ICBM accuracy is the present inadequacy of intercontinental geodetic survey. The use of any guided missile which is not equipped with some terminal-guidance system requires precise knowledge of the relation between launching point and objective, and though some margin of error may be allowed where area damage is acceptable, no such margin is permissible if it is desired to hit a single objective with the minimum of damage to surroundings. If a terminal-guidance system is fitted to the missile, a prerequisite is often a knowledge of the radar return from the target area. In peacetime or in the early stages of a war, when it may not be possible to acquire this

knowledge by prior reconnaissance, the only alternative is the simulation of the return by a careful analysis of maps.

Since mapping represents graphic collation of many aspects of intelligence, it is pertinent to examine briefly our role vis-a-vis that of the map-producing authorities. Procedures no doubt vary between our countries, but certain fundamental principles are valid irrespective of their detailed application. First, there must be a system for feeding our information to the map producers, and for checking their drafts. This assumes particular importance when no recent photography is available to the mappers, but even when it is, there is inevitably a time-lag between it and the map compilation, and in that interval changes may occur. A map becomes out of date all too quickly; we must at least ensure that it is as accurate as possible when issued.

Second, there must be a system for informing the mappers of inaccuracies detected after issue, and for letting them know when certain series or individual sheets have become obsolete. Many of us, noting inaccuracies on maps, have done nothing to draw attention to them because there was no routine procedure for doing so. Third—and this applies primarily to areas over which peacetime photoreconnaissance is not practicable—there must be a system whereby doubtful map details noted in everyday research are recorded, so that procurement agencies may be briefed to check them.

Fourth, there must be a system whereby mapping priorities are related to planning. This is primarily a matter for liaison between planning staffs and the mappers; the responsibility of intelligence organizations lies mainly in drawing attention to the deficiencies and inaccuracies in existing maps of the priority areas so that new editions may be put in hand.

Photography

Photography is a basic requirement in mapping, in most forms of intelligence research, and in operational planning; and any deficiencies of photography must adversely affect these activities. Of the two forms of photographic coverage, print coverage and negatives backing it up, the need for the former is well recognized, but the need for film is not so generally appreciated. Film is required to meet the demands of various sections and organizations in peacetime and in war,

and the alternative of copying from prints, besides being slower and more costly, does not provide first-class quality, especially when, as frequently, the original prints have deteriorated through age.

It seems somewhat illogical that whereas the exchange of textual information between our agencies has been developed to a high degree, the exchange of photographic prints and film has been comparatively neglected. In addition to the direct advantages of such an exchange to peacetime intelligence research, we should not overlook its importance in those "hot" situations which occur from time to time and in the period of extreme military activity which would immediately precede the next war. At such times it is clearly a complicated and inefficient procedure to be obliged to signal [redacted] for urgently required photographs and film, and then to await their arrival "by best possible means." Once the war had started, it is reasonable to suppose that fresh photographs would become available, but in the pressure periods in the meantime we have to depend on existing holdings.

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One appreciates, of course, that clauses in peacetime reconnaissance contracts may preclude the exchange of the resultant photography, but this restriction applies to a very small proportion of overall available holdings and does not invalidate my thesis that much more could, and should, be done in the matter of exchange.

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[redacted]

Geographic Names

Much painstaking work has been done by the U.S. Board on Geographic Names [redacted] towards the standardization of place names and generic terms, and this has been of particular value where transliteration from a non-roman to a romanized form is required. Difficulties are still encountered by the in-

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telligence community, however, in applying the authorities' decisions.

The main difficulty arises from the fact that the decisions, being based on academic principles, are sometimes ahead of popular usage, and in such cases the "preferred" (or decision) name tends to make the text less readily intelligible to the non-specialist reader. In current intelligence reporting, it is desirable to use a style which permits the easiest comprehension by a wide range of usually high-level generalists; any irritant which interrupts their concentration on the subject matter is undesirable, and might even result in failure to appreciate the importance of the intelligence. A few examples of what I term irritating preferred names are Krung Thep (Bangkok), Kuang-chou (Canton), Chin-men Tao (Quemoy Island), Sulawesi (Celebes), Shen-yang (Mukden) and Hsiamen Tao (Amoy Island); there are many others which, being less common, are perhaps all the more irritating when they are encountered.

The problem is complicated by the fact that some of these preferred names may, in course of time, become more commonly accepted in daily usage throughout the world. This raises the question whether we are to concentrate on ease of comprehension at the present time or should tolerate irritating names with the object of gradually educating ourselves and our readers to accept the academic decisions. The decisions of the two boards are progressively being incorporated in new map series, and therefore confusion is likely to arise in basic or long-term reporting if we do not adhere rigidly to them. One can imagine, for example, the frustration of a commander in the field when he realizes that he has the task of reconciling the "preferred" names used on his basic maps and the "conventional" names used in a detailed study of the region's topography.

Another aspect of the decisions which brings complications is the retention of many indigenous generic terms for such topographical features as capes, rivers, islands, mountains and lakes. The topography of foreign lands is sufficiently difficult for generalists to comprehend without the added difficulty caused by the use of these terms, and there would appear to be a strong case for the substitution of English-language equivalents. Although we, the peacetime elite of [redacted]

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intelligence activities, can perhaps overcome the difficulties by acquiring familiarity with new terms, the problem would assume increased significance in wartime, when a large body of untrained recruits would be unfamiliar with our nomenclature.

Air Targeting

While the production of air targets material is primarily a Service responsibility, the intelligence organizations must provide the basic information required and play an important part in writing the appreciations on which the priority of target systems and individual targets are based. It is therefore relevant to examine whether we are devoting our resources to any non-vital aspects of targeting, or on the other hand are neglecting others of importance.

Let us look first at strategic targeting. In World War II the basic documents for operations were detailed information sheets and annotated photographs of individual targets, and similar, usually more generalized, graphics on important concentrations of targets. These were necessary for attacks by manned aircraft, since visual recognition of the target and of the selected detailed aiming point within it played a major part in such attacks. With the concept of nuclear and guided-missile strategic attack, it should be examined whether it is still necessary to devote a major part of our targeting activity to detailed graphics on individual targets; in view of the area damage attainable by modern weapons, should a greater proportion of effort be devoted to urban and industrial complexes?

There is probably no aspect of aerial warfare on which more has been written than target selection. It is fairly easy to be wise after the event, as we have seen from the spate of criticisms of allied bombing policy published since World War II. It is very difficult to be equally wise before the event, and to be sure that the golden role of targeting is observed—hit the enemy where it hurts him most. In a future war, because of the striking power of weapons likely to be held by both sides, it is more than ever essential that target selection be right, and from the very beginning of hostilities. There may be no opportunity to experiment with priorities as in the last war. We in intelligence have, therefore, a responsibility to

ensure that our recommendations in this field are based on sound principles.

The discharge of this responsibility is rendered more difficult, in my opinion, by the lack of any sound system for assessing the relative priority of complexes as targets. This is quite a different task from assessing the priority of a single installation relative to others of like function. One complex may, for example, contain a transportation target of major importance to the country's war potential, a steel plant and oil refinery of medium importance, and so on. How can the priority of this complex be determined in relation to that of other complexes which contain various other combinations of installations, each with their own relative importance within their functional systems? This is too critical a matter to be left to haphazard methods, and merits some close examination.

I have long felt that the solution may lie in some sort of point system. What I have in mind is that within each country for which strategic targeting is undertaken a factor should be agreed on for each functional system (*e.g.* oil-refining, transportation, steel industry, administration), the factor being based on the characteristics of the war potential of the particular country. Then within each system a factor should be agreed on for individual installations in accordance with their various degrees of importance. A combination of the two factors would give a points value for each installation, and the sum of these values would give the total value of each complex, thus providing an indication of its relative priority for attack. It would, of course, be necessary to keep all the factors under periodic review, and to adjust them in the light of changes in the war potential of the country concerned. While this method would not be without its difficulties, it provides the basis for a positive approach to the matter and should, I suggest, be investigated.

One important aspect of graphics on complexes is a representation of the anticipated radar return from the various installations, buildings and natural features. In the absence of actual radarscope photos—and this must at present apply to vast areas which might be attacked in war—it is necessary to simulate the return, basing the simulation on an analysis of such factors as the height of buildings, their type of con-

struction, their lay-out, the density of built-up areas, and the configuration of such features as rivers, lakes, and woods. All this information must be provided by the intelligence agencies.

I doubt whether our procurement policies take sufficient account of this requirement. Are we equipped to provide such information with the degree of detailed accuracy which is required? In respect of a country such as China, for example, I am fairly sure we are not, particularly when the constant development of existing and new centers is borne in mind. I suggest that this deficiency is worth examination, with a view to the better briefing of procurement agencies active in the field.

In World War II probably as much activity was devoted to tactical targeting as to strategic, and the allied tactical air forces played an important part in the victory. Today, the tendency to talk in terms of a short, decisive nuclear attack or at least an air offensive conducted at long range with guided missiles has given rise to a feeling that in the next war little in the way of tactical bombing will be needed. But this is not necessarily so. In some areas where our forces might be engaged it is still probable that for various reasons tactical attacks would be required, even if they did not actually predominate. Because of this, some effort directed towards the preparation of tactical target material can still be justified, but we must ensure that the effort is commensurate with the use that will be made of the material, bearing in mind that on the outbreak of war photoreconnaissance would quickly provide completely up-to-date information.

Conclusion

The field of geographic intelligence, as we have seen, is a very wide one, affecting either directly or indirectly most forms of military operations and planning. If there is any common factor in the problems I have indicated, I believe it to be this: priorities for procurement and research must be more closely related to planning requirements than they are at present, not only in respect of the degree of detail but also in respect of the areas covered. For geographic intelligence is not an end in itself; it is a means to an end—military operational efficiency.

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A clandestine requirements officer reveals to the intelligence analyst a magic formula to summon and command the powerful ginni of last resort.

SPY AT YOUR SERVICE, SIR

Lowell M. Dunleigh

"The obtaining of intelligence by covert means is an inefficient, expensive and unsatisfactory business. No secret intelligence is worth collecting unless it is absolutely certain that the intelligence is genuinely and urgently required by some executive authority. . . . The art of being an executive in a secret service (and it is an art, not a science) consists largely of seeing that the operating case officer knows exactly what intelligence he is required to obtain, or what target he has to attack. . . . The further the best brains of a secret service divorce themselves from this basic problem, the less efficient the service will be."

So writes a distinguished British colleague, crystallizing these nuggets of wisdom from his wide experience and the long traditions of his service. It is the duty of headquarters, he adds, "to see that the customers don't ask the field damn fool questions." To this negative thumbs-down on foolish questions we would add an outstretched palm begging for good ones, questions calculated to produce the highest yield of essential information.[1]

Putting the right questions to the covert collector in order to get the right answers is not simply a matter of professional neatness, it is imperative to the performance of the intelligence function. Clandestine assets for the collection of information are limited, and in the progressive complexities of the modern world we must be sure we are aiming them at the pivotal factors of power. On the other hand, the flooding of

[1] See William P. Bundy, "The Guiding of Intelligence Collection," *Studies in Intelligence* III 1 (Winter 1959), p. 49, for a review of guidance problems in clandestine collection as presented to the [redacted] Research Methods Conference. 25X1

the information channels is already acute and may soon become overwhelming. Every day more than 1,000 classified documents are poured into the intelligence stream. How many are brightly illuminating, how many of low candlepower? That depends not entirely on the validity of their information, but on what questions they answer.

Process and Rapport

From the viewpoint of the collector, the whole intelligence process has four phases, represented by quadruple R's—Research, Requirements, Reports, Reaction (or evaluation). The third phase is the collector's own, but is dependent on the other three, which belong to the analyst.

The analyst or producer must approach his analysis of the past or present and his estimate of the future through research—the assembling and collation of raw information. He usually finds that he needs more information than he has on some phases, or perhaps current coverage of a developing situation. So he levies a question on the collector, overt or covert. The question is answered by an information report. Then if the system is working properly, the analyst will react, evaluating the report to let the collector know whether he is on the beam. So the intelligence wheel turns: Research, Requirements, Reports, Reaction. Whether it turns smoothly or develops an eccentric wobble depends very considerably on the relation between analyst and collector. This relationship is the key to a pair of most critical and sobering problems—how to get the indispensable information, and conversely how to avoid choking the intelligence stream with the luxuriant water hyacinth of trivia.

In simpler days the operations of the quadruple R's could be combined in one man. In the fifth century B. C., Thucydides both reported and analyzed the Peloponnesian War, ranging the fields of politics, economics, military action, psychological and subversive warfare. He set down a creed that can be warmly embraced by modern practitioners of the intelligence arts and sciences:

And with regard to my factual reporting of the events of the war I have made it a principle not to write down the first story that came my way, and not even to be guided by my own general impressions; either I was present myself at the events

which I have described or else I heard of them from eye-witnesses whose reports I have checked with as much thoroughness as possible. Not that even so the truth was easy to discover: different eye-witnesses give different accounts of the same events, speaking out of partiality for one side or the other or else from imperfect memories. . . . It will be enough for me, however, if these words of mine are judged useful by those who want to understand clearly the events which happened in the past and which (human nature being what it is) will, at some time or other and in much the same ways, be repeated in the future. . . .

I do not think that one will be far wrong in accepting the conclusions I have reached from the evidence which I have put forward. It is better evidence than that of the poets, who exaggerate the importance of their themes, or of the prose chroniclers, who are less interested in telling the truth than in catching the attention of their public. . . . We may claim instead to have used only the plainest evidence and to have reached conclusions which are reasonably accurate.

Alas, no modern Thucydides is competent to undertake alone the full reportorial description and the analytic evaluation of the Cold War; they are a task for many men and many minds. And, perhaps unfortunately, the stylus and papyrus which limited even the prodigious industry of the phenomenal Greek have been replaced by a boundless proliferation of paper and the ever faster writing machines of today. But let us waste no time in tears for the past, for we cannot become our own ancestors; we have no choice but to seek some contemporary means of elevating the quality and reducing the quantity of information which now pours into the intelligence hopper.

I believe the way lies in a closer integration of the question and answer process, a better understanding between producer and collector as to their functions and mutual responsibilities, a realization that they are parts of the same body, lobes of the brain of a master institutional Thucydides. To the superficial observer there is no problem here. Machinery exists, and generally it is good machinery. With minor adjustments it would win a good rating from management experts. The river of paper, properly diked and leveed, flows smoothly from port to ordained port. There is a procedure to

fit every need, a good bureaucratic procedure. Everyone does what he should do according to the book. But what is often lacking, and this is the crucial point, is an empathy, an understanding appreciation, between analyst and reporter.

The collector has many obligations indeed to the harried analyst/producer, and many faults to account for and to remedy; these we shall discuss another time if we are invited back to these pages. At present our concern is with the analyst's obligation to the reporter, if action in his own interests should be called an obligation. It is really only the sensible use of his opportunity to ask questions and criticize the answers. This process can give him an overwhelming influence on the collection course, can make him an effective navigator of the overseas flight piloted by the collector. The navigator is obliged to indicate the route, the pilot is obliged to pursue it. The failure to exercise these roles with mutual helpfulness can cause a bumpy ride or even ditch the craft.

The British colleague we quoted spoke of the expense of clandestine collection. If the checks and balances of capitalistic enterprise only prevailed in intelligence, and the producer were charged for his raw material on the basis of cost and rarity, he would make sure his requests concerned only real and imperative needs. His parsimony with orders and his generosity with complaints about quality would ensure the most efficient use of the precious assets of clandestine collection. By its nature, however, a bureaucracy is akin to socialism or state capitalism, a system which can achieve efficiency only through an *esprit de corps*, an *élan vital* springing from the zeal and drive of personal responsibility. Without these, means will be mistaken for ends, shadow for substance, movement for achievement, and worst of all the size of the highway vehicle for the value of its cargo.

The Rolling Stock

Let's look at some of the vehicles on this highway between questioner and reporter—paved, like a more famous road, with most laudable intent—and weigh those that carry guidance to collectors.

Priority National Intelligence Objectives. These plot the cardinal points of the intelligence compass, the North, East, South and West for research, production and collection of all

types, overt and covert. They list, in order of priority, the areas of danger to national security. Here are the grand, heroic questions which must be answered for policy-makers. From an indifferent beginning nine years ago, they have become increasingly valuable with each revision. The latest edition, with its functional appendices, is an excellent document. Most heartening is this serious attempt to bring the great galaxies of the intelligence firmament into telescopic focus, though they are perforce beyond our quick and easy reach.

Interagency Clandestine Collection Priorities Lists. Keyed to the PNIO's, these lists are tailored for the clandestine collector and formulated on a lower level of abstraction. In many cases they not only list specific requirements but even suggest targets, for instance an installation which might yield the required information. They are growing steadily better, and so are used increasingly for collection and planning. Unfortunately the IPC has confined itself almost wholly to the Denied Areas, in obeisance to the questionable notion that only the Sino-Soviet Bloc, particularly its military power, is a really worthy intelligence target. There's no denying the dangers of hot war or military blackmail, but the hazards and manifestations of the cold war are worldwide. The IPC would seem to be somewhat in conflict with Messrs. Allen Dulles and Nikita Khrushchev, who in a rare duet of agreement have pictured the main battle lines stretching across the field of economics, chiefly in the underdeveloped areas outside the Bloc.

Post Mortems of National Intelligence Estimates. These report information gaps revealed in the preparation of NIE's. Properly they should be translated into collection requirements by the contributors to the estimate in question, but this responsibility is too often overlooked.

Related Mission Directive. This basic instruction for the operation of a clandestine station includes a section devoted to informational objectives. The producers are invited to express their general requirements for integration in this section. The response varies in quality and specificity.

Periodic Requirements Lists. These are regional or country lists issued quarterly through cooperative effort of CIA's Office of Current Intelligence and the State Department. Although not tailored to clandestine collection, they are valu-

able guides for the covert operator. They are improving rapidly in comprehensiveness and general quality.

Clandestine Collection Requirements. These are the particular questions directed specifically to the clandestine collector. In present usage "requirement" covers almost any expression of need for field response, and these questions extend over the widest range. In concept, understanding, and formulation a requirement may be the joy or the despair of the collector. It may be one of those "damn fool questions" or on the other hand a carefully conceived, skillfully formulated requirement which will stimulate the enthusiastic ferreting instincts of the field operator.

Now it is possible, I believe, to indicate quite clearly what makes it foolish or a potent catalyst to action. If the analyst will only give heed to the following recipe for concoction of a secret love potion, he can bend the collector gently to his will. The analyst who knows this secret will be able to practice the most rewarding kind of one-upmanship on his ignorant or careless colleague whose appeals to the field reporter evoke indifferent responses, or none.

The Magic Formula

The ploy, like so many general formulae, is simple to state, but not so easy to *em*ploy. It is this:

Be sure 1) that the information requested does not already exist in the catacombs of an intelligence library, 2) that the information cannot be gathered overtly, or if a question has both overt and covert aspects, that the latter are spelled out, 3) that questions expensive to answer in money and manpower are really significant, 4) that the formulation contains background information to help the collector understand what he is doing, most particularly in scientific and technical subjects, 5) that the questions are not analytic conclusions in interrogative form but are directed at specific informational unknowns upon which the conclusions must be built, 6) that the requirements statement makes a serious effort to suggest targets and indicators (signs, portents and outcroppings that signal subsurface developments, present or future).

Each element of this formula illustrates a vice or virtue which is manifested every day in the requirements traffic. Let's examine these elements one by one.

Be Sure It's Not in the File. Resist the lure to write a field collection requirement until the repositories of information have been searched. This is the analyst's responsibility. The admonition is obvious, though often ignored, to the great and righteous annoyance of the collector. Recently a regional service unit asked about a transportation facility in a denied area. A cable alerted the clandestine station. Meanwhile a curious intelligence officer at headquarters, stirred by vague remembrance, found the information reposing in the files, quite where it belonged. And the shades of Dale Carnegie shivered a bit. Remember, a library search is cheaper than clandestine field collection, certainly in precious manpower if not in cash.

Don't Ask for What's in the Newspaper. Never ask the covert operator to collect overt information. You are cracking pecans with a piledriver if you see the field operator as an all-purpose collector and refuse to believe that he can't undertake such easy tasks as collecting publications, clipping the press, etc. One avid and able analyst begged a covert office for overt collection on his specialty because the overt collectors were busy entertaining important visitors from Washington!

The demands for this kind of thing are greatest in times of crisis, when analysts and policy-makers expect the covert operator to turn himself into a news association. His proper role on these occasions is to probe behind the news, using his covert sources to illuminate events by infra-red; and this role presents a wonderful opportunity for the analyst. Recently I phoned a crisis-stricken analyst, suggesting with apologies that he take just five minutes from his dizzy whirl to frame a few important questions whose answers would be helpful in his round of analyses, interpretations, briefing papers, etc. From past reporting he was familiar with the general capabilities of our sources. He produced three questions, of which one became obsolete in a few hours; but the others were answered next day, to his profit and delight. This is the proper use of an important intelligence tool.

The working analyst who through ignorance or eagerness wants everybody to collect and transmit everything is not the sole culprit. More elevated chiefs may be even worse offenders. They often generate the greatest confusions by

expecting and encouraging their particular collectors to range the spectrum of conditions and events. The result is wasteful competition, duplication, and superficial coverage. Policy-makers have even greater expectations. Anachronistically and conflictingly in this age of science, their naive faith in the collector as seer and soothsayer is a last refuge of the belief in magic.

Here we get into the problem of expecting from the covert collector not exactly overt information, but something more than raw, unevaluated information, some analysis or interpretation. Even the experienced analyst will sometimes be led astray by undue faith in the wisdom of field collection, in its on-the-spotness. In a recent upheaval abroad the covert operator tried to analyze and focus a puzzling development. His reasonable, informed, but too parochial interpretation was not so good as that of a Washington analyst. The collector was fitting news events into the framework of a locally expected trend. The Washington analyst, without personal involvement, had been considering material from all sources in a larger context.

The role of the collector as analyst or interpreter is highly controversial. But in no case can it properly be more than a secondary, contributing function, whether voluntary or by request. The clandestine collector, in particular, though often extremely well informed, is a methods specialist, not a subject specialist. His interpretations and estimates, while they can often be helpful thought-provokers, should be taken into consideration not as authoritative but as tentative contributions to the ever elusive truth. So the good analyst will not encourage the covert collector to act the pundit and write editorials (a bait to which many leap eagerly), but rather will ply him with questions to keep him busy as a reporter developing information. Sound information in the covert field is more precious than prophecy.

Be Sure It's Really Significant. Be sure the questions are inspired by necessity, not curiosity, and that their answers will yield important dividends. This should be a matter of design, not of chance. Resist the temptation to play it safe and cover everything, thus nullifying the whole effort to concentrate limited assets on targets of major importance.

In a recent exercise a group of economic analysts set down a list of industrial establishments on which they wanted information. Almost all were vulnerable to attack. But to get complete information on all of them would have required the total assets of the collectors, with nothing left over for other targets. It was discovered that the analysts didn't really need complete information; what they needed was to fill in certain significant gaps in the production picture. So amiable negotiations between representatives of the collector and the analysts produced, first, an arrangement of the targets in some order of priority, and second, specifics as to what quantity and kind of information was needed on each.

This kind of complex determination requires stern self-discipline by the analyst, as well as understanding by the collector. Many a concentrated specialist could easily use up all existing covert assets on the gaps in his own specialty. A good analyst is always ravenous and omnivorous, but quick and greedy satiety might well be followed by intestinal obstruction and future famine!

Be Sure to Give Background. The operator needs to understand what he is collecting, and why. One disconcerting phenomenon in a bureaucracy is the descent of instructions or requests down through the echelons, losing direction and momentum like the steel pellets of a pinball machine bobbling unpredictably down among its pins. Requirements should have the speed and sharpness of a dart, and the feather end is background information to steady the shaft toward its goal.

The ultimate collector may be an agent limited in understanding. Ideally, of course, the case officer should be able to fill him in and tailor the requirement to his limitations. But if the case officer gets only a list of questions or, worse still, a bare request for "information" on some topic, he cannot always illuminate the subject. The field collectors are not always blameless, to be sure: some are so concerned with the operation of their delicate covert mechanisms that they do not dig deeply enough into the substance of their collection.

Considerable progress is now being made on this count. IPC lists are including increasingly good background statements. Economic analysts are adding blood and sinew to

the bare bones of requirements. Exceptionally good in this respect was the recent Guided Missiles Task Force study, which not only reviewed past collection but described present gaps and pointed the path to future collection. It was a true *Vade mecum* for the case officer. Though mildly encyclopedic, its items could be split up and developed for specific purposes and individual agents. The physician, no matter how refined his specialty, must be well informed on the anatomy of the whole body.

Our British colleagues do these background studies (Green Line papers, they call them) exceedingly well. They take a puzzling subject important to future policy, analyze it, and indicate lines of inquiry. We have experimented with a similar but more elaborate procedure, selecting a target country, relating it to its environment, reviewing existing requirements, speculating on alternative developments, pointing out avenues and targets for collection, and searching for valid indicators. Producers may be asked to participate in this exercise when the technique is better developed and better insured against getting bogged down in endless coordination. Meanwhile the producer can contribute by providing as much background as he can with his collection requests.

The point is that there is an important type of analysis whose aim is not to weigh precisely all facts and arrive at agreed conclusions, but rather to appraise tentatively, to speculate on alternative developments and their import, so as to stimulate the collection activity which will make agreed conclusions possible. The purpose here, again, is to concentrate limited assets on significant lines in a large context.

Ask Collection Questions, Not Conclusions. Conclusions are reached by totaling all evidence from research and all types of collection. The bane of the clandestine collector is the analyst who thinks he has posed a keen requirement when he asks, "Will the government of Country X remain stable until the next election?" or in variant form requests "all evidence of the stability of the government of Country X." Who, the collector might ask, can determine better than the analyst what type of evidence shows that Country X is crumbling? He sits at the center of all information on X. He's an expert. Let him tell us what kind of evidence he wants, and we'll look for it.

Of course, it's not quite so clear-cut as that. The collector is no mere mechanic. He often has an intimate knowledge of his area, but his position and his myriad chores (and perhaps his temperament) do not usually permit him an analytical approach.

So the analyst must not put himself in the position of a judge passively awaiting a verdict. Rather he is an attorney or even a police official directing a difficult quest for evidence, deploying all his overt uniformed police and covert plainclothesmen. Success depends upon search of police records, research by laboratory technicians, and interchange of information between field and headquarters, as well as upon the skill and zeal of the detectives in applying headquarters' instructions.

Suggest Targets; Point Out Indicators. Although the collector will certainly have good ideas of his own, the analyst can turn his intensive knowledge to good advantage by the selection of targets for investigation and indicators that bear watching. He is like the trained petroleum geologist who by carefully studying the terrain can show the field crews where best to drill because he will recognize indicators in the terrestrial environment that signal the likelihood of oil.

A medical diagnostician will suspect from preliminary observation that the patient has one of several possible ailments. This preliminary diagnosis enables him to order specialized examinations and laboratory tests to develop new information which, upon evaluation, will confirm, narrow, or change his original views. He has thus selected a few significant targets and indicators for investigation. He does not send the patient to a clinic for all the tests in the book, with the instruction to "tell me what's wrong with him." The whole galaxy of tests would require endless time, and most would be useless. The intelligence producer is in effect an internist, concerned with diagnosis and prognosis, whose success depends on the care with which he guides the collection of data by specialist-technicians.

In medicine, too, indicators are commonly watched to signal deeper conditions—temperature, pulse and respiration, the condition of tongue, skin, or fingernails, for example. In intelligence, the simpler military indicators are common enough: clearing of the border zone as a portent of invasion,

cancellation of leaves, and a host of other early warning signs. Scientific and technical intelligence has developed many indicators in its field: "What color smoke issues from the chimney of the chemical plant?" "Is the nozzle of the tank car frosted?"

The determination of simple indicators for significant information is a promising field for expansion, and a worthy and profitable task for the analyst. It should be particularly rewarding in the boundless expanse of the social sciences—politics, economics, psychological and social reactions, etc. We stand here greatly in need of indicators and measuring devices which will reveal trends or show where to dig. In the question of a government's stability, for example, the analyst might point out vulnerabilities which the opposition could be expected to attack effectively.

The indicator approach should have fruitful application to the known Communist tactical pattern, in detecting the first hints of infiltration before it becomes manifest—in press and radio, in the army, among the police, in key ministries. For instance, an early move toward getting control of the press is to get control of newsprint. The target for this information might be a local business firm or a newsprint producer abroad.

Mutual Understanding and Responsibilities

If the analyst asks important, practical, and appropriate questions, if he tries to convey to the collector an appreciation of why they are important, and if he helps select high-yielding targets and indicators, he is likely to get good information. The collector for his part is obliged to use his classic formula and operate good agents against good targets. The mutuality of this responsibility is inescapable. Producer/analyst and collector/operator are tied together, for better or for worse.

In the bad good-old-days, particularly when the end of the war opened large new areas, the information-hungry analyst welcomed almost everything, and the operator collected with slim discrimination. In those honeymoon days of the analyst Owl and the spying Pussy-cat, they dined on mince and slices of quince and danced by the light of the moon. But as every marriage counselor warns, the honeymoon does not last forever. Ideally it merges into a workaday world of practical

partnership, exchanged tolerances, happy dialogue, and mutually accepted responsibilities. So we hope it will be with this couple; it would be too bad if their beautiful peagreen boat foundered on too many "damn fool questions."

Some problems common to the intelligence community and some particular to Air Targets find their not flawless solution in the use of machine methods.

DEVELOPMENTS IN AIR TARGETING: DATA HANDLING TECHNIQUES

Outten J. Clinard

The production of any kind of finished intelligence rests upon processes which require the handling of data in large quantities. When the finished intelligence is global and encyclopedic, as in air targeting, these quantities assume massive proportions, and their management requires substantial resources in time and people or machines. Since more than storage and recall of documents or even basic intelligence information is involved in air targeting, data-handling techniques have perforce developed in a complex rather than straightforward pattern.

Responsibilities of Air Targets

Air Intelligence has the responsibility for providing defense staffs and commanders the intelligence necessary to enable them to get the best possible results from the employment of airpower in the event of hostilities. As a part of this responsibility, the Director of Targets is charged with producing for the Department of Defense the common target intelligence base for joint staff and command plans and for the development of weapon systems. Specifically, the Director of Targets must determine enemy vulnerabilities to air attack, estimate weapon requirements and effects, plan and coordinate the production and distribution of data on target systems, and produce estimates of best opportunities for U.S. and allied offensive air action.

A fundamental difficulty in dealing with air weapons and the required operational and supporting systems is their dynamic development, their constantly changing capabilities. This is true both of our own weapons and their delivery vehi-

cles and of those of our potential enemy. Changes in the values of the great number of variables involved could be largely ignored when the United States had an overwhelming superiority in atomic weapons, but intelligence estimates must now take them minutely into account.

With present-day weapon systems it is no longer sufficient to focus on target categories—airfields, for example—as target systems or to assume that our weapons are delivered to the bomb release line. Targets must now be rated according to the immediacy of their potential threat to the United States and its allies, and target systems may consist of a number of different categories, depending on the situation and the objectives to be achieved. For example, a target system may include not only all long-range air bases in an area, but also missile launch sites, weapon storage, liquid fuels, transportation, and control centers. To measure the effects of an attack on such a target system, moreover, we need to know how many weapons would be actually delivered to the target area and where they would fall. We also need measurements of enemy net capabilities at frequent intervals to determine at what stage the attack would have achieved the desired objectives.

Targeting, like the development of weapon systems, has become a swift-moving, ever-changing process. A sampling of the types of questions asked of the Director of Targets during the past year will illustrate its complexity:

Where can I best apply such and such forces available at present? Available in the future?

From what points can I reach the greatest number of priority targets?

How much damage is necessary to eliminate airfields for varying time periods?

What is the operational effect of using such and such alternative damage criteria in calculating the forces necessary to achieve certain ends?

With a given-sized weapon at bomb release line, what are the probabilities of damage and of contamination to the target?

If we attacked this or that target category, how much damage would we effect in other categories?

What would be the effect of fallout in the initial phase on troop movements in certain areas?

What capability would be left the enemy after this strike for atomic weapon delivery, air defense, war production, and general economic activity?

Although it is not impossible to solve most of these problems by manual calculations, the time requirement and cost of manual solution would be prohibitive. Some sort of machine methods have therefore become necessary.

Data handling in the Directorate of Targets may logically be broken down into three distinct processes—*document handling,* or the extraction of individual data from source materials; *data manipulation,* or the consolidation and organization of data in various arrangements; and *data integration,* or the synthesis of data in application to operational problems.

Document Handling

Since research on source materials for the extraction of basic data is an operation common to all intelligence components, a detailed presentation of the procedures used in the Directorate of Targets is not necessary here, but some mention of past difficulties and the still current effort to solve them may be useful. Most of these difficulties, as would be expected, are library-type problems. In the Directorate of Targets there is no central repository where *all* incoming materials may be found, nor is there a reference service where the existence and location of a needed document may be ascertained. Comprehensive documentation is therefore extremely difficult: an analyst can never be sure he has seen all of the available documents pertinent to his study. Not knowing what is available and where makes difficult also any effective control of the collection effort. Other aspects of the same problem turn up in excessive document handling, effort devoted to management of files, and difficulty in making available to all analysts the work of each.

Most of these shortcomings lend themselves to mechanized corrective measures. In Air Intelligence the corrective effort over the past five years has centered on the development of the Minicard System, primarily for document retrieval. The tiny Minicards of film, only 16 x 32-mm, can record photo-

graphically up to 12 legal-sized pages, along with sufficient digital information to index the contents. They can be manipulated by machines in any desired order or selection by content and can be reproduced either as film miniatures or as paper prints enlarged to original size.

The Minicard System has recently undergone a full operational 30-day test in Air Intelligence and has proved itself mechanically satisfactory. The official report on this test, noting that the system requires a few more personnel slots, emphasizes that its justification lies in providing a fast and accurate system of document retrieval and an automatic means for consistent and accurate dissemination of Air Intelligence information reports.

A solution to the document-handling problem thus appears to be in sight, even though this particular equipment is still in the experimental stage and may eventually be replaced by an entirely different system. If recent plans are realized, a new Air Force Intelligence Data Handling System will include an Air Targeting sub-system with a much broader capability both for document retrieval and for other kinds of data handling.

Data Manipulation

Meanwhile, the closely related problem of data manipulation has been receiving attention. In the early days of air targeting, most of the evaluated intelligence on individual targets was maintained in "Phase I Lists." These were simply lists of targets in each category and country arranged alphabetically or by importance. Although they were kept current by analysts as new information was received, formal revisions were published only infrequently. A complete up-to-date set of these lists was seldom available.

The chief defect of the Phase I List system, however, was that the data could not be manipulated easily. This defect has been accentuated by the growth of the target lists. The increase in the destructive potential of weapon systems has made it necessary to extend the range of targeting into areas and installations not previously included. The *Bombing Encyclopedia*, a listing of all identified targets, has grown from some 2,000 entries in 1946 to over 78,000 at present. The *Target Data Inventory*, a compilation used as a basis for war

plans, now has over 14,000 entries, including over 9,000 installations and 4,500 populated places. Air Target Materials, a collection of maps, charts, and mosaics produced for operational use, now cover some 15,000 targets, as against 9,300 just a few years ago.

Although presented in different forms, essentially the same information is used in all these publications; at least, it all comes out of a common fund of target information. So also does the information required to answer numerous individual questions and to solve the equally numerous targeting problems posed to Air Intelligence. This common fund of target information is in short the primary working base for all air target intelligence production. To be effective for these purposes, it requires careful management in all phases of compilation, organization, control and use.

The targets publications, for all they may seem overlapping and duplicative, are required in their various tailorings to meet the needs of particular customers or for a particular mix of information. Consolidation of some publications with others would have alleviated the data manipulation problem somewhat but would not have solved it, and would have created new problems for the consumer. For what might appear to be a large amount of duplication was actually not so much duplication of product as it was a duplication of effort required to produce a variant product. This was where too much valuable analyst time was being expended in repetitive clerical activities like checking, tabulating, arranging, and verifying lists.

Aside from the waste of personnel time in the tedious compilation of data for a variety of products, manual manipulation provided no effective means for controlling the quality of information in the fund, for preventing losses through change in emphasis, functions, or personnel, for providing other headquarters with current information, for supplying quick answers to spot questions of an urgent nature, or for extracting masses of data in preparation for the data integration processes discussed later.

The problem assumed more formidable proportions early in 1957, when the Joint Chiefs of Staff designated the *Target Data Inventory* as the basis for atomic annexes to Command Plans. All codes, reference numbers, and other tar-

get identification elements in the *Inventory* now had to agree with those in other targets publications. It seemed desirable and feasible to standardize the format of publications and information files at the same time, and the outcome was the development of what is now known as the Consolidated Target Intelligence File (CTIF).

The CTIF Solution

The primary element of the CTIF is the standard form herewith illustrated, which is filled in for each target listed in the *Bombing Encyclopedia*. The form's five parts, separated by the heavy horizontal lines, respectively contain:

I. Codes for machine processing and hand processing.
II. Information identifying and locating the target.
III. Information on the category of the target and its individual characteristics within the category.
IV. References to graphic coverage on the target.
V. Sources.

Much of the information is entered on the form uncoded and may be read directly, for example the target's name (02), location (06), elevation in tens of feet (20), roof cover in thousands of square feet (23), and output in thousands of pounds (57). Some of it is entered in a simple code for which the IBM 705 is keyed. On the form shown, in the *country* block (09) "UR" represents the USSR; under *command interest* (28) the figure 2 in the *E* block indicates that the target has been nominated by the U.S. European Command; and under *category requirements* (68) the letters C and F indicate that additional information is needed on capacity/output and labor force, respectively.

Two subsidiary forms are also used to feed information into the CTIF. One of these, a Graphic Materials Data Sheet, carries the information given in section IV of the major form plus additional detailed data describing the maps, charts and photo mosaics which cover the target. The other, called Category Data File Corrections, is used as a corrective supplement to capacity and output figures on target categories where these data elements apply. It is designed to give the figures on capacity and output, over and above those attributed to known plants and installations, required to arrive at a total national estimate. Such estimates are necessary for

CTIF FORM

SECRET (CLASSIFICATION) | TDI (PROCESSING)

I

B.E. NUMBER	PURPOSE TARG	PURPOSE CAT	ALT ☒ MINOR REF NO. CATEGORY CODE	MINOR REF NO. PART
001300123 4	C		61241	

01 B.E. NUMBER	02 B.E. NAME	03 TAB NUMBER	04 10 MIN WAC GRID
	YARLINSK AIRCRAFT ENGINE PLANT		

II

05 TDI REFERENCE NOS. MAJOR	MINOR	06 COORDINATES LATITUDE	N/S	LONGITUDE	E/W	07 SOURCE OF COORDINATES: MATERIALS IDENTIFICATION B.E. NUMBER	SERIES	PROD	SHEET NO.	EDIT	BASE NO.; DATE	TYPE	HDLG	08 SHEET NOS. 200	50	CNTRY 09	TDI 10 ZN
99995		81°45'17"	N	112°29'32"	E	001300998	7100	E	01	2	2000758	CA				UR	

11 CEIR REG	12 AIR DEF REG	13 NEW ECON REG	POLITICAL SUBDIVISION & SUBORDINATION 14 SSR	15 ASSR	16 DBL	17 N.O.	18 RAYON	19 STAT OR MIN	20 ELEV	E	21 DIMENSIONS LENGTH	WIDTH	HT	DEPTH	E	22 ORI	E	23 ROOF COVER	E	24 FLOOR AREA	E	25 LABOR FORCE	E	26 ROUTE CODE
									0031									00800	F					

27 ATMP PRIORITY	28 COMMAND INTEREST S E P L A J R V C G	TDI 29 STAT	B.E. STAT; 30 DATE	ACC POS 31 INTEL	ACC POS 32 CARTO	DATUM 33	ATTBL 34	35 PHOTO REQS V O S G R I	36	37 TGT REVIEW INDEX; DATE OF REVIEW DAY MO YR	38 10 MIN GEOREF	39 RECON PRIORITY	OLD 40 ECON REG
	2	A	A58							S23	158		

51 CATEGORY CODE	PART 52 NO.	SUB- 53 CAT	54 ENTRIES B.E. TDI ATM 1001 TGT	55	56 UNITS/MEASURE	57 OUTPUT/ POPULATION	TIME PERIOD: 58 DATE	59 % OUTPUT/POP NAT	BLOC	OUTPUT/POP EVAL: 60 DATE OF INTEL	61 CAPACITY	TIME PERIOD; 62 DATE
61241			AA		1000LBS	25570	YR57	13	710	4A0758		

63 % CAPACITY NAT	BLOC	CAPACITY EVAL; 64 DATE OF INTEL	65 PRIORITY	JCS 66 PRI	TDI 67 RMK	68 CAT REQS L	C	D	E	F	X	INTEL CUTOFF 69 DATE	CAT REVIEW INDEX; 70 DATE OF REVIEW DAY	MO	YR	71 STRUCTURE TYPE	PRINCIPAL CATEGORY COMPONENTS 72 LATITUDE	N/S	LONGITUDE	E/W	73 R-95
			22001		01	C				F		0656									

III

74 VN-T-K SEVERE	MODERATE	75 PHYSICAL CHARACTERISTICS	76 MILITARY SUBORDINATION	77	78	79	80	81	82
152Q	132Q								

83	84	85	86	87	88	89	90	91	92	93	94	95

96 CATEGORY REMARKS

97 CATEGORY REMARKS (CONT.)

98 CATEGORY REMARKS (CONT.)

IV

99 IDENTIFICATION OF GRAPHIC MATERIALS WHICH COVER TARGET A/D	B.E. NUMBER	SERIES	PROD	SHEET NO.	ST	A/D	B.E. NUMBER	SERIES	PROD	SHEET NO.	ST	A/D	TAC CAT	S	DEGREE SQUARE	TAC SERIES	PROD	PROD SERIES	PROD SHEET NO.	ST ST

V

100 SOURCES OF INFORMATION

[NOTE: TARGET IS FICTITIOUS]

SECRET (CLASSIFICATION)

101 ANALYST'S NAME: John Doe | UNIT: 3A2 | DATE: 1 DEC 58

AFHQ FORM

calculating percentages and for evaluating the relative importance of individual installations in each category.

The Consolidated Target Intelligence File is maintained in three sets. Working copies of the CTIF form are held by each category analyst in the appropriate target jackets of his own files. Then a complete and up-to-date collection of CTIF forms is maintained centrally as a handy tool for answering numerous questions of some urgency and of limited scope. This collection must be manipulated by hand. If the CTIF stopped here, it would still be very much worth while; for even here it saves much valuable analyst time formerly spent in digging out the same information over and over for different purposes. The CTIF contributes much more, however: its third set is on magnetic tapes and is susceptible of rapid and complex manipulation in electronic data-processing machines for a wide variety of purposes.

The flexibility of the machine-manipulated CTIF is illustrated in the programs now carried out, for example:

Floor space/capacity printouts for specialized installations by type. These lists are required for effects analysis and for input data for military resources models.[1]

Listing of significant installations in any category along specified transportation routes. These lists are used for travel briefs and other collection purposes.

Listings and plottings of airfields situated within range of specified types of aircraft. These lists are required for the air battle model [2] and other types of effects analysis.

Lists of major components plants within a specific industry, for example airframe, engine, electronics, and other components plants in the aircraft industry. Construction of such lists is useful in showing the dependence of certain plants upon the products of others and for pointing up methods of disrupting production.

Numerous routine listings by category, function, capacity, location, priority, *Bombing Encyclopedia* number, or *Target Data Inventory* reference number. These are useful for coordinating target lists, locating interdiction lines,

[1] See *Studies in Intelligence*, Vol. II, No. 1, p. 51, for a description of these models.

[2] See *Studies*, Vol. II, No. 2, p. 13, for an account of the air battle model.

and analyzing needs for such utilities as transportation, electric power, water, and fuels. Probably their most important use, however, is the production of the printer's copy of the *Bombing Encyclopedia*, the *Target Data Inventory*, and other targets publications.

Against the evident advantages of the CTIF, certain difficulties must be ranged. The preparation of the CTIF forms entails coding much of the information and translating it into the precise language required for machine handling. Training analysts in these new techniques is a continuing requirement. To promote uniformity in reporting and exchange of data between Air Force Headquarters and the major field commands, there is being developed a special reporting form keyed to the CTIF but allowing for variations from command to command. Analysts will integrate information reported on these forms with other available data and enter it into the CTIF. In performing these more or less mechanical functions, they will have to guard against a mechanical approach to the information and keep alert not only to the facts they are recording but also to their meaning in association with other facts known to them. Otherwise they will be in danger of losing the feel for the intelligence on which so many of their judgments must be based.

In machine manipulation of data, programing is required for even the smallest requests. Programers trained in translating target data into machine language must be available, and time must be allowed for designing, testing, and if necessary correcting the program. In due course, however, a library of stock programs will be built up for most uses and should alleviate the programing problem. Another problem is the availability of machine time. The larger, high-speed machines such as the IBM 704 and 705 must serve many Air Staff offices, and time on them is not always available when needed. This situation will in large measure be remedied when Targets acquires an expected magnetic tape facility and can process many of the less complex requirements on its own IBM 650.

Despite these shortcomings, the CTIF still marks a significant advance in data-handling techniques. It provides an up-to-date, comprehensive file of target information; it facilitates the manipulation of great volumes of data; it produces answers to complex problems quickly; and it makes positive control of target data possible. An electromechanical plotter, soon to be added to the data-processing equipment, will allow rapid recording or plotting of information in a wide variety of formats and should greatly increase the scope and utility of target compilations. The CTIF will assume additional importance as a major input source for the new Air Force Intelligence Data Handling System when it becomes operational.

Data Integration

The third data-handling process is data integration, in which the data are applied to an operational problem and are altered in form or lose their identity completely in the solution. Consider, for example, the Damage and Contamination Model described in the Summer 1958 issue of *Studies*.[3] This is a large and complex program, involving 58,000 targets and geographic "cells" and 700,000 to 900,000 computations. With requisite inputs from a war plan, that is, a pattern of ground zeros, weapon types, etc., this program is capable of calculating the probabilities of blast damage to some 9,000 targets, the radiation dose and contamination pattern from the weapons which were ground burst, and the fatalities and other casualties in 40,000 geographic "cells." It will also give damage and casualty summaries by categories and by regions. The Air Battle Model and the Military Resources Model discussed in previous articles[4] are programs of similar magnitude and complexity.

In addition to these major programs, the day-to-day operations of the Directorate of Targets have led to numerous special techniques for the solution of data integration problems. A number of manuals and memorandums present in graphic or tabular form the results of complex and extensive calculations. In one of these, for example, a probability chart was developed for calculating contamination effects when a ground zero is offset from the center of the target area. Another example is a slide calculator which permits rapid estimates of damage probabilities for various yields, heights of bursts, distances from aiming point, etc. Another is an anal-

[3] Vol. II, No. 3, p. 23.
[4] See footnotes 1 and 2.

ysis of the effects of topography upon atomic blast waves, showing the enhancement or attenuation of blast pressures on hills, ridges, slopes, and valleys.

A Look Ahead

Although significant progress has thus been made in data-handling techniques, the development effort is continuing. This effort is directed at the areas of greatest potential benefit, namely those where large amounts of technical and professional manpower are required to do basically clerical tasks, where many manhours are required to redo things previously done, where human ability to assimilate, integrate, differentiate, and remember is swamped by the volume or complexity of data, and where hand methods are too slow to be effective.

Improvement in these areas is essential if the targeting effort is to keep abreast of developments in weapons and delivery systems. The requirement will be accentuated with the introduction of new reconnaissance systems whose contribution in volume and types of additional data cannot now be predicted. If the Director of Targets is to continue to discharge his responsibility to provide defense staffs and commanders with timely and accurate target intelligence, he must be prepared to meet the problems of the future. The development of these data-handling techniques is a significant part of the effort to meet that challenge.

This true story of an exceptional spy has been reconstructed from records of the postwar debriefings of participants and witnesses to his adventures.

THE SHORTHAND OF EXPERIENCE

Thomas F. Elzweig

This is the story of two men who broke nearly every rule in the spy's handbook, and were right. One was a German. The other was one of the topdrawer Czechoslovak military intelligence officers. As a young man, long before World War II, he had studied intensively the unchanging axioms of espionage, and was thoroughly versed in these fundamentals:

Identify the agent. Don't do clandestine work with parties unknown.

Study the agent. Know as much about him as possible before asking him to work for you.

Recruit the agent. If it is he that selects you, beware of provocation. *You* choose *him*—for access, reliability, motivation, stability, etc.

Train the agent. Untutored, he is a menace to himself, to you, and to your service.

Test the agent. Be skeptical not only of his capability but also of his loyalty. Establish all possible independent checks on all his contacts.

Control the agent. You ask all the questions; he provides the answers. You order; he obeys.

The man who breaks these rules in ignorance is likely to die young, at least professionally. But General Z, the Czech, and Major L, the German, broke them wittingly and for good reasons. The result was a brilliantly successful operation that began before World War II, provided Czechoslovakia and the Western Allies with invaluable intelligence, and survived to the end of the war. It was like the other great espionage coups of history, which are almost all full of deviations and exceptions to the rules. But in all of them the controlling

service planned the rule-breaking before the operation began. It did not begin by the book and then stumble into anarchy.

The story begins on 4 March 1937, four years after der Korporal became der Fuehrer. The wind from the north, Dr. Goebbels, howled around the ears of the Czechs. But their houses were snug, their stores full; they were prosperous and free. The Nazi occupation of Austria was still six months away. A year and a half would pass before Chamberlain would go to Munich with his symbolic umbrella and return in a figurative barrel.

In Prague the Agrarian Party was in power. It saw keenly the full national granary but only dimly the shaking of Sudeten German fists. And this myopia spread throughout the country. Only a handful of people, among them the Czech intelligence officers, saw the growing danger clearly. Intelligence was busier than it had ever been before. On the positive side, it was straining to learn everything possible about German political and military intentions, while counterintelligence struggled to prevent or manipulate the activities of the Abwehr. This small group of men knew that war was coming.

The Agent Recruits a Case Officer

General Z reached his office in the General Staff building punctually at eight. He hung up coat and cap, sat at his desk, read his correspondence. In other offices administrators and analysts, code clerks and comptrollers, were also starting the day. The machinery began to move. The general sorted his correspondence swiftly. Policy, promotions, pyroelectric techniques. And then he stopped. He had opened an envelope typewritten in Czech and addressed to him by full name, rank, and function. It had been mailed in Chomutov, a town in northwestern Bohemia. It held a three-page letter, also typewritten, but in German, with only the initial L for signature. This is what it said:

Dear Sir:

I offer you my collaboration. After we have had a personal meeting and you have been given the first samples, and after mutual agreement on the terms of further co-

operation, I shall be paid one hundred thousand Reichsmark.[1] *I need this money urgently.*

Here is what I can do in return. I can provide you with information, partially documentary, on German preparations for mobilization; detailed order of battle; documentary material on Wehrmacht developments and current disposition; documentary material on German defences along the Saxony border; information concerning German armament, tanks, planes, and airfields; Sudeten-German underground activities and the support provided for these by the government of the Third Reich. I can also provide information about German espionage in Czechoslovakia.

Our interview will take place in the restaurant at the Chemnitz railway station. The time and date are for you to select. Please send your reply, general delivery, to [a code name], Chomutov, main post office.

L.

General Z read the letter several times. Never in his wide experience had a peddler made quite so crassly commercial an offer. You couldn't take it at face value: even worse than the possibility of fabrication was the probability of provocation. Chemnitz was well inside Germany, and the specification of the meeting place would make it simple for the German police to arrest a Czech officer there. And what an array of information the writer claimed—not only military, but political and clandestine as well. Surely no one German could have access to so much. The language, too, had a faintly technical flavor, as though formulated by a military intelligence service. General Z had recently conducted a successful provocation against the Abwehr; sweet is revenge. No doubt the technical examination of letter and envelope would prove only that both were sterile. Chomutov was in Sudeten territory; a check at the post office there would probably draw a blank.

But while the general's mind pondered everything that was wrong with the letter, his nose was telling him something different. Somehow the distinctive odor of the phony was missing. His mind, intrigued, began to consider what was

[1] $40,000 at that time.

right about the letter. Well, it was *too* suspicious; the Abwehr had demonstrated that its provocations were professional. Again, it dangled too many kinds of bait. A provocation is built like a tunnel; he who enters may go deeper and deeper, seeing more and more; but he cannot turn to left or right. He is confined to that area which the provoking service can control and exploit. Then too, that sentence about needing the money urgently—a personal consideration, of no concern to the Czechs, somehow not the sort of thing that an enticer would hit upon.

The general summoned the chiefs of his espionage and counterintelligence sections. Both read the letter attentively. Both looked a bit blankly at the general, as though to inquire why he asked advice in so elementary a matter. Both had the same opinion: swindle or provocation.

The letter was subjected to technical examination. Nothing. The Chomutov postmark was genuine. The general decided not to risk a check at the post office, because it would not reveal a hoax and might ruin a possibility. What next? If he dropped the matter, he could not be wrong.

Instead a letter went to Chomutov. It expressed interest in L's offer but flatly rejected a meeting on German soil. L could select any Czech site he found convenient. He was to send his reply to the Chomutov post office, box 83. The general particularly liked this last touch. It did not matter if every postal employee in Chomutov were a Nazi: his own men would watch. They would find out who picked up the letter to L; or, if anything went wrong, they would at least see who slipped L's reply into box 83.

But they didn't. They could not determine who picked up the Czech reply, in its distinctive off-blue envelope. And the postal clerk who put L's response in box 83 was sorting his mail in normal fashion. The letter was stamped.

L proposed that General Z meet him in Linz, Austria. Technical examination revealed only that his second letter was like the first, written on the same German machine. Perhaps it was just a diversion operation. If so, it had already succeeded in tying up a surveillance team and some technical experts, not to mention one of the key men in Czech intelligence.

Linz, of course, was as unacceptable as Chemnitz. By this time the Nazis were already on the march in Austria. The

Anschluss was coming, and everyone knew it. So L received another rejection and another proposal to meet on Czech soil.

Finally he agreed. As the place he chose Kraslitz, a little town situated directly on the Saxony-Bohemia border and lying partly in Germany, partly in the CSR. He set the time at midnight on 6 April 1937. His letter said that he could be recognized—in the unlikely event that anyone else should be standing in the square of the sleepy town at such an hour—because he would set his watch by the clock in the tower.

General Z was decidedly unecstatic about this proposal. The border town could not be controlled as tightly as a wholly Czech village. The dark forest which came marching to the outskirts on one side was on German territory. Ninety-nine percent of the 8,000 villagers were Sudeten Germans, the most fanatical of Nazis. Available for protection in this situation was a six-man patrol of local gendarmes with doubtful loyalties. Recently there had been several kidnappings along the German border. Not long ago, in fact, an intelligence officer of the East Bohemian 4th Division had been taken by force.

The general nevertheless decided that he too would be in the town square at midnight. He knew perfectly well, of course, that by simple logic he should be anywhere in Czechoslovakia except Kraslitz that night. But his initial decision to pursue this matter had been intuitive, and it was not to be expected that later decisions could be based entirely on reason. General Z knew his subordinates agreed unanimously that L's offer was a piece of cheese poised neatly on an especially vicious trap. Therefore he did not feel justified in forcing them to run a risk which he evaded. But at least preparations could be made. His own trusted men, heavily armed, would form a hidden ring around the square. The most loyal of the gendarmes (or least disloyal, thought the general) would serve as outer circle. Signals for the inner ring were established: one to indicate the approach of L, or anyone else; the other to warn of danger. Finally, the general would remain in Kraslitz only long enough to identify L. Within minutes he and L, with selected subordinates, would be in a car and on their way to Chomutov, some thirty miles away, where a villa had been fully equipped for just such a purpose.

The night was black. There was no moon, and an oppressive blanket of black clouds shut away the stars. There was no

wind, either. Standing at one side of the seemingly empty square, the general heard all the unreal noises created by the ears of a waiting man. Now and then he glanced at his luminescent watch. The unlighted clock was as invisible as the tower in which it was ensconced. Darkness blotted out everything. The hands on the general's watch moved to midnight and beyond. No one came. The general began to berate himself silently. It was obvious now. The cat had spotted the mouse in the town square, but it had also spotted the waiting dogs. No one would come.

Then, 25 minutes past 12, the general saw a figure standing motionless in the center of the empty space, near the fountain. Neither the approach signal nor the danger signal had been sounded. The stranger had apparently not walked into the square. He just stood there. Then he turned toward the town clock that he could not see, raised an arm, and made an indistinct motion with the other hand. Immediately a young Czech officer emerged from a doorway, walked over to the man, and spoke a few words. The two approached the general, who now could see that the stranger was carrying a suitcase in either hand and a long roll of white paper under one arm. No greetings were exchanged. The three men walked swiftly to the car, parked in a near-by street. There a staff officer, drawn aside to report, said that neither the outer nor the inner ring had spotted anyone entering the square. The general ordered that the outer ring stay in place for three more hours.

The villa in Chomutov was comfortably furnished and warm. Among its facilities was an excellently equipped photographic laboratory. The experts and technicians were waiting.

In the living room L put down his suitcases and turned to the general. "This one," he said in fluent, accented Czech, "holds what you may keep. You'll have to photograph the contents of the other, which I must take back with me. I have to be over the border before dawn."

"We'll help you return," offered the general.

"Thank you, but I prefer that the car drop me near Kraslitz; I'll make my own way back. I know the border well."

The general heard the faint click of the shutter as a concealed camera photographed L while he spoke. He hoped that L had not heard it. Two Czech officers, both blown to the Abwehr, came into the room. One left with the suitcases and

the roll of paper. The other, a colonel, remained. The three men sat down.

Identification, Study, and Control

The general leaned forward slightly. The time had come, clearly, to get this operation on the tracks. "Would you mind telling me your name?" he asked pleasantly.

"Yes," L said.

"Oh. Well, in that case, would you please state your occupation?"

"No."

"But this information is necessary, so that I can determine what possibilities exist, what you can do for us."

"You have my suitcases. They speak for themselves."

"Why do you need 100,000 Reichsmark?"

"For personal reasons."

"Is the money your only reason for offering to work for us?"

"No," said L, and now for the first time he looked less guarded and withdrawn. "My fiancée, who comes from Lausitz, is of Slavic origin. I do not like the things that our beloved Fuehrer and his buddies have been saying about Slavs. In fact, there are several things that I do not like about our heroic leader and his little group of trained animals."

"Money and ideology do not usually go hand in hand this way," the general observed bluntly.

L smiled. "If it were not for the devil," he said, "who would believe in God?"

They fell silent, waiting for the analysts to report whether the stuff was jewels or junk. No one said anything until, on signal from a sergeant, the general excused himself and left the room. In the hallway the first analyst reported, and then the second. They were enthusiastic. The report on the defenses along the Saxony border tallied with information from other sources.

It was hard to believe that Czech intelligence now had in its possession a true copy of the German *Grenzschutz* plan in all its meticulous detail. The plan for border protection was in all the countries of Europe one of the most closely guarded secrets. The Germans had ordered a state of border alert in order to proceed with their mobilization on schedule and without detection; knowledge of the preparations for war would

reveal to the Czechs the areas of main concentration of force, and therefore their intentions, not to mention other logical deductions. Yet the information on border defenses checked out.

The general re-entered the living-room, the border plan still in his hand. "This document is a hand-made copy, I presume?"

"Yes," said L. "I did it myself. Took me two months."

"It will require further study," said the general.

L grinned. "It's all there. And now that you have it, you may be interested to know that we have yours too." From his pocket he drew several sheets of paper and passed them to the general. The briefest of inspections was sufficient to reveal that it was the Czech border plan for Northeastern Bohemia and that it was wholly accurate.

"Where did you get this?" the general asked.

"I am sorry, but I shall not be safe unless you figure it out for yourself. I do assure you that this plan, like everything else I've brought, is genuine."

(Subsequent investigation led finally to the arrest of a captain of the Czech General Staff. He was hanged for treason.)

The general turned to other documents. Two contained original orders from Abwehrstelle Chemnitz concerning certain subversive activities of Sudeten Germans. The nature of the orders made it clear that the underground work was directed entirely from inside Germany, by the Abwehr. Moreover, it had been instigated by German intelligence and was financed by Abwehr funds. (These documentary proofs were shown to the Czech government, which in turn passed their contents to its Western allies, but the evidence was largely ignored in the prevailing atmosphere of appeasement.)

After four hours of talking with L and examining his materials, General Z had formed several conclusions about the German. First, he had a military background; it was apparent in his speech, in his bearing, and in the documents he had submitted. Next, he was an Abwehr officer or at least was closely associated with the German service. He knew Saxony well and specialized operationally in this border area. He was particularly knowledgeable in security matters. Apparently he had direct access to secret documents. He was intelligent.

Mentally General Z reviewed the standard data form for new agents: true name(s) in full, with all variants; aliases; exact place of birth; etc., etc., etc. Not one of the required blanks could be filled. There were only these deductions and conjectures.

So the general hired L. He paid him his 100,000 Reichsmarks. And feeling rather like a man who props up one splintered door at the entrance of a building wracked by war or revolution, he asked a little weakly, "I wonder if you would mind signing a receipt? The administrative people. . . ." His voice trailed off.

L grinned companionably. "I know," he said. "Sure, I'll sign it."

He picked up the receipt, made a motion, and returned it to the general. It now bore a block L in the lower right-hand corner.

Well, there was one consolation. In General Z's shop the auditors had no jurisdiction over operational expenses. Otherwise this first meeting with L would have been the last. And maybe it should be, the general thought.

"Naturally," he said in firm tones, "our work is beginning in unorthodox fashion. I quite understand that it had to begin this way, or not at all. But I'm sure you'll agree with me that it would be best to—ah—regularize the circumstances in the future. We shall need one or two rules."

"Naturally," L agreed. "Three, in fact. The first is that you will not pass any requirement to me but will be content to review what I provide. If I were to try to carry out assigned tasks, I'd be practically certain to make mistakes. If I bring apples and peaches, and you want apples and pears, throw the peaches away. You needn't pay a groschen for them. But if I try to steal pears for you, I'm likely to lose my neck."

"Agreed," said the general. He did not even wince.

"The second rule," L continued, "is that you will not attempt to ascertain my identity or my vocation. If you do so, you are likely to direct the attention of German counterintelligence toward me."

Again General Z agreed.

"The last rule is that there will be no other rules."

"Unless mutually agreeable."

"All right."

It was near dawn now. There was time for only two more questions. "Tell me," said the general, "how did you manage to mail your letters from Chomutov?"

"I have my ways," said L.

"Well, what about coming across the border, then? Rather risky for someone who stresses security as much as you do."

"I know the area," said L. He smiled at the general, not in the least insolently or tauntingly, but understandingly, as a friendly fencer might smile at a highly-trained opponent who looks clumsy against an unorthodox attack.

Arrangements were made, of course, for continued contact, personal and postal. The next meeting was set. Two Czech officers took L by car to the outskirts of Kraslitz. He walked away from the road, into the last of the darkness.

But he reappeared on schedule, not once or a few times but through the years. His value remained extremely high. In fact, General Z and his staff, both in Prague and later in London, had no source of greater worth or reliability. The Allies, too, discovered that L was a pearl beyond price. One British general said, "When L reports, armies move."

Episodes in a Partnership

The value and validity of L's information clearly reduced, or even eliminated, the normal need to establish a source's identity and obtain as much personal data as possible. Unless, that is, the entire operation were aimed at one master stroke of deception. What if all this accurate reporting which clearly hurt the Nazi cause were intended solely to insure that when the big lie came, at the critical moment, it would be accepted unquestioningly? But in that event any prying at L's secrets would be certain to establish only that he was exactly what he seemed to be, an Abwehr officer.

Of course, as the contacts continued, the Czechs learned more about L. For one thing, the general and the agent began to discuss their respective needs and capabilities with growing frankness. And L became less guarded about himself as time went on. Gradually it was learned that he was indeed an Abwehr officer, stationed in Chemnitz and assigned to Abwehrstelle IV, in Dresden. He mentioned his age, 35, quite casually one day. But not until 1940, three years after the

operation started, was his identity established by name, and then only because he chose to reveal it.

The major unsolved mystery remained his motivation. At the outset he had claimed an antifascist idealism while demanding at the same time large sums. He was in fact paid handsomely: he had received more than 800,000 RM up to the German occupation of Czechoslovakia. General Z was well aware that the swindler (especially the wartime swindler) customarily professes the highest motives while lifting your wallet; but L was no swindler. A mercenary, then, a salesman of secrets without loyalties. Strictly cash-and-carry. Or was he truly antifascist? Perhaps he belonged to a small clique that was deliberately leaking information as one means of hastening der Fuehrer's defeat?

Whatever else he might be, he was engaging. Once in 1938, in the safehouse at Chomutov, L was smiling a little, as usual. "How about doing me a favor?" he asked.

General Z was painfully conscious that a significant raise or bonus for L, already better paid than any other source, might place the G-2 budget squarely in the red. "What is it?" he asked cautiously.

"I have orders to establish four new W/T sets inside the CSR. Two go to Slovakia. The other two are supposed to be placed in Moravska Ostrava, in Moravia. I don't have any operators in the towns chosen by the brass for these four sets. I could recruit them, of course, and let you know who they are. I'd like to do it that way, the natural way. But the brass have put one of those blasted 'urgent' stamps on this one. The sets aren't supposed to go on the air now, you understand. They come up when you begin emergency mobilization. So how about giving me a hand?"

"Your realize the problems?"

"Well, I'll read them from our side, and you read them from yours."

The problems were indeed horrendous. The four radio sets could not be faked or quietly forgotten; the Abwehr might check at any time. The four operators—

"Let's say three," said the general. "Better to fail on one; nothing more suspicious than infallibility."

"No," said L. "I want all four. After all, my professional reputation is involved."

"All right; maybe they do think you're infallible. But these four men must be completely loyal to us and yet acceptable to you. And they must be skilled already or else they will have to be trained. They can't be trained because I don't want to tell them the story, and your people would have to do the training. And you're going to want test runs, I suppose, which my people are likely to pick up."

But L remained cheerful and helpful. One by one the knotty problems were solved. Finally the four sets were all in place, and Czech intelligence gained a thorough knowledge of German methods and tactics in radio operations, German equipment, German codes and signals. Exploitation of the information led to the discovery of seven really German-controlled sets in the CSR. L's four sets could be used by the Czechs at will, to remain silent or to furnish deception. Finally, the severe pressure exerted upon L for speedy placement of the sets had been an unmistakable warning that the war was near.

This success seemed to make L even happier. By 1938, in fact, there was a genuine and mutual cordiality in the relationship. In the summer of that year occurred another episode which is worth describing because it reveals how constantly danger threatened the operation and also provides an added insight into L's character. At that time serious public disturbances, nearing the proportions of armed revolt, occurred in the Sudeten German area of the CSR. Units of the Czech Army had to be dispatched to the border regions to put down the rebellion. L continued to appear for scheduled meetings, punctual and serene. One night two Czech intelligence officers were returning him, as usual, to the outskirts of Kraslitz. The car was stopped by a barricade; armed men appeared; their leader, in gutteral Czech, ordered the occupants to get out of the car and hand over their identity papers. There was no doubt that this was an insurgent group, and the lives of the two Czech officers would be in serious danger if they were searched and exposed as intelligence personnel.

In sharp German L ordered the leader of the group to step aside with him. At a distance he showed the leader a paper of some kind. The Sudeten German listened respectfully to L, saluted, and then shook hands, as though he could not

decide whether civilian or military courtesy was required of him. L and his two associates got back into the car, armed now with the password for the return trip.

At the next meeting L laughed over the incident. "Nothing could be simpler," he said. "I showed him an official Abwehr document—without a name on it—and told him that your chaps were two of my best agents who had just supplied me with excellent material and now were guiding me back to the border."

"You thought quickly. I want to thank you on behalf of my subordinates as well as myself. You saved their necks."

"Mine was on the same block," said L.

Being human, L was not an ideal agent. It was obvious, for example, that he knew a great deal about Czechs who were spying for the Abwehr. In fact, he had promised at the outset to deliver precisely such information. But when General Z pressed him for it, he became evasive. "Do you remember hanging that General Staff captain because he was an Abwehr agent?" L asked sharply. "Every one of your arrests is thoroughly investigated by the III-boys [Abwehr counterintelligence]." L grimaced at the memory. "And not only the Abwehr, but the Gestapo and the Sicherheitsdienst as well."

"But you did not identify that man," the general protested.

"Exactly. That's why I'm still wearing a head."

Yet once, inexplicably, he volunteered the information that someone in Artillery Regiment No. 305 in Ctyry Dvory (Southern Bohemia) was a German agent. A lieutenant colonel of German parentage was arrested and confessed. "This time it was safe," said L.

He was proud and sensitive. At the time of one scheduled meeting other business had called General Z away for three days, and his deputy filled in. The deputy was a scholarly man, precise of habit.

L was coldly angry at his next meeting with the general. "Keep your good little boy away from me from now on," he snapped. "I do not risk my hide this way to talk with fools and pedants."

"I am sure that he meant no offense."

"Of course not," said L, unmollified. "But he is forever saying, 'In such a case, one does thus and so. The rule to follow is this or that.' He doesn't appreciate our nice little opera-

tion, he isn't interested; he only wants to know what *type* of operation it is, so he can decide which of the three sets of rules he has memorized ought to apply here."

"Perhaps he is right," General Z argued. "Rules are the shorthand of experience."

"Rules of this kind are the crutches of feeble minds," retorted L. "The simple truth is that the world we live in is a chaos. And most minds are uncomfortable when confronted by chaos. Scatter blocks in front of a baby, and it makes patterns. Any child can do it, and does. So we impose on this whirling formlessness all kinds of imaginary structures, each different from the next. Confusion is too much for us; we create an arbitrary order. That's all right; but then we confuse our subjective patterns with reality and say that these structures are inherent, that they belong to the nature of reality."

The general drew the correct conclusion from this discourse. He decided that his deputy had somehow offended L's sensibilities.

Munich and After

The work of Major (later Colonel) L for the Czechoslovak G–2 falls into two periods: from March 1937 to the German invasion of the CSR in March 1939, and from then to the end of the war. Through both periods he was an invaluable source. The Czech army and government were kept steadily apprised, up to the time of the Munich conference, of German intentions and capabilities affecting Czechoslovakia. Moreover, this flood of reliable information served to reveal new gaps in Czech knowledge and thus to stimulate new efforts, both in positive collection and in counterintelligence. During the Munich crisis L appeared only once. Obviously he was very busy in connection with the German mobilization and final preparations for the forthcoming campaign; it was surprising that he could get away at all. Moreover, the increased tension had tightened the border controls on both sides. L looked completely relaxed, however, as he sat in his favorite armchair at the safehouse and calmly reported that unless the Czech government surrendered the Sudeten territory, the Germans would open fire.

"Der Fuehrer and his foot-kissers are convinced that there is not a country in Europe, including your ally France, that will come to your aid if Germany attacks. The main thrust will come from Lower Austria, where your fortifications are weakest."

L continued, explaining the German plan in detail. On the basis of his information the Czechs were able to inform the French High Command that all but two of the first-class German divisions would be employed against the Czechoslovak army. The rest of the divisions along the border of France would be second and even third class, incompletely equipped. The entire length of the Polish border would be guarded by only two divisions. This concentration of force upon the CSR left the German flanks obviously exposed, although the Czechs were under no illusion that the Allies would counter a thrust against the CSR by an attack elsewhere. The solution, instead, was "peace in our time," and some months later the Nazi occupation of Czechoslovakia.

L did not appear during this interim. General Z assumed that Munich's elimination of Czechoslovakia as a military power had caused him to lose interest in any further collaboration. Moreover, the changing times had wrought collaborative changes in the Czech G–2; L now had increased reason to fear betrayal to German counterintelligence if he persisted. Perhaps, too, he suspected that there was little cash left in the Czech coffers. General Z reasoned that L either would cease to work against the Hitler government or would now seek support from a stronger, wealthier power.

General Z was wrong. L came, hurried but unagitated, to the safehouse on 2 March 1939 and told the houseman to arrange an immediate meeting with the general. The latter left an important conference and sped to Chomutov. Without preliminaries L reported that the occupation of Bohemia and Moravia would take place on 15 March 1939. He identified the German armies scheduled for participation, the commanding generals, the directions of advance, and the objectives. Armored and mechanized units were to reach Prague and Brno as fast as possible. Only token resistance, or none at all, was anticipated from the demobilized and demoralized Czech army. Slovakia would become an independent German protectorate. L provided a copy of a document which ordered

police units advancing with the German armies to arrest all Czechoslovak intelligence officers and subject them to immediate interrogation. Of key interest were the identities of all Czech sources in Germany or reporting about Germany.

Thirteen days! And so much to do.

L was not smiling now. His face showed plainly his sympathy and deep concern. "Look here," he said, "what are your plans?"

"Oh, we have something cooked up, of course."

"Well, it's plain that you've got to clear out, unless you want to invite the Gestapo for tea. I don't advise France. Wherever you go, you'll be able to set up a safe meeting place or two, nicht?"

"Yes, I can give you an address in Holland, and another in Switzerland."

"Good." L wrote them down. "I promise to get word to you as soon as I can. And I want you to promise me something."

"Whatever I can."

"See to it personally that any file material which identifies me, or even points toward me, is destroyed."

"It has already been taken care of," said the general.

The two men stood, then, and shook hands. "God protect you," said L in German. "This is not goodbye. I'll be in touch with you soon. Just get out in time to save your skin."

"Yes. Thank you."

"Not necessary. If you're stabbed, I bleed." But L's eyes, usually full of inquisitiveness or amusement, now showed his anxiety for his associate.

The general sat down again after L had gone. There was much to do. But L was, as always, a teasing enigma. Why did he risk his life to appear at such a time? And why did he volunteer to continue serving the Czechs even after his own people had driven them from their homeland? He could withdraw now. Even if the Czechs were so unscrupulous as to betray him, they would not profit thereby. He had been paid so well that he could now live comfortably throughout the war and for years thereafter. Or if he were greedy, he could seek out a major power and reap far handsomer rewards than could be offered by an impoverished government in exile. Perhaps the promise was empty, a gesture intended to console

an associate in distress, offered without any intention of carrying it out. Yet his manner had not been one of pious sympathy; it was too sincere and friendly.

Still baffled, the general was driven back to Prague, where he reported his latest information to the Chief of Staff. But the report was met with governmental skepticism. Collaborators had already infiltrated the government, and many of those free of this taint seemed half paralyzed by the headlong rush of events and the ominous clouds gathering. L's information was labelled incredible, and the general was forbidden to disseminate it. Under these circumstances he concentrated on plans for the security of his own staff. At 6 p.m. on 14 March 1939, six hours before the German armies crossed the border and twelve hours before they entered Prague, the general and twelve of his staff members left the capital in a plane made available by the British.

Intelligence-in-Exile, Impoverished

Czech operations were resumed from London through offices in Switzerland, Holland, Sweden, Denmark, and Poland. The ranks of Czech intelligence officers were augmented by a number of military attachés abroad who refused to serve a Hitler-dominated government.

The spring passed, and the summer, without word from L. Despite the refutation of his earlier doubts, General Z was by now convinced that he would never again see the Abwehr major, or hear from him. Undoubtedly, he thought one day as he attacked his morning mail, L had worried in the spring about the possibility that Czech documents or arrested Czech intelligence officers would reveal his identity and the story of his silent battle against the Nazis. Now that nothing had happened for nearly half a year, he probably felt safe. And freedom from this anxiety would be such a welcome relief that he would not be likely to put his neck into the same noose a second time.

Thus theorizing, General Z opened a letter from Switzerland. It came from L. He would soon arrive in the Hague, where he would like to meet General Z or even the once-hated deputy. He would reach the Hotel des Indes at 2 p.m. on the afternoon of 4 September and would register there under the name of Braun.

On the appointed day L received the deputy cordially. "Please tell General Z," he said quietly, "that if he is interested, I am prepared to resume our association."

"I am sure he will be delighted."

"I've been transferred to Berlin, to the OKW Abwehr Abteilung [General Staff G–2]. I shall have plenty of opportunities to travel and can easily meet you. And I'll have some first-rate information for you."

The deputy looked a shade uncomfortable. "This is wonderful news, of course," he said, "but—"

"But what?"

"It's the money. You'll understand that things are not the same for us now. I do not mean that we cannot pay anything, but in comparison with the old days we—"

"I don't want pay," said L. "General Z has done very well by me; my only money problem now is to keep your generosity from endangering my security. So don't give it another thought."

The general's deputy was tempted to ask what caused this remarkable about-face on the part of an agent who had required about one million Reichsmark for two years' work. But his earlier encounter with L had made him cautious.

L turned over valuable and detailed information about German armored and mechanized divisions. The deputy agreed to his proposed arrangements for the next meeting, and returned to London to report.

General Z listened to the story with surprised delight. Was nothing that L did ever to conform to expected patterns of behavior? Now he did not want money, and was willing to serve an emigré organization that had lost much of its power along with its funds. Why? His fondness for a Slavic fiancée seemed a far from sufficient answer. If he were a burning anti-Nazi, was he operating all alone? Or did he perhaps tie in to some German underground group dedicated to Hitler's overthrow? Was he part of the dissident Canaris group? Was this group seeking a liaison channel to the Allies? But probably, in that event, it would have sought contact with the English, or another power, rather than the exiled Czechs.

Now that contact had been reestablished, reporting flowed smoothly. Correspondence embroidered with secret writing went to cover addresses in neutral countries, usually Switzer-

land or Portugal. Personal meetings were also held in these countries and in Holland. One meeting was held in Constantinople. It is no exaggeration to say that L's reports, submitted on both military and intelligence subjects from 1937 to 1945, were of momentous significance. Here are a few examples:

- ★ Accurate advance information about the German attack on Poland and plans for the subsequent campaign. This information included the now familiar fact that German SS units garbed in Polish uniforms would simulate an attack on German positions to furnish a pretext for war.
- ★ The concentration of German armies for the invasion of Denmark and Norway.
- ★ Prior warning of the German attacks upon Belgium and France, together with clear indications of the main lines of thrust.
- ★ The opening of hostilities against the U.S.S.R.
- ★ Plans for the German offensive in the Kharkov area in the spring of 1942.
- ★ A series of reports on German order of battle.
- ★ Reports on the movements of major German headquarters from one battlefield to another.
- ★ Some information on preparations for the V–1 and V–2.
- ★ Hitler's plans for Spain, which did not materialize.

L's written reports were almost always brief. Sometimes the secret text consisted of a single sentence. His oral reports were somewhat lengthier, but they too were pithy. During these personal meetings the friendship which had grown between General Z and the agent never led L into confidences or irrelevancies. In time the Czechs managed to organize from London a respectable agent network, but L's value continued to outweigh the combined work of the others.

At one meeting in Lisbon he eyed the general reproachfully. "It looks as though your British friends pried my name out of you," he said.

The observation was accurate. For quite a long time General Z had withstood the pressure of British questions about L's identity, but finally things had reached the point where withholding it was no longer possible.

"Some very smooth customer dropped in on me right after our last meeting and with an air of engaging frankness explained all the practical reasons why I should work for his firm directly instead of through an intermediary."

"Oh?" said the general. "And what did you tell him?"

"I told him that I didn't know him and that he had obviously made a mistake. You know, you might tell them to check with you before they come calling, and get your blessing."

"Perhaps you should agree to cooperate with our friends," said General Z. "They can pay you better than I."

"I've told you I don't want money. Look here: I've worked with you for about three years now, and I'm still alive."

General Z said nothing more. It was typical of L to profess the purest self-interest as his sole motive. He would have blushed at the mention of loyalty. In fact, the general reflected, the idea of fealty has been out of fashion for a long time.

In January 1944 L wrote to ask for a meeting in Constantinople. He reported that he had been promoted to the rank of colonel and transferred to the Prague military command. His new assignment precluded frequent travel.

General Z discussed this change with his deputy. It had serious disadvantages. The transfer from Berlin took L away from the brain of the German Army. It also posed delicate problems of communication, for secret writing mailed from Prague would obviously be too risky. There were some advantages. The Protectorate had grown increasingly important to German military operations as the result of developments on both fronts. The war industry there was virtually unmolested by Allied bombing, so that the railroad network served the German High Command efficiently. Moreover, it had become clear by 1944 that the Allies were going to win the war. The exiled Czech government therefore needed information from Prague. Communications were the hardest problem. There was good radio contact between the Prague underground and London, but General Z felt that placing L in touch with the underground so that he could use its facilities was too risky. He anticipated, in fact, that L would reject such a proposal.

The deputy met L in Constantinople. The new Abwehr colonel proposed that communications be maintained by

radio; he was willing to use the Czech underground if his contacts with it were restricted to a single reliable man. General Z had previously selected such a man, a Colonel Studeny. It was decided that a separate code would be employed for L's reports. The time and place for future meetings with Studeny were chosen by L, and arrangements for dead drops were worked out in detail.

And so L began a new life. His assignment as chief of the counterintelligence section of the Prague military command, under General Toussaint, provided him a measure of protection. He usually knew in advance which persons were suspect to the Germans and which were slated for arrest. This knowledge was not infallible; the Gestapo and Sicherheitsdienst were often—and increasingly—on unfriendly terms with the Abwehr. And sometimes Gestapo arrests were not only unannounced but seemingly capricious, made for precautionary reasons, on suspicion rather than evidence.

But at least the operation was now conducted in accordance with the rules. Colonel Studeny had dropped all other underground activity and functioned solely as L's cut-out. There were no more chancy meetings in neutral countries. L had received no money for years, so the danger which an added and inexplicable income always brings had now evaporated. L and Studeny never met; they used a number of cleverly concealed drops. Perhaps it was a miracle that the operation had survived its cowboy years, but now L had for protection an intelligent application of the rules.

His reports continued to be very valuable, fulfilling also the new function of providing warning about forthcoming Gestapo arrests. The months rolled by, months in which the German armies met a series of major defeats. The end was in sight.

Mission Fulfilled

In October 1944 Colonel Studeny was arrested. It seems that he had been under surveillance for some time. And yet, surprisingly, the Gestapo had not found his dead drops; for if they had they would have arrested L as well. What they did find, when they searched Studeny, was a piece of paper bearing questions obviously addressed to someone in the German headquarters at Prague. Colonel Studeny was inter-

rogated under relentless torture. He died a hero, without revealing anything about the radio station or the identity of the German collaborator. L even participated, on behalf of the Abwehr, in the investigation of the case.

L's own arrest came in December. Its causes remained as obscure as those that had led to Studeny's apprehension. Perhaps an analysis of the requirements on Studeny's person had led, in turn, to investigation of the past activities of all logical suspects. Such a review would presumably have revealed L's presence near the Czech border before the war started, his specialization as intelligence officer in Czech matters, his extensive travels, and a number of other significant indicators. Or perhaps, after the attempt on Hitler's life in June 1944, L was one of the large number of Abwehr officers who fell under suspicion of complicity. Whatever the reasons for the arrest, the Gestapo used much the same barbarous methods on him as it had previously employed on Colonel Studeny.

There was one difference. L must have sometime read *The Arabian Nights*. At any rate he emulated Queen Scheherezade by prolonging his story, relating only one episode at a time, and ensuring that much additional investigation would be required before the next chapter could be drawn from him.

In this way Colonel L sought to remain alive until the dying war reached its end and he, along with the other prisoners at Terezin, was set free. He nearly succeeded. In fact, this rational plan would almost certainly have worked except that fate is notoriously irrational. The SS guards at Terezin, growing more frightened daily as the Russians stormed closer and closer, got thoroughly drunk on their last afternoon as masters of the concentration camps. They decided to shoot forty prisoners in a final Teutonic orgy of death. By chance a sodden sergeant chose L as one of the forty.

As he was led from his barracks, he managed to exchange a few words with a Czech inmate not marked for execution. He told him to seek out General Z and tell him what had happened.

"Tell him it was a wonderful time. I'm sorry it stops here. And tell him—he always wanted to know *why*, so tell him that my reasons in life were just as logical as the reasons for my death."

And there you have it, thought General Z, pondering the story. Maybe no one can proceed by logic or rules alone; maybe nobody knows enough. I don't know why he was the best spy I ever knew. I don't know why he was a spy at all. I don't even know why I broke all the rules at the outset. One of my English friends once said that the prerequisite for intelligence is intelligence. He's wrong. The indispensable organ in this business is not the brain. It's the nose.

COMMUNICATION TO THE EDITORS

Dear Sirs:

The recent *Studies* article by Louise Omandere entitled "Covert Scientific Collection" [1] represents a good first step in examining a critical field of intelligence collection which has remained relatively untapped. There is no doubt that the collection of scientific information is one of the biggest problems facing the intelligence community. The challenge was stated clearly by Mr. William P. Bundy in his presentation to the Research Methods Conference in November 1958:

> It is in advanced weapons and scientific progress that we find at once our most critical area and the one where our present status is least good. . . . It is one thing to train an agent to count the flatcars going through Brest-Litovsk; quite another to train and give the right questions to an agent in a low-level position in a scientific establishment.[2]

Most of the views in Miss Omandere's discussion of this problem are quite valid, but some portions of her article, I believe, are erroneous in concept. She begins by defining the two basic steps in obtaining covert scientific information, first "What to collect," and second "How to collect." I don't believe this analysis wrong as far as it goes: if our main target (as determined by a valid requirement) is Establishment X, Department A, it behooves us to do everything in our power to develop available assets in this locale. But more often the *How* comes first, with the fortuitous acquisition of assets in Department B of Establishment X, or even more remote from the predetermined target. Here targets become the targets of opportunity, and with the philosophy that "half a loaf is better than none," or "gold is where you find it," no opportunity should be overlooked. The history of intelligence and espionage operations show that a direct line is rarely established between the case officer and the target, and the case officer who waits for such an ideal setup is apt to have a long wait indeed. In other words, we are more often than not faced with a here-is-an-agent-how-can-we-use-him situation, and this situation will be wasted if we adhere to the order of the textbook *What* and *How*.

[1] Vol. II, No. 4 (Fall 1958), pp. 23-31.
[2] See *Studies*, Vol. III, No. 1 (Winter 1959), p. 53.

The author goes on to point out that the covert collection of scientific intelligence is fraught with more difficulties than any other type, mainly because special knowledge is required to understand its meaning. To this I can say only, "Amen!" Her example of an elusive target, however (do-it-yourself BW operations fomented in a camp kitchen), has little bearing on the proposition. An inconspicuous atomic bomb can similarly put an entire city out of commission, but what we are looking for is the scientific effort which went into the development of the bomb. The example would be valid only if the Soviet Bloc carried on BW *research* in apparently innocuous soup kitchens. The covert collection of scientific information differs from other covert collection only in the absolute necessity that the case officer be competent to direct the agent in scientific matters and competent to sift the information received for pertinent scientific fact. Unless the case officer can do this, he had best channel his efforts into a less esoteric field.

Scientific group discussions and social affairs at which scientists mingle are, as the author points out, excellent stages for the elicitation of scientific information and possible recruitment of Iron Curtain scientists. Here, however, she touches lightly on one of the biggest problems of exploitation: the transition from overt to covert scientific contacts has too often been handled like a Marx Brothers comedy, with rapid entrances on scene and exits (left, behind curtain) of various unrelated people before the confused scientist's eyes. Where does overt exploitation leave off and covert exploitation begin? And by whom is each conducted? And how is continuity maintained? These are the big questions which remain unanswered. Any exploitation or recruitment of scientific personnel has to be carried out on an intimate basis; it cannot be accomplished by continual replacement of contacts like substitutions in a football game.

The article also slights another problem—the fact that, while exploitation of the scientist himself is certainly desirable, we are often faced with the prospect of dealing with a low-level agent in a target establishment. What requests, couched in simple terms, can we make of, say, a janitor? Properly exploited, he can supply much valuable information; but we *must* have a scientific man in contact with him, one

who can not only pose the questions but also interpret the answers.

This brings us to the main point, the article's thesis that we can improve our collection of scientific information by training nonscientific case officers in general science. Desirable as this may be for rounding out education and background, it is not the answer to the problem of conducting scientific operations. The answer, I suggest, is rather to recruit scientific personnel specifically for use as case officers in the fullest sense of the word.

Miss Omandere apparently had two reasons for rejecting this solution. Her first is that unless the scientist is thoroughly experienced in the narrow field of the target, he is of little use, a physicist, for example, being inadequate in the field of microbiology. This argument is only a half-truth, for no scientific person, however highly specialized he may be, is completely ignorant in another scientific field. He may not know all the details of some other specialty, but he can certainly appreciate them, and more important, he can talk the language of the agent-scientist better than an economist armed with a copy of *Popular Science* can. If this were not so, we could expect nothing but chaos from the recent State Department move to place scientific attachés in embassies abroad, imagining how the attaché assigned to Paris, because he is a chemical engineer, would throw up his hands in helpless confusion every time he heard the word "electronics."

The author's second argument, the more important one for us, is that the scientist rarely has the qualities requisite for a case officer. Be it so; but do more economists, historians, lawyers, political science majors, etc., possess case officer qualities, including the necessary acquiescence to anonymity? If we look at the old OSS records and see the amazing variety of backgrounds which successful case officers had, we recognize that the case officer type is scattered sparsely through almost every profession, and it requires a certain amount of effort to dig him out. Whether the proportion of individuals who have case officer inclinations is significantly lower in the physical sciences than in other fields has not been demonstrated. From personal experience I know that persons who have majored in the physical sciences are not *all* interested in a life of research. And the conception that a person who

knows what goes on, say, inside electric light bulbs is an eccentric utterly incapable of normal dealings with normal people is a mythical one now discredited. It is dying a hard death, but it is dying, with a fortunate assist from the Sputniks.

Instead of bemoaning the lack of true scientific case officers, we should be going out to find some. For the short range, there are a number of likely candidates already within the community. I know, for example, of a skilled physicist, holding ten patents on radio tubes, who occupies a technician slot overseas because he is more interested in clandestine operations than in research. And there are others, if one should only look for them. For the long range, we should start pulling some scientific people in from the colleges for the JOT program; I am sure that they can be found in sufficient quantities to meet the needs of the Agency.

Miss Omandere has summed up my convictions in one of her later paragraphs, where she speaks of valuable information obtained from behind the Iron Curtain by using the "trained eye of the scientist." It takes a scientist to perform a scientific job, and where better could we have him than in the front ranks of the case officers?

ROBERT G. LEONARD

Articles and book reviews on the following pages are printed without classification and without identification of the writers, for the convenience of readers who may wish to detach them from the classified body of the *Studies*.

CRITIQUES OF SOME RECENT BOOKS ON INTELLIGENCE

SUSPECT DOCUMENTS—THEIR SCIENTIFIC EXAMINATION. By *Dr. Wilson R. Harrison.* (New York: Frederick A. Praeger. 1958. Pp. 583. $15.)

This is the most comprehensive and technically correct book ever written outside the United States on this subject, and it compares favorably with the best and newest works produced here. The author, Director of the British Government's Home Office Forensic Science Laboratory and an honorary member of the American Society of Questioned Document Examiners, is one of the comparatively few persons outside this country qualified by applied scientific experience to write with authority on the examination of questioned documents. He has been in this field for more than twenty years, having worked for a number of police organizations in England and in Wales. His scientific background is clearly discernible in the care and great detail of his explanations, which at the same time are couched in simple and direct language completely free from ambiguity.

The establishment of authenticity or the exposure of forgery is a difficult and complicated process, requiring the use of the latest developments in microscopy, photography, and microchemical analysis. Dr. Harrison describes the application of these sciences to document examination in a dozen chapters—on materials, preliminary examination, laboratory equipment, photography, dating problems, typescript, handwriting, disguise, forged signatures, preliminary phases, preservation and cleaning, anonymous letters, and a case at court—each followed by an unusually good bibliography, and the whole topped off with a detailed index and a superior glossary. He elaborates on such subjects as the deciphering of erasures, the chemical analysis of ink, the development and identification of latent fingerprints, the development of invisible writing, the dating of ballpoint-pen documents, the tracing of anonymous letters, and the authorship of typewritten matter. He tries to get the reader to participate, as nearly as possible, in the actual document

examination; and one of his devices is the generous sprinkling of excellent photographs—more than 150 of them—throughout the book. Printed on high-gloss coated stock, the photographs have lost very little detail in reproduction and vividly illustrate the points discussed in the text.

The reader must be cautioned, however, that Dr. Harrison's book, excellent as it is, will in no way qualify him to attempt work of this nature. Like other applied sciences, these subjects can be learned only by years of on-the-job training and application under the guidance of experienced personnel. But for the person who has cause to collect and submit questioned documents for examination, comparison, or identification, the fine chapter on their handling and preservation provides full instructions, which if followed will make possible a substantial increase in the content of the analyst's report and obviate many of the qualifications which would otherwise attach to his findings.

For the qualified questioned document analyst this book serves well as a reference on the techniques presently employed in police laboratories in England and, by association, other European countries.

IN FLANDERS FIELDS. By *Leon Wolff*. (New York: Viking. 1958. Pp. 308. $5.)

This readable new book about the Third Battle of Ypres (better known as Passchendaele), fought by the British against the Germans in the late summer and autumn of 1917, is a good sample of that now popular form of literature, the disaster story. Wolff, a former Air Force public relations officer, chose his subject well, for few campaigns in military history have been so often damned as disastrous. Moreover, no aspect of the British command's conduct of this campaign has been more criticized than its GHQ intelligence estimates; and Wolff faithfully repeats much of the criticism, adding some of his own.

Certainly one of the reasons why the battle was fought, though by no means the only or the most important reason, was the glowing picture of a possible early victory painted by Sir Douglas Haig's intelligence chief, Brigadier General John Charteris. Haig himself was a dogged optimist, and he liked to

have optimists about him. Charteris, once a correspondent of *The Times* in Vienna, had served with Haig in India, at Aldershot, and at all of Haig's wartime commands. In effect, he was Public Relations Officer, Chief Censor, and GHQ Morale Officer, as well as Chief of Intelligence, and he seems sometimes to have confused his various duties. He was convinced that the Somme battles in 1916 had done the Germans great damage, that the food shortage in Germany was becoming acute, and that revolutionary tendencies were emerging there. On 11 June 1917 he ended a report with the "fair deduction that, given a continuance of circumstances as they stand at present and given a continuation of the effort of the Allies, then Germany may well be forced to conclude a peace on our terms before the end of the year." Haig himself repeated this in substance to the cabinet: assuming that fighting continued at the same intensity, he said, the Germans would be at the end of their manpower in six months.

In retrospect this certainly seems optimistic, for by the end of 1917 Russia had ceased fighting and Italy and France were greatly weakened, while Germany was bringing more divisions to the Western Front. Haig's and Charteris' prognosis contrast with a memorandum of 9 May 1917 from the Director of Military Intelligence in London, G.M.W. Macdonough, who, observing that Germany was still strong and Russia near collapse, recommended remaining on the defensive until the Americans arrived. This memorandum, addressed to the War Cabinet, influenced its opinion of Haig's and Charteris' views. When serious criticism of GHQ developed in the autumn, Charteris became, not surprisingly, the first target. He has in fact been a target ever since. David Lloyd George, in a passage quoted by Wolff, spoke of "more stuff from the Charteris still-room," and Wolff himself deprecates "the fine Scottish hand of General John Charteris." Captain B. H. Liddell Hart and Winston Churchill have also attacked the man, and one is left with the impression that he was little more than a fabricator.

Such a conclusion would be, to borrow a phrase from the other side of the hill, *etwas uebertrieben*. If we look at his diary and the full text of his report, we see that Charteris got his basic information from the classic sources of military intelligence—PW interrogations; captured letters, records and

paybooks; overt publications; and agents. His interpretation of the effect of the Somme battles has since been documented by German writers. His June estimate of the number of German divisions in the West (157) was, if anything, one to three divisions high. He foresaw the danger of bad weather. He had captured orders indicating that German field rations were being reduced by a third and captured letters revealing the food shortage in Germany, a shortage since amply confirmed in German sources. Perhaps most important, he had an agent's report that German casualties in the spring battles in the West up until June had numbered 400,000. The German official study dated 1941 put losses for April through June at 384,000, of which 121,000 were killed or missing. Although this tally includes June, in which there were probably at least 60,000 casualties, the discrepancy with Charteris' report is offset by the fact that the official figures do not include those lightly wounded who were not evacuated out of the corps area; roughly 30% should be added to the net figure of 324,000, making some 420,000 to the beginning of June.

Thus Charteris does not seem to have been so far off in his picture of the German situation in June 1917. His rosy estimate that Germany would be exhausted at the end of the year was probably influenced by recent events in the Battle of Messines, where the greatest explosion of mines in military history for a time demoralized the German defenders. It should also be remembered that he was counting on a continued effort by the French which did not materialize. But he did not grasp the danger and the significance of a Russian collapse, which even a month earlier Macdonough, from his broader perspective in London, had seen more clearly in making his soberer estimate of the German power to resist. Perhaps we may claim Macdonough's clearer view as another proof of the advantages of centralizing intelligence estimates.

The Third Battle of Ypres began on 31 July, and from this time on Charteris seems to have made more errors. He reported at one point that all the German divisions in one sector had been on the front line and had therefore been mangled, when actually some had still not been engaged. For some mysterious reason, he (not just Haig, as Lloyd George and Wolff state) revised his estimate of German divisions in the West downward to 145, now placing 12 more on the Eastern

Front. Four divisions actually had been sent east in June, but in July eight were moved west from the east, so that the number in France and Belgium was now greater, not smaller. Charteris also reported that the 1919 (1899) class of German conscripts was entering the trenches, a mistake he had to correct later.

It might be pointed out in Charteris' defense that other intelligence chiefs have erred on the side of optimism and lived it down. Some readers may recall that in 1943 the Supreme Allied Command devoted considerable effort to working out what to do in the event of a sudden German collapse.[1] It is natural, unless the enemy is practicing deception, to underestimate him; no news is good news, but it may not be true news. The real trouble in Charteris' case was that his veneration of Haig made his judgment suspect, both in London and in the armies.

Haig told the War Secretary, Lord Derby, that he always discounted Charteris' optimism, but this does not seem to have been true, and Haig always erred on the optimistic side himself. On 12 December, after the German counterattack at Cambrai, Derby gave Haig a month to get rid of Charteris. Haig regretfully replaced him, writing at this time to his wife, "It is now over a year since Derby and the War Office have set their faces against poor Charteris," and later, "He seems almost a sort of Dreyfus in the eyes of our War Office authorities." But when Charteris suggested that the attacks on him represented efforts to attack Haig, Haig did not hesitate to rebuke him; Charteris was told that the commander himself was the only one responsible for his decisions, and that they had been based on other information besides that furnished by GHQ Intelligence.

A reader who is familiar with intelligence will find Wolff's book scanty on details, not only in regard to Charteris but also on matters such as the German failure to exploit the French mutinies. Wolff, of course, has written on the battle as a whole, not just on its intelligence aspects. The truth is that his book is essentially a warm-up of the polemical campaign of the "Easterners"—advocates of an eastern strategy—

[1] The code-name RANKIN was used for the planned pursuit operation in case of abrupt German withdrawal.

principally Lloyd George and Churchill, against the "Westerners." This is not the place for details, but it should be pointed out that the "Easterners," by comparing non-comparable casualty figures, have made Passchendaele appear more disastrous than it actually was. Wolff adopts Churchill's data without checking into Churchill's source and fails to compare the available unit casualty reports, which show, when analyzed, that the battle losses on both sides were in the neighborhood of 250,000, with the German losses perhaps slightly higher than the British. As often in such polemics, the denunciations by Lloyd George and Churchill were really attempts to conceal or justify weak spots in their own records—Lloyd George's failure to supply manpower in 1918 and Churchill's Dardanelles fiasco. The records of Haig and Charteris were far from spotless, and there were some sound arguments for an eastern strategy; but sound arguments were not the only ones used. It is sobering for us to realize that no part of the denigration was more effective than the exaggerated charges levelled at GHQ's intelligence; an intelligence organization makes a good target.

WE SPIED . . .

We spied several books of considerable interest during the last quarter, one of which is *The Cat and the Mice,* by Leonard Mosley.[1] It tells the short and readable story of John Eppler, a German spy who worked for Marshal Rommel in Cairo until British security put an end to his activities. Born of German parents, but calling himself Hussein Gâafer after his Egyptian stepfather, Eppler was well known in Cairo cabaret circles and a natural for recruitment into the Abwehr. After training in Germany he and his radio operator, a German from East Africa named Peter Monkaster, were led in May 1942 across 2,000 miles of the Sahara back to Cairo, where he picked up the threads of his former gay life.

A belly-dancer and German agent named Hekmath Fathmy worked with Eppler and Monkaster, bringing British officers to their adjacent houseboats and giving parties where information could be extracted with the traditional help of wine and women. There Eppler met Lieutenant Anwar El Sadat, a young associate of the anti-British Captain Gamal Abdal Nasser. (El Sadat's book, *Revolt on the Nile,*[2] tells of these contacts with Eppler and Monkaster and records his opinion that the two agents were spending their German funds more on good living than on securing information. El Sadat attributes his own arrest a few days after Eppler's to the fact that he had been in the German's company.)

As the story is told in *The Cat and the Mice,* Eppler, with the help of the belly-dancer and some knock-out drops, found in an officer's dispatch case the answers to three key questions Rommel had asked about British plans for defending the Delta. But meantime the radio men who were to receive his messages in the desert had been captured by the British, and his alternate circuit would not be available for 24 hours. In those 24 hours British Intelligence, which had been investigating the source of forged English money ineptly introduced into British-held Egypt by the Abwehr, was able to trace it to Eppler and arrest him, bringing the espionage operation to a photo-finish end.

[1] London: Arthur Barker Ltd., 1958. 160 p. 13s.6d.
[2] London: Allan Wingate, 1957. 131 p.

Mosley's version of this operation is evidently simplified and embellished for popular consumption, but it has a factual basis and makes good reading.

* * *

The prolific English writer, Ronald Seth, continues to pour out books of general intelligence interest. His latest work, entitled *For My Name's Sake*,[3] is a brief account of the struggle of the Roman Catholic Church against the Nazis in occupied Western Europe and against Communist persecution in Eastern Europe. The author has omitted the Nazi persecution of the Church of Germany as too complex a subject to cover in this volume. Mr. Seth's quick books reflect comparatively little original thought or research and often contain some inaccuracies, but this, like many of them, is useful as a broad outline of the resistance activity he describes. The growing literature of Clerical Resistance, which already overflows a three-foot bookshelf, is of considerable importance to the intelligence officer in the resistance field.

For light but informative reading, attention is called to two anthologies of escape tales recently published in England. One is a compilation of *Great Escape Stories*, edited by Eric Williams,[4] himself an escaper with several books on the subject to his credit. His anthology, largely devoted to World War II escapes, includes one during the Korean War and one from behind the Iron Curtain. *Great True Escape Stories*, edited by Fred Urquhart,[5] also deals largely with World War II, but leads off with Winston Churchill's 1899 escape from the Boers. Readers who are content with anthologies as a substitute for the originals will find that these two editors have picked from among the best.

[3] London: Geoffrey Bles, 1958. 246 p. 18s.
[4] London: Weidenfeld and Nicolson, 1958. 256 p. 12s6d.
[5] London: Arco, 1958. 240 p. 16s.

STUDIES in INTELLIGENCE

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Allen W. Dulles is the Director of Central Intelligence.

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THE LIFE AND WORK OF STEPHAN HALLER

Patrick R. Beller

This true biography of an intelligence officer is doubly a study in intelligence: it shows how a goodly endowment of intellectual equipment, the honing of scholasticism, and a catholic diversity of interests and experience provide none too elaborate a base for intelligence work, but indeed create the potential for extraordinary success. Haller's contributions to U.S. intelligence began in war, with the OSS. Often unorthodox in his methods but always effective in his stubborn onslaught on the work assigned him, he lived a career that is now part of the tradition of the U.S. intelligence service, a tradition that he and many of his colleagues have been building since the days of World War II.

Stephan Haller—scholar, mathematician, and political activist—was not the model intelligence officer, because there is no such thing. The job is so vast that in addition to that first requisite—brains—all kinds of persons and talents are needed. But Haller combined more talents than most men—combined them and controlled them, so that even seemingly disparate traits were fitted together. He was a thoughtful and sensual, purposeful and humane man.

But trying to measure him is like trying to measure other natural forces, like explaining a storm as so many foot-pounds of wind-thrust. He was more than a sum of attributes.

Stephan Haller was not his real name.[1] *He did not want publicity or acclaim; he wanted to do his job. Those of us who knew him know that he would not only have chosen anonymity; he would have insisted on it for operational reasons. His identity and character merged with the work to which he was devoted, shaping it and shaped by it. The work is his memorial. And because we share in the work, we also share in his story.*

R. Helms

[1] A pseudonym is used here because his contacts are still active and several of his operations continue to be of a sensitive nature.

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Stephan Haller was the second of two sons born to a middle-class family of German Jews. Manfred and Margarete Haller were living in Frankfurt am Main with their three-year-old Emil in 1906, the year of Stephan's birth. Later a daughter, Sara, was born. Manfred Haller was a Rabbi. In 1916, after Stephan had finished grammar school, the family moved to Kassel. Graduation from *Mittelschule* at the age of ten is unusual in Germany; young Stephan was a good student. From 1916 to 1924 he continued his studies in Braunschweig, and two years later he took his first degree, a BS, at Marburg/Lahn. The next five years were spent at a number of universities inside and outside Germany. The young man's studies showed the breadth of his interests. He became skilled in mathematics and statistics, physics, psychology, sociology, and political science; and he read widely in other subjects.

His father was lean, bearded, and strictly orthodox, whereas Stephan's broad interests and his studies in the sciences had increased his natural curiosity and his scepticism. The result was frequent clashes between father and son. But although Stephan argued from materialistic concepts, one of his closest friends has said that later in his life he was deeply religious, a fact he tried to conceal. In any event, the Rabbi and his younger son were never intimate in their association.

Margarete Haller died in 1923, when Stephan was seventeen. Ten years more, and the Nazis were to put his father in a concentration camp. Later the Rabbi, his daughter, and his older son all managed somehow to reach South America. Stephan found a different course.

Politician and Propagandist

European students have always been more precocious in political life than their American counterparts. Young Haller associated himself with the Social Democratic Party when he was nineteen, and soon became very active in its student groups. From 1925 until 1933, when he was forced to flee Germany, he was much occupied with politics and the educational programs of the German labor movement. For several of those years he was chairman of the Social Democratic Students' Movement at the University of Frankfurt and a member of the movement's national board of chairmen. He was also

district leader of this movement for southwest Germany, which included the Universities of Marburg, Frankfurt, Giessen, Heidelberg, and Munich, as well as the Polytechnic Institute at Darmstadt. At the same time he took part in the educational program of the German labor unions, serving both as educational director and as teacher at various large plants, including I. G. Farben, throughout Hesse.

Haller also became intensely and practically interested in the theory and uses of political propaganda. It was this interest that brought him into intimate contact with Kurt Schumacher, Ollenhauer, and other leading Socialists. He became a member of the SPD Propaganda Committee for Hesse, which worked under the direction of Reichstag Deputy Dr. Carlo Mierendorff. For three years, from 1930 to 1933, this committee maintained a continuous survey and analysis of the effect upon the German people of the propaganda of all the political parties. The purpose of the survey was to improve SPD propaganda and reduce the effectiveness of that of all opponents. Stephan Haller's education thus drew a little closer to his future work.

During the same period he put his analyses to use, appearing as the SPD speaker at nearly a thousand political rallies held all over Germany. About half of these were meetings of nationalistic groups: the Stahlhelm, the German National Party, and of course the NSDAP, the Nazis. He sharpened his wits and skills in debate against men whose names were later heard in intercession and anathema—Goebbels, Hitler's propaganda chief; Baldur von Schirach, Nazi youth leader; Dr. Franz Seldte, founder of the Stahlhelm. Selected as a delegate to the SPD's national convention, he twice ran unsuccessfully for office, once for the Hessian Landtag and once for the Reichstag. Politics is not an easy life anywhere; it was a hard and rewarding school for a young Jew in the turbulent pre-Hitler Germany.

A statement written by Haller for the OSS in early 1944 includes this comment:

> I shall not dwell upon the fact that in the course of the above mentioned activities, I could not fail to acquire a rather thorough knowledge of the German party system as a whole, of the structure, history, methods of propaganda and action of the German national parties, particularly the Nazi Party,

the German National Party, and of the leagues and associations either connected to or collaborating with them; as well as, to a certain extent, a personal knowledge of many known leaders of these organizations.

He also learned how to assess people and how to deal with them, when to be friendly and kind and when to be hard or austere, whom to praise or reassure and whom to treat with just the right degree of that superciliousness so effective with certain Germanic types. His convictions gave him reason to act; his studies and political research had taught him how; and now experience was teaching him the hardest lesson, when to act.

Adolf Hitler became Reichschancellor on 30 January 1933. The night before the Reichstag fire, on 27 February, Haller made a pungently anti-Nazi speech at Darmstadt. Two days later the SS storm-troopers came to the Haller home. They did not find Stephan. A young student of his, a girl, had somehow learned what was coming and had warned him. The troopers smashed up the household, arrested the Rabbi, and hauled him off to the *Sammellager*.

The Wandering Jew

For six months Haller lived and worked underground with anti-Nazis in southwest Germany, the Ruhr, and Berlin. In September he escaped into Luxembourg. Here he continued his anti-Nazi work until the German government pressured the small duchy to arrest him and return him. A warrant for his arrest was issued, but he escaped again, to the Saar, which was then administered by the League of Nations. (Much later, at the war's end, Haller went back to Luxembourg with the American forces. He looked up the chief of police and identified himself: he understood, he said, that a warrant for his arrest and extradition was outstanding.)

He stayed in the Saarland until 1935, when it was returned to Germany. When the Nazis marched in he walked out, to Paris. There he resumed, at the Sorbonne, his studies in statistical mathematics, sociology, and political science. He became a volunteer statistician for the Pasteur Institute and a member of the National Center of Scientific Research, a branch of the French Ministry of Education. He was offered an assistant's post at the Institute of Atomic Physics of the

University of Lyon, despite the fact that in 1934 and 1935 France was suffering from unemployment, employed aliens were required to have work permits, and there were many times more refugees than permits.

When World War II started, all German aliens in France were arrested and confined in a detention camp. Soon thereafter Haller and some fifty other German and Austrian scientists were released and formed into a curious organization known as the *Prestation Savante* (Service of Scientists), organized by the French Ministry of War and attached to the University of Montpellier, where they worked under the orders of the Ministers of War and Education. The organization was semi-military, and the scientists were dressed in a compromise between soldiers' uniforms and the garb of monks. During this period Haller made friends with a number of fellow-scientists whom he later recruited and used as agents. Precisely what work was done by the *Prestation* until the fall of France is not clear now.

When France went under, Haller fled again. Both the Gestapo and the Vichy militia were looking for him. There was a price on his head. He went south, to the unoccupied zone. During his long sojourn there he became fluent in French and improved his accent sufficiently to pass as a Belgian. After the Franco-German armistice, the French set up numerous depots at which French military personnel could be demobilized upon request. Their proof of bona fides was the uniform; upon discharge they were given a few thousand francs and a civilian suit. Haller managed to go through the process three times in three different towns, living in each on his severance pay.

Finally picked up and placed in a camp for demobilized French soldiers, he escaped and made his way to the American Consulate in Marseilles, where he obtained an Emergency Intellectual Visa to the United States. After a brief delay in Spain in the summer of 1941, he reached New York via Cuba on a refugee ship. He arrived in wretched physical condition.

Rebel in Uniform

Ten months later, at Fort Dix, New Jersey, he was inducted into the United States Army. The Haller legend has it that some difficulty with the military psychologists ensued: asked

by one of them if he could sing, he replied with a *fortissimo* rendering of *Die Wacht am Rhein*. This opening scene foreshadowed some later events. Assigned as a student to an army engineering school in Kentucky, he was placed in an elementary class. The instructor made frequent errors, and Haller's helpful corrections were appreciated neither by the teacher nor by the commanding officer. The latter had Haller on the carpet and informed him incisively that he was not the assistant instructor. Haller explained that he did not know anything about the army but did know mathematics, whereas the instructor's specialties were obviously the reverse. A compromise was effected: he was to remain silent in class in exchange for a nightly pass.

From September 1942 until April 1944 he was assigned to five different Army posts, usually instructing in the operation of a computer, while the OSS was frantically looking for men who knew Germany well. At last an IBM run turned up Stephan Haller; he knew the language, had detailed area knowledge, was a well-known SPD member, knew important personages. Almost all the holes in the card were in the right places.

The OSS brought him to Washington and gave him intelligence training. In June 1944 he was shipped to London and assigned to the labor division of the BACH section, an organization which supplied cover stories and documents for agents working behind enemy lines. In August he was transferred to a forward combat area in France. He served with one of the first OSS field detachments that accompanied the armies from the Normandy landings to the war's end. These detachments provided liaison from G–2 to OSS headquarters, ran border crossers, recruited spies from POW cages, briefed and debriefed agents, and performed many other intelligence tasks. Haller's exceptional capabilities led to his being recommended for a commission. The recommendation included the following job description:

> Haller is in charge of all BACH research work at Field Base C and acts as immediate assistant to the CO in all intelligence operations. . . . He (a) questions officials . . . interrogates prisoners of war, deserters, and escaped foreign workers . . . (b) collects and analyzes documents . . . (c) prepares written reports . . . covering such topics as: The German Rationing System, Travelling in Germany, . . . Priorities in German War Production . . . (d) supervises the work of six other members of the detachment. . . .

When Haller's commanding officer was told to have him ready to appear before an ETOUSA commissioning board, he was advised to ensure that "Haller's actions in front of the board be strictly military," and to be sure that the candidate could salute and about-face correctly, that his uniform was neat, clean, and pressed, and that his buttons shone. Perhaps the candidate was aided less by the coaching than by his record. At any rate, on 20 April 1945, Stephan Haller was commissioned a second lieutenant in the Army of the United States.

For the next few months his principal task was to interview prospective agents and work out their cover stories. Supplementing his intimate knowledge of German, Germans, and Germany was his painstaking care in details, an incisively logical mind, and a quiet devotion to duty. He went from Verdun to Luxembourg to Belgium. In May his unit moved to Wiesbaden, where his pay and allowances were further increased by two free bottles of champagne each month.

In Wiesbaden, where the unit was known as "Field Base C" or "Triangle," Haller located old SPD friends and began to pick up the broken threads of German politics, while at the same time busy with counterintelligence work. During this period he established the unorthodox operational pattern which he usually followed afterwards. He installed himself in a house well away from the base, living alone and working with his agents there. This pattern of activity was threatened with abrupt termination by an order from Security that he be separated, but his commanding officer and others who knew him well obtained a reversal. During the argument over this order the acting chief of the area wrote, "We have no one in Europe today who has his scientific background," and forecast for him a brilliant career.

"Baron" Haller at Hochheim

The prediction proved right. In the years after the war Haller obtained extremely valuable political and scientific technical intelligence. Although promoted to first lieutenant

in 1946, he asked to be given civilian status, and in July 1947 became an employee of CIG. He was graded at CAF–11 and paid $4,902 annually—a bargain if there ever was one. By this time he was established at Hochheim am Main, an imposing mansion—almost a castle—with marble halls and statuary, walls covered with damask and leather, and a cellar full of champagne. Thus ensconced in "Schloss Haller," which was listed in official records as a political research center, he began to exploit the intelligence potential of the SPD against East Germany and the USSR and to follow French activity in the French Zone of Germany and even in France itself. This second task, apparently carried out through friends made during the days of his exile, produced almost the only information available about Socialist activity in France and won him an official commendation.

The three years that Haller spent in Hochheim were probably the happiest of his life. The talents with which he was born, the scope and depth of his formal education, and the diversity of his international experience, both civil and military, now came into focus. He was working hard. At times he did not leave his apartment on the second floor of the "Schloss" for two or three weeks in a row. He held intense political discussions with visitors, many of whom were not agents but unwitting sources, friends and acquaintances who had known him as an SPD leader and who were more than willing to help him in the "political research" which he was now doing for the Americans. Among his visitors were Schumacher, Ollenhauer, Heine, and other German Socialist leaders. In fact, Haller even arranged formal meetings of the SPD Party Directorate in his quarters. The result of these meetings and discussions was unexcelled political reporting.

Hard as he worked, Haller also found time for fun and games. He was popular with both his colleagues and the townspeople, from the Mayor down. He always sat at the Mayor's table at civic festivities and was in demand as a dance partner among the wives of the local dignitaries. He drank and smoked with zeal, but few people claim to have seen him the worse for alcohol. His cellar was kept well stocked with champagne and the still wines of the Rhine and Moselle. He even had a false bottom installed in his car, so that whenever his driver was sent to the French Zone he could smuggle back

a few dozen bottles of Hoch. And his major domo, Kurt, was sometimes detailed to escort one or another fair young lady to the Schloss of an evening and drive her home again the next morning.

His pleasure in the present did not keep him from planning for the future. He suggested to his superiors that for operational purposes he renounce the U.S. citizenship acquired through military service and become a German again. He would then re-enter the SPD and thus give the newly established Central Intelligence Agency a high-level penetration of one of the two most important political parties in Germany. This position would make him an ideal agent, he felt, for both intelligence collection and political action. It would not be suspected that his renunciation of American citizenship and renewal of old ties were not genuine; the same thing had been done by others, including a former mayor of Hamburg. But Haller also made conditions. He wanted to keep his U.S. passport—he was quite proud of being an American—and he wanted assurances that when the time came he could return to the United States, his citizenship reactivated. This proposal was not accepted. He frequently referred to it in later days as a missed opportunity.

Haller was intuitive as well as logical. He had a remarkable ability to smell out Communist penetrations of the various civil governments set up in the German states. He felt sure, for example, that the Minister of the Interior for Land Hesse, Hans Venedey, was a Communist; and with his customary pertinacity he set out to prove it. His efforts led the Military Governor to complain to Haller's superior: he "had a good little government going there and Haller was upsetting it." It seems apparent that Haller then had a talk with the SPD leadership, for Venedey was expelled from the SPD for acts injurious to the party. He re-emerged as a functionary of the German Communist Party.

From Politics to Science

In March 1949 CIA headquarters for Haller's area moved from Heidelburg to Karlsruhe, and Haller set up shop in another castle, at Pforzheim. In part his work here was a continuation of the three years at Hochheim. His old SPD friends continued to visit him and furnish valuable political informa-

tion. These visits also gave him a chance to explain his own views, which were of course those of the U.S. Government, and thus to combine intelligence collection with political action. But some of his duties were new. Because of his scientific background, he was placed in charge of a U.S. program for paying subsidies to German scientists, part of a much larger operation designed to deny German scientific talent to the Soviets. This assignment required him to establish and maintain a new cover, one suited to its purpose.

In 1951, his cover well established, he was shifted to Berlin, there to direct operations against scientific targets in the East Zone of Germany. As usual, he took a house which served as both living quarters and base of operations. He responded to the tighter operational environment by intensifying personal control. He rarely went to parties now. He refused to let anyone else handle his agents, even when he was ill. He did not like to put on paper the mass of information accumulated in his head.

He began work, with others, on an operation designed to hinder the Soviet atomic energy program by inducing large-scale defection among German specialist craftsmen in the East Zone. These workers made the fine nickel wire mesh used for the essential separation of uranium isotopes. The scheme worked; technicians and their families defected in droves and were flown to West Germany. But Haller was disappointed to learn later that the Soviets were only inconvenienced, not thwarted. The vanished craftsmen were replaced. His own part in the operation, however, was well done, and in April 1951 headquarters sent him a congratulatory wire. One of his chiefs at about this time took written note of his lone-wolf tendencies, but all were unanimous that his work, and particularly his reporting of scientific intelligence, was excellent.

The German and Austrian scientists who had served with Haller in the *Prestation Savante* in France soon after the beginning of World War II now constituted a pool of assets. For two more years he worked with some of them in acquiring scientific and technical intelligence. A love affair with a young German actress ended when she married his rival, but his disappointment did not impair his work. The quality and

quantity of his output is evidenced in the repeated efforts of his superiors to get him paid more nearly what it was worth:

> His production is phenomenally high, and the many cases he runs are distinguished for the professionalism evident in their conduct. Although outstandingly qualified in background for conduct of positive intelligence operations covering technical and scientific subjects, he has demonstrated marked ability in conducting other kinds of positive intelligence and CE cases. . . . I should like to underline the fact that in the handling of agents and the production of intelligence, particularly in the scientific and technical field, in this area, Haller is, in my opinion, without a peer.

His scope expanded as scientific conferences in Switzerland and elsewhere enabled him to discuss the meetings with old friends who had attended, professors and other intellectuals. Both the briefings and the debriefings of this period are classics. In late 1955 he debriefed Leo Bauer, former leading functionary of the East German Communist Party, who because of his personal acquaintance with Haller had refused to talk to any other American official. He also debriefed Erica Glaser Wallach, who had gone to East Germany to locate her foster-father, Noel Field.

His friends remember only one interview that left him shaken. Dr. Gustave Hertz, one of the leading German scientists who worked on the Soviet atomic energy program, had returned to Germany with his secretary, Ellen Mueller, her husband, and their four children. The family was rushed to a safehouse, and Haller was called. As he began his careful questioning, little hands started tugging at his trouser-legs and clutching at his coat. Soon one and then another child, chomping hard candies, had struggled into his lap. While their mother beamed with a pride that was obviously a factor in her cooperativeness, the two continued the ascent, reaching Haller's sagging shoulders and making room for the other two members of the expedition. Haller has been called both a man's man and a lady's man, but no one ever called him a children's man. Somehow he struggled through the questioning. He emerged perspiring and a little stunned, as though he had been kicked in the stomach. Perhaps he had. All future dealings with Frau Mueller were handled by his assistant.

The Sheer Pinnacle

By now he was near the peak of his career. He was using fully his keen intellect, depth of recall, sensitivity, practical astuteness and imagination, his background in languages, science, and politics, and his feel for operations. His ability to deal with people amounted to genius. He was good at it because he was patient and, above all, because he was interested in people. Unlike most refugees, he had no political or personal axe to grind. He was an accurate observer and reporter. He could talk to all classes of Germans, from artists and professors to farmers and laborers, each in their own language—an indispensable skill in a country in which speech differences mirror both social levels and geography. His relations with his contacts were on two levels—of friendly personal participation and of impassive objectivity—without the latter being evident to them. Perhaps his membership in a race recently and bitterly persecuted by the Germans strengthened this faculty and sharpened his ability to use German agents for the purposes of his new homeland.

He did not grow careless or conceited with success. He remained a meticulous craftsman. Before he debriefed a source, he mastered the subject to be discussed. His agents were made comfortable not only by his cigars and beer but also by the easy flow of communication. And he did not end until he had every last scrap of useful information. He never failed, moreover, to remain alert for operational leads—potential agents, counterintelligence indicators, propaganda possibilities. When Haller was finished, there were no more questions to be asked. And though he groaned over the chore of putting it on paper, his reporting became thorough—and more than thorough, illuminating—for he rarely failed to make interpretive comments. Despite the bulk of his reporting he wrote everything in longhand.

His work remained consistently solid, even brilliant. Some of it was considered sufficiently important to be brought to the personal attention of the Director of Central Intelligence. The Director, impressed, thought that the promotions which his superiors had got for him were not enough. Stephan Haller thus became a rarity, a man promoted to the top of Civil Service ranks not because he was an exceptional executive—he had never occupied an executive position—but solely because he was an exceptional case officer. The Director sent him a personal letter of congratulation, and shortly thereafter, when he was called to headquarters, gave a luncheon in his honor. Haller was deeply moved. He often spoke later of the great honor conferred on him in Washington. His life and work reached on that day the top of a rocket-like trajectory. It was for him a moment of true glory.

After his return to Germany and a period of hard work in Berlin, he went in mid-1956 to Darmstadt to visit friends. Awakening in a strange room, in the middle of the night, he reached out for the light, but on the wrong side, and fell out of bed. The fall broke his hip. A German doctor placed a pin in the fracture, but the leg kept on giving him trouble. He went to a hospital in Munich, where leeches were used in an effort to reduce his blood pressure. The results were not good. He developed phlebitis.

These physical misfortunes would not have been the beginning of the end for most of us, who can learn to be satisfied with past achievements and past honors, financial comfort, and a familiar circle of family and friends. Stephan Haller was a man of different breed. With all the intensity of his character he had wound his life around one thing, his work. Work and the feeling that what he did was recognized were his entire psychological sustenance. Now that appeared to be gone.

Lying month upon month in bed in the Army Hospital in Frankfurt, he grew ever more depressed, thinking of how he could do nothing now to justify those honors heaped on him, and how little he would ever be likely to do again. Remembering that it had once been only his performance which had saved him from the Security axe, he even developed a growing fear that he would be released from the service, after thirteen years, because he had stopped producing. No amount of reassurance by friends and fellow-workers could dispel this irrational figment of his frustrated energy. His collapse was so alarming that he was returned to Washington in February 1957 and treated at the George Washington University Hospital. About a month later he was discharged.

He took an apartment on Sixteenth Street. Far from familiar Europe, out of touch with his world of operational activity, Haller fell victim of that sense of uselessness with which the jealous gods, perhaps, had visited him at the summit of his life. On 26 April 1957 he was stricken by a heart attack and died.

Apologia and challenge for the covert reporter in a land where learning is an elite privilege, time is cheap, and the dignity of friendship dear.

INTELLIGENCE GATHERING IN AN UNLETTERED LAND

Francis Hollyman

If analysts and estimators find their political information on the illiterate countries lacking in depth, confined to the ostensible policies and evident intrigues of a few dominant families and providing little insight into future moves, sub-surface trends, or popular attitudes, the reasons are not far to seek. Our reporters in these countries, both the Foreign Service officers who maintain correct official contacts and especially the covert reporter whose business it is to probe outside this official sphere, must pit their efforts against formidable obstacles deriving from the peculiarities of an anachronistic society. 25X1

25X1 Take [redacted] An American trying to use [redacted] citizens as clandestine sources of political information, however well versed in Arabic and well acquainted with the country he may be, has to get through three concentric barriers before he can begin to look for the information inside. The first is the fact that there are very few native residents in a position to have political information. Second, the odds are all against getting satisfactory covert access to any of those who do. And third, if you do gain access to a potential source, his patterns of motivation and behavior are such that it requires consummate skill in an American to get him to produce.

Unschooled Public and Rarefied Politics

The first difficulty, the scarcity of [redacted] in a position 25X1 to have useful information, arises in part from meager opportunity for education and in part from traditional restrictions on participation in political and public life. [redacted] who 25X1 are well educated by the standards of their country, including some businessmen and many government functionaries but

few others, have generally had no more than eight or nine years of school, with a large part of that devoted to the Koran. Well over ninety-nine percent of the populace has been given much less schooling or none at all. A slight expansion of secondary education in recent years has not yet had any appreciable effect on the general level of elite learning. Plans for higher education, aside from the training of religious figures and a few teachers, are still in the dream stage. Only a very small fraction of one percent of the population can go abroad and get a better education than is offered by the [ ]elementary schools.

Even at the elementary level, [ ]schools tend to leave large blind spots with regard to political matters. Subjects such as geography and world affairs are scarcely touched. It is not uncommon to find that a relatively well-educated [ ]who occupies an important place in commerce or government cannot read a map, and he may not even be aware that the world is not flat! With this shocking elementary ignorance he cannot begin to comprehend or care about more complex or subtle things like the meaning of the Iron Curtain or problems springing from Communist imperialism. The extremely few who have overcome these educational deficiencies by going abroad are still far from politically sophisticated; they are likely to be swallowed in the sea of ignorance around them, and they have nowhere to turn to get accurate current information.

The public media of information are weak, and do little to remedy the collossal deficiency in education. Basic information in the form of published surveys, handbooks, lists, directories, statistics, charts, maps, etc., is virtually nonexistent. The official radio and press service, organized efficiently in recent years, has become more effective in preventive control of thought rather than in informational content. It gives little place for commentary except that promoting government policy and those slogans of Arab nationalism considered best suited to [ ]interests. [ ]newspapers similarly give only a small fraction of the news available, and the paucity of published information is often more striking in domestic matters than on important international questions.

The newspapers are in any case little read; scarcely one [ ]in a thousand is a subscriber. But there is a con-

siderable amount of radio listening, and the people have generally come to rely on the powerful Egyptian radio as a source for news. At the height of the Suez crisis nearly all those who had access to radios listened also to at least one Moscow broadcast in Arabic daily; and they may now be turning to some extent to the Bagdad radio.

The restrictive character of the [ ]government abets the low educational level in severely circumscribing the number of citizens in a position to be well informed about political questions of interest to us. A great deal of the most important information on political questions is restricted [ ] A very few outsiders, no more than a handful at present, have succeeded in entering this charmed circle through personal ability based on a good foreign education; this phenomenon is the exception rather than the rule. Other officials of the government are generally mere functionaries, lacking access to much information on activities outside their own offices. 25X1 25X1 25X1

There is a tendency to keep the most important matters strictly [ ] keep personnel of the ministries from being well informed. And in matters which do go to a ministry, an unusual degree of reliance is placed on the spoken word, the personal mission, and the personal memory of the minister himself. Furthermore, even when there are documents covering a transaction, they are not likely to be filed in such a way as to be easily accessible when they are more than a few days old. It is not unusual for an employee of the Ministry of Foreign Affairs, for example, to spend hours in an unsuccessful search for some item, paging through irrelevant jumbled material or unindexed chronological entries. 25X1

Outside the ranks of the government, only a few [ ] through powerful business or family interests, have even indirect access to authentic information on political questions. The general public completely lacks such access, and under present conditions does not concern itself very seriously about the lack. 25X1

Reaching the Rare Politico

The second major difficulty for the political reporter is the relative inaccessibility of those few [redacted] who *are* well informed about political matters. The hindrances to satisfactory access, being in part characteristic of the restrictive political and social system of the country, affect all kinds of reporting, but there are certain complications which make the effects of the system broader and more serious in the field of clandestine information-collecting activities than in the overt field.

Ways of life in a country like [redacted] make it hard to reach any good potential source some of the time, and hard to reach some of them at any time. The virtual absence of easy social contacts, the lack of suitable public meeting places, the staggering inadequacy of public communications, and the suspicions commonly aroused among native residents by outsiders attempting to move freely among them—all make the task unbelievably time-consuming. Hardest to see are the persons who are in the highest positions, or whose work does not call for contact with foreigners, or who speak only Arabic; and the majority of good potential sources are probably in these categories.

The travel habits of practically all important native figures make them an elusive quarry for the foreigner, who has little mobility in [redacted] Persons of interest to us often stay for long periods of time in [redacted] Government personages also absent themselves frequently for trips abroad. The religious requirements of Ramadan, the month of fasting, and of the annual *hajj* or pilgrimage to Mecca tend to damp down any information-collecting activities for considerable periods of time. In sum, almost any native source is likely to be out of reach for at least a few months of the year, in some instances for more than half of each year.

These difficulties are particularly trying when we are seeking initial contact with new potential sources. We sometimes have to wait for months because they are not in a place where we can see them and there is no other means of initial communication that carries any hope of secrecy. The choice of possible native sources is so narrow and the ways of access to them are so extremely few that almost any effort to find and develop new clandestine sources is vulnerable to detection by friend and foe alike. There is almost invariably a prolonged period of intense awkardness and insecurity in the preliminaries to initial clandestine contact.

Psycho-Cultural Characteristics

Characteristic peculiarities of attitude, motivation, and behavior constitute a third major difficulty in the use of native sources for political information. They are a considerable obstacle even to the overt reporter, but in clandestine information-collecting activities they also make it much harder to assess the personal reliability of a potential source. I do not refer here primarily to the obvious peculiarities of outlook caused by limited education, religious beliefs, social customs, restrictions in political and public life, and the thought patterns of a language so unlike our own. Peculiarities of this kind, readily identifiable, can be anticipated and partly compensated for in our training and preparation for the work.

More difficult to handle are other, subtler peculiarities, ones which would probably not be very apparent if we ourselves did not have definite expectations of a behavior which fits our requirements in those whom we want to use as sources. To a [redacted] the peculiarities lie in our expectations, not in the attitudes and motivations fundamental to his way of life. 25X1

One of these is his sense of time, a practical one from his standpoint, if impractical from ours. For him, infinity stretches out ahead, contiguous and real. He seldom, perhaps never, feels the pressure of time. The concept of a fiscal year is wholly foreign to him, either as a measure of time or as a means of controlling expenditures. The notion of "production" of political information in certain quantities within a certain period would puzzle him. He does not have our sense of a schedule, of a deadline, of a program. Nothing can be done to make him work at a set rate of speed, let alone hurry.

Another of these subtler peculiarities is his sense of purpose, which bears little obvious resemblance to ours. Aside from wanting to be a proper Arab and a good Muslim, he has no strong aims or convictions. His experience is too little, his ignorance too great, to provide a foundation for opposition to Communist imperialism as his motive force. He has no strong sense of socio-political responsibility, no felt need for thinking, for making a political choice. The idea of subscribing to a positive ideological program or doctrine, except as it incorporates his immediate Arab interests, is beyond him. He does not like to generalize about the world, because all he knows is his home, the marketplace, the desert, and the edge of the sea. Very often his attitude is that of the merchant, even if he is not engaged in commerce. His aims and desires are very simple ones, and he does not want to change them.

The [redacted] often reacts in ways that surprise those who do not know him, or fails to react in the ways they expect. He is essentially gentle, not belligerent. At the height of the 1956 Suez crisis he hoped for nothing more than an immediate end to the fighting; he could not comprehend the international forces at work, and he was afraid. He respects force partly because it is simple and within his comprehension. Although he is often distrustful of British diplomacy, he understands and makes allowance for a frank statement that such-and-such is in the British interest and British policy is planned accordingly. He rather distrusts the profession of lofty moral principle as a basis for policy on the part of any government, partly because the principle may be too complicated or too different from his own way of thinking, partly because he does his political thinking—such as it is—in terms of interest, not principles. He likes the material things which the western world may have made available to him to make life more pleasant, but if he has been abroad he generally returns happily home, not very much impressed by other aspects of western civilization.

Relying largely on oral communication, he tends to simplify and omit when he has to deal with complicated matters. He cannot easily distinguish fact from rumor. He is not good at making an estimate of a situation, or even at judging the state of public opinion, because he is not used to thinking along these lines. When a new situation develops, he does not fail to react, but his reactions are simple and direct, based on his

immediate interest. An observer or overt collector needs a long period of living among these people and learning to think in their way to acquire the instinctive appreciation that will make him a sensitive reporter.

The covert reporter has the further problem of assessing the individual [redacted] as a potential agent, and then of maintaining his motivation and his production. As a clandestine collector of information, it is hard for a [redacted] to work in a methodical way, because method is not part of his make-up. He rarely if ever has the spirit of fighting for a cause; but on the other hand, even if he is venal, he will do very little to accomplish things he does not believe in. He cannot be ordered bluntly, because he cherishes the little niceties in personal dealings which are his way. He needs a great deal of orientation and encouragement. What he usually prizes most in this activity is an abiding personal relationship that gives him understanding, dignity, and friendship.

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These, then, are the awesome obstacles to political reporting from a country where illiteracy [redacted] leave only a handful of worthwhile sources of information, where customs make this handful difficult to reach and confidential dealings almost impossible, and where the cultural differences that wall off westerners go down to the very roots of motivation and thinking. These obstacles have been described with particular reference to [redacted] but the situation there is not unlike that in a score of equally important other countries where the people are unfamiliar with the written word, reserved and imprecise with the spoken, and profoundly different in their way of life.

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An amateur graphologist pleads for at least a dry run on an assessment technique of potential value in intelligence.

HANDWRITING ANALYSIS AS AN ASSESSMENT AID

Keith Laycock

The assertion that reliable clues to a person's character [1] and some of his capabilities may be derived from analysis of his handwriting usually evokes a vigorous *pro* or *con* reaction which seems to originate somewhere in the subconscious mind and not to reflect a reasoned consideration of the proposition. The reaction is at times so strong as to give a psychologist the impression that those who shrink from the idea do so because they fear exposure and those who eagerly embrace it are the kind who like to snoop and pry. Whatever the psychological reasons, one thing is certain: the proposition is a good one for starting a controversy.

The art of handwriting analysis—graphology, as it is more commonly called, especially in Europe—has two branches: an established and "respectable" one devoted to the identification of individuals by their handwriting, and a black-sheep branch dealing with the assessment of personality. The latter is the subject of this paper. I am not a professional graphologist, but I have explored the subject enough to be convinced that this black art has a practical application in the assessment of persons to whom access for other character tests is limited.

Since character assessment (as distinct from capabilities-testing) is as complex as human nature itself, and the art of handwriting analysis is exceedingly difficult in its detail, the most that can be achieved in any short paper is to give an outline of the theory involved, in the hope that those readers who have serious limited-access assessment problems will be encouraged to explore the matter further, independently,

[1] By *character* I mean the individual constellation and balance of drives, inhibitions, and habits which determines how (rather than how effectively) a man will behave in a given situation.

either through study or by enlisting the services of a professional graphologist.

Plotting the Terms of Reference

Anyone undertaking serious study or investigation of graphology—or of any assessment system, for that matter—must settle three formidable related questions before he can safely submerge himself in the "how" of the technique at all, to wit: 1) How far do we propose to go in plumbing the ramified depths of a subject's character? 2) How do we handle the semantic problems which plague character descriptions? 3) What do we do about standards for judging the ethical aspects of character?

It seems to me, on the first question, that we have to specify in some detail precisely what we want to know about a subject's character before we can proceed in any assessment operation, and then keep within these sharply delineated limits to avoid an extensive mire. Most executives appear willing to settle for any assessment system which will consistently and reliably tip them off to those *peculiarities* of a given individual which will be helpful and those which will be harmful in the job they are trying to fill. They seldom appear to be interested in ultimates about anyone's character, in complete "character-pictures" pages long, or in abstract conceptions that have to be interpreted. From the purely practical point of view, then, assessment starts with the job description, and that job description should be supplemented by a list of desirable, undesirable, and fatal traits. In the absence of such a guide, assessment becomes perforce an undertaking to describe all the traits of a given subject, an exceedingly unrealistic exercise in the present state of psychological knowledge and one which, if conscientiously carried out, results in massive and complicated reports, long delayed.

I should accordingly, without prejudice to the usability of graphology in the field of deeper research, answer the first question as follows: We should consider a reasonably acceptable result from this technique to be a report containing a reliable guide to those character-traits of the subject which make him fit or unfit for the job we have in mind, as specified by us, plus a warning on any character-traits that deviate strongly from the average. For example: We specify that we want to fill a bank-teller's job. For this (with apologies to bank tellers)

we want a stable and mediocre person who is conscientious, able to stand dull routine, accurate, and honest, one who is *not* quarrelsome, thieving, aggressive, or imaginative. We assume that in other respects he will be run-of-the-mill. The assessment turns up one candidate who meets the specifications of general mediocrity and willingness to handle other people's money without appropriating it but who is also exceedingly vain, in fact a peacock. Such a potentially dangerous factor ought to be reported to us, even if we have not required it.

Our second problem, semantics, can cause a great deal of difficulty either in the exercise of the graphological art or in the study of it; it is a pitfall into which many have tumbled. What is an "honest" man? What is a "brave" man? Definition of such words is a practical impossibility, since the third unknown, an ethical standard, is involved. If we could establish agreed ethical standards, we could, no doubt, compose definitions which would be adequate, but there does not now appear to be such a set of standards. In fact, at this point in human history there seems to be more confusion than ever over whether the end justifies the means or is inseparable from them. We are accordingly, as far as I can see, limited in using characterological terms to those denoting specific acts such as talking, stealing, lying, etc., and must eschew words with ethical overtones. Many writers and students on the subject have fallen into the ethics trap, so let both student and practitioner beware.

It is necessary to add yet another caution: The analysis of handwriting is an art, not a science, and the quality of the result is dependent upon the caliber and capacity of the artist. Consequently, the statistical evaluation of graphology according to the accuracy of the results obtained by a cross-section of its practitioners is meaningless. The question whether graphology can be used reliably in assessment work seems to me to depend on whether even *one* person can do it consistently, not whether a majority of those who claim to be competent can get results. The evaluator should be aware that a great many so-called graphologists are either dilettantes or charlatans, using an art of which they have a smattering to swindle or astound the gullible. It is, in fact, this swarm of fortune-tellers and mystics, with a small but noisy retinue of supporters making extravagant claims, who have done that recurring

damage to the reputation of graphology which has served to deprive many a harassed executive of its assistance.

Basis for the Art

As the reader will see from the bibliography attached at the end of this article, much has been written on the "how" of graphology. The bibliography could be much longer without exhausting the list of serious works. The student who reads these books will find that, while there is considerable divergence among them in the area of fundamental theory, there is striking unanimity on the more concrete technical level. This situation no doubt reflects the general dilemma of assessment: it is a lot easier to devise tests that reveal a hidden habit, such as "taking ways," than to uncover the underlying psychological reasons for the habit. We shall therefore try as far as possible to avoid the more abstruse aspects of the subject in discussing next the general validity of the thesis that reliable clues to the character and to some of the capabilities of a person may be derived from competent analysis of his handwriting.

Essentially, two points have to be established, first that the individuality of every person's handwriting is caused primarily by psychological, as distinct from mechanical, characteristics peculiar to the writer, and second, that there is reflected in a given handwriting, in symbol form, a hidden "story" about these psychological factors which a graphologist can "read." The individuality and peculiarity of every person's handwriting is accepted by the courts, and it follows that a person's handwriting must change very slowly and slightly or not at all during his adult life, since otherwise the courts would not accept holographic evidence.

If this individuality in writing were the result of mechanical influences only, then the enormous deviations from letter forms taught in school which some calligraphies exhibit would be due to extreme mechanical idiosyncrasies, not to say difficulties, peculiar to the writer. The fact is, however, that writers with exceedingly peculiar handwritings perform all other tasks with about the same mechanical competence as the next man, and conversely, persons who are markedly unadroit often have more regular handwritings than those of considerable mechanical skill. Mechanical skill, in fact, is one of the abilities which can *not* be deduced from handwriting.

Handwriting is in reality brain-writing, as the following experiment will prove to any reader who cares to try it: Sign your name on a piece of paper. Now take the writing instrument between your molars and sign; then put the instrument between your big and second toes and write your name that way. With some practice legible signatures can be produced in this fashion, which on comparison will be found to resemble closely (with due allowance for mechanical factors!) the work produced by the hand. Even if you cannot control your neck or leg muscles sufficiently to produce legible scrawls, you will be able to see that you are *trying* to direct the instrument held in teeth or toes to produce *the image you have in mind*. (I would warn the reader who attempts this experiment either to make sure of privacy or to let any possible intruder know beforehand what he is trying to do. It can be very embarrassing to be caught barefoot in simian concentration on managing a pencil with your toes.)

There are a number of cogent reasons why psychological rather than mechanical factors dictate the main calligraphic peculiarities of a person who does not have a neurological condition of some sort. Let's look briefly at the influence of a dozen common psychological motivations.

Pride in Appearances. A writer usually feels that his handwriting's appearance represents him to the reader and to the community at large. He accordingly makes a certain amount of effort, depending on the degree to which he feels appearances are important, to make his calligraphy look "good." Therefore his writing will in some degree reflect his personal taste in what looks good, and how much importance he places on looking good.

Social Attitude. Except in the case of memoranda written for notekeeping, the act of writing has strong social implications. It is an act of communication, seeking to reach and influence one or more readers, whether with generous or sinister motives. How the writer moves across the paper toward the reader must, as a matter of common sense, reflect somewhat his attitude. A self-confident, outgoing, cheerful, trusting writer who loves people is bound to cross the page in a very different way than the writer who hates, fears, and dis-

trusts others, and perhaps himself as well. As a matter of common observation such opposite types *act* differently, use different gestures, have different smiles, etc.; it is hardly surprising that their gestures on paper would differ.

Docility and Truculence. The act of writing is an act of conformity: if certain standards are not met, the communication can be read only with difficulty or not at all. Here the people who like to make things difficult for others can have a field day by distorting their handwriting, leaving it just readable enough to make the reading a torture. Those who rebel in principle against conformity will also maim their writing, and so will some gentlemen who fear they may be called to account for what they have written. Others there are who conform rigidly to the set standards, some willingly, some desperately, some furtively, and some because they have no particular personal preferences to express.

The Shock of Early Battles. Writing may bear scars. Learning to write is one of the first great struggles with society which many of us undergo, faced suddenly with a frightfully difficult task which we must perform or remain illiterate. The job can be torture, or a game; that depends on many things. But the attitudes toward writing then established (cramped, worried, overanxious; or relaxed, confident, free-flowing?) are often reflected throughout life.

Emotional Disturbance. Writing is an act of self-expression, sometimes of feelings hidden from the conscious mind. A pen driven by boiling emotions will move very differently than one in the hand of a calculating or apathetic "cold fish." The writer who is tormented by ungratified (perhaps ungratifiable!) sex wishes will unwittingly interject some sex-wish symbols into his calligraphy. Where these wishes include a desire to commit rape-murders, the symbolism can be very sinister indeed.

Energy and Fatigue. Writing is a piece of work, to some a highly disagreeable chore and to all an effort requiring concentration and output of energy. Is the writer ebullient with energy? Or does he wearily drag one foot after the other? Is he tireless or easily fatigued? Is he liberal with his energies, or does he try to economize on every movement? The impact of his pen on the paper will certainly vary with these traits.

Agility and Impatience. As a means of communication, writing is a slow technique. It is adequate only for the slow thinker; to the man whose mind is leaping ahead of his hand it becomes an irritating impediment. But agile minds may react variously to this drag: some devise ingenious shortcuts, others butcher the script beyond recognition. The ruthless ones wade over the paper; the considerate ones torment themselves with conscientious printing.

The Devious Intent. The writer knows that what he has written can be used for purposes he never intended or even foresaw. Therefore the prudent man with ulterior motives writes cautiously, and the self-conscious criminal may choose ornate, imposing script. Men who prowl craftily through life seldom caper across paper.

One's Path to Glory. We all desire to attain status among our fellows. Do we try to gain it by hard work? By sudden, spectacular achievement? By illegitimate methods? By violence? By bragging? Would it not be strange, after receiving a letter full of exaggerated capitals and ornate flourishes, with various senseless embellishments for general effect, to find that the writer was a conscientious, self-effacing, hard-working drudge?

The Root of Evil. We all have some emotional relationship or attitude toward money. Do we spend nights dreaming of it? Squander it? Hoard it? Steal it? Despise it? Feel guilty about having it? Most accountants and bookkeepers can tell you, without even thinking, how a man feels about money by the way he writes a check. Some of them can make quite a good guess also about how far he trusts people.

Practice of the Art

At this point the reader will probably be satisfied that about as many factors in a man's habits, attitudes, and traits influence the formation of his handwriting as he has habits, attitudes and traits, and may agree that peculiarities in handwriting are mainly generated by the psychological peculiarities of the writer. We still, however, have not established the validity of point two, that a graphologist can consistently interpret peculiarities in writing to reveal the peculiarities behind them. If systematic interpretation of handwriting is to be possible, peculiarities or their combinations that indi-

cate a certain trait of character in one writer must indicate that trait in others, and be subject to interpretation according to some set of rules.

In an article of this length I cannot present the voluminous tabulations which have been compiled by graphological analysts relating specific peculiarities to specific traits. Moreover, simply presenting such tabulations would hardly convince the reader that the tabulated relationships are in fact correct; paper will, after all, put up with anything that is written on it. In my experience, the only way you can convince a real skeptic that this kind of interpretation is consistently possible is to perform it consistently, or else cite performance data from a source he respects. From my own files I can present quite a few cases where graphologists have made astonishingly accurate delineations of the character of persons in whom we had abiding interest of great importance, and I would like to cite two of the most striking ones very briefly. On these I am prepared to produce (for those with proper clearances only) precise documentary proof.

The first concerns a person who carried out a monumental performance in duplicity for several years at considerable risk. A grapholigist who knew nothing about him but his penmanship described him in such accurate terms that when a sterilized version of the graphological report was circulated without any other indication of identity to five persons who had known him well, all five recognized him from the description and four concurred in it entirely. The fifth acquaintance agreed on all points except one: he did not think the subject as intelligent as the graphologist assessed him to be. Meanwhile a standard assessment was made by psychologists, who were in agreement that the man had a very high order of intelligence indeed.

The other case, a man who had carried out an even more extraordinary deception, was processed by both a European and an American graphologist. The two descriptions not only concurred in all major points, but were ultimately proved to be far more accurate than we believed at the time they were produced.

This, of course, is not evidence, in the scientific sense, on the critical question of consistent performance. In both cases the handwriting specimens were of the striking kind which

even a layman would recognize as having elements of greatness from the espionage point of view. To the best of my knowledge, and strangely enough when one thinks of the controversy that has raged around this subject, a proper test run has never been devised and carried out, at least not in the United States, to determine whether *any* graphologist can consistently deliver accurate results in the area of character delineation. Consistent results in the psychiatric area concerned with the detection of mental illness appear to be pretty well established,[2] and these are certainly impressive. That is a different matter, however, from providing data on the character peculiarities of people who are "sane." It is high time that such a determination were undertaken, and at the end of this article I shall take the liberty of making specific recommendations on such a test.

In the absence of a present fund of test data to throw at the skeptic, I resort to offering him a brief description of one or two graphological techniques and the thinking behind them. I hope thereby to bring him to the point of joining the man who needs means for limited-access assessment and helping him generate pressure for carrying out a proper proving problem on the pivotal question—can anybody at all do this work with reasonable accuracy and consistency?

Sorting Out the Symbols

The techniques employed by the graphologist to bring out the hidden character-story in a given handwriting rest upon the interpretation of symbolism in the specimen. There are two kinds of symbol-groups—those common to a society or culture, and those which the writer may have devised on his own, usually unconsciously, to express subconscious wishes, fears, hatreds, and the like. We are all so surrounded and submersed in symbols and symbolism that we are often oblivious to the tremendous expressive and controlling force of this cultural factor. In some way not understood, symbols are linked with the deepest impulses of the mind. They are not merely a matter of simple association, as performed by Pavlov's dog. Some symbols are coarse—the Swastika, the Hammer and Sickle, the Rising Sun, the Dollar Sign, the Cross.

[2] See Lewinson & Zubin, *Handwriting Analysis*, King's Crown Press, N.Y., 1942.

Others are less so—the jagged, angular writing that suggest combat, cutting, tearing; the hidden rope and dagger; the blots and drips of ink, like poison and bloodstains, in some writing; the hidden treble clef of the music-lover. Some symbolism is subtle—the receding left margin, making inner reservations; the flung-lance t-cross harpooning its victim; the whole writing back-slanting, as though resisting or reneging.

The interpretation of these symbols requires a process of analysis more or less as follows: First, all deviations from the model calligraphy the writer was originally taught in school, insofar as this can be determined, are noted. That requires a very substantial knowledge on the part of the analyst as to scripts and formats taught in different parts of the world at different times. Second, these and other symbolic deviations are evaluated in terms of the extensive lists of character indicators compiled in tabular form by generations of graphologists. Then the individual indicators are compared and sorted to form groups comprising for example those indicating persistence or lack thereof, aggressiveness or lack of it; and the picture that emerges is then checked for consistency.

A complete re-evaluation has to be made when major inconsistencies are detected or where confusion results. This inconsistency or confusion is generally due to the fact that a given set of peculiarities in handwriting will reflect the corresponding set of positive peculiarities in the writer only about two-thirds of the time, and in the other third the symbolism may be *inverted*, reflecting not the positive trait but a subconscious wish for the missing quality. A bold and massive general's handwriting sometimes comes from a Mickey Mouse of a man who would like to be a general but doesn't dare and hasn't the capacity. At times a complex mixture of direct, inverted, and wish symbols is present, and the graphologist is stuck with a tiresome cut-and-try process until he comes up with a consistent picture. It is no wonder that the charlatan and the dilettante, who don't do the required cross-checking and therefore should stick to simple handwritings, from time to time fall on these inconsistencies and are exposed. Unfortunately, people then blame the art, not the practitioners.

These are the mechanics of the interpretive process, but there also is an "intuitive" factor involved. There are so

many aspects of symbolism to consider more or less simultaneously that something like a computer is really needed to perform the drudgery of comparison; and I believe that the art, if it is ever to become a science, will have to have electronic support for the human brain. But frequently some analysts seem readily to understand specimens of writing that baffle others, and vice versa. Still others seem to interpret handwriting by way of some subconscious response of their own to the latticework of symbols they see, without knowing how they do it.

A notorious case in point is that of Roda Wieser, who once undertook to analyze the handwriting of hundreds of jailed criminals and then compared it with that of "honest" men (i.e., men not in jail!). To cap the comedy, she picked policemen as the "honest" men, apparently not realizing that she was actually only comparing the handwriting of *unsuccessful* criminals with that of a group no better or worse than other men involved in crime, but hardly ipso facto honest. Entangled in the semantic problem and her ignorance of criminology, Roda labored long and hard and produced the strange book listed in the bibliography. Yet she was an almost phenomenal interpretive handwriting analyst; she appears simply not to have known how she did it.

A Kindergarten Case

Let us look, by way of elementary illustration, at one segment of the symbol structure and something of its interpretation. We shall stick to "direct" interpretation only, since the "inversion" and "wish" aspects would confuse matters and are not essential to getting a grasp on principles. In fact, if the reader sticks to the direct approach and does a little study on the side, he can soon qualify for dilettantism and might even become a quack.

When we write a letter by hand on a blank sheet of paper, we enter as it were an open area; and as we write across this field, we move upward, downward, and incessantly forward and backward as well. These four directions and the zones they point to immediately involve a common or "cultural" symbolism. In our society the four have relatively uniform implications; take at random phrases like *high* ideals, *low* life, a *backward* child, a *progressive* firm. In writing, the way

we behave with respect to these directions and how we distort our movements in these zones has a strong significance in individual symbolism. In interpreting the significance of these symbols the graphologist (as distinct from the charlatan, however well-read) spends hours and sometimes days matching up the various indicators to see how they jibe. He will study slant, pressure, the way of joining the letters, size of print, flow of the lines, speed of writing, extraneous symbols, etc., etc., etc., in each case building up a pyramid of data, which, if he is sufficiently competent, ultimately makes consistent sense. For the purpose of our illustration, we can only show a few fragments of the process.

In the specimen of Figure 1, the right margin goes further and further right and the left margin also slopes to the right. As the writer proceeds he strives to get closer and closer to the reader, ending up practically in his lap. The capitals and upper loops in this specimen show distinctly the writer's freedom of movement in the upper zones, above the line of writing, but note how repressed and hesitant he is in venturing below the line. We conclude that he is far more at home in the world of ideas and ideals than in material and animal activities. The letter-formations are extended toward the right, curtailed toward the left: the writer is in a hurry to get to his goal (or *away* from his origins, himself, his past, etc.). The whole slants upward and onward.

We thus have a small fragment of the giant composite picture we have to construct before we know what the fragments mean. The writer seems at this point to be an idea-man, idealist, or dreamer who is intent upon reaching the reader and careful to keep out of the mire, or else he is pretending to be that kind of person, or wishing he was, and moving full tilt.

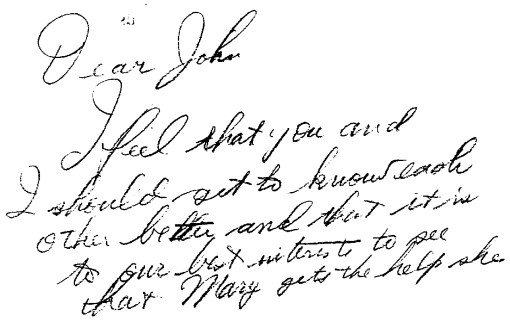

FIGURE 1

Figure 2 reproduces a charlatan's analysis (in this instance correct) of two specimens for one pair of traits—talkativeness-secretiveness. I choose this example not only because it deals with one of the easiest human traits to detect in handwriting and by personal contact, but also because application of these indicators is within the capabilities of the lay reader, who may wish to experiment a little on his own, by scanning the writing of persons he knows and whose coefficient of garrulity he knows. I feel reasonably safe in saying that if the reader rules out those specimens which show contradictory indications (such as large scrawly writing with closed and knotted o's and a's) he will soon discover that there is a high degree of correlation between a given writer's talkativeness and the indicators cited in Figure 2, and that the more indicators of either group there are present in a given specimen, the more marked the trait will be.

If the reader wishes rather to test out the effectiveness of some graphologist, what material should he be prepared to submit? At least several pages of work, if possible from different sittings, one at least bearing a signature. The writing should be on unruled paper in ink or good pencil, produced with an instrument that suits the writer and under writing conditions to which he is accustomed. Ball-point writing is anathema because the effort to control the flow from this atrocious instrument makes the pressure-friction pattern meaningless. The graphologist is entitled to know the writer's age, sex, national origin, and profession, since he cannot tell these facts from the specimens, and they are invaluable interpretive aids. An "effeminate" handwriting produced by a male, for example, or the "masculine" writing done by some women must be examined with care to determine how much of the masculinity or femininity is real and how much is affectation, secret-wish expression, etc.

At this point I rest my Introduction to Graphology, hoping at least to have disabused the eager convert of the notion that he can soon and easily train himself to detect other people's secrets, and to have quieted the fear of exposure that may be haunting others. My object was to persuade the sincere skeptic that he cannot simply say "It can't be done," and to induce the man who has limited-access assessment prob-

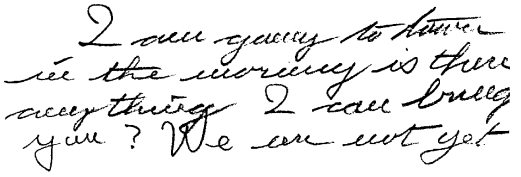

Exhibit A

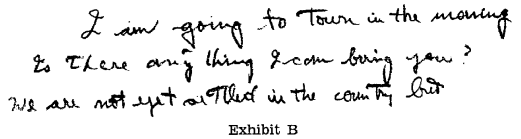

Exhibit B

A. An extreme case of talkativeness: The writing is large and sprawly, the a's and o's are open. The words tend to "grow" as they flood the page, ignoring the right margin and crashing into the reader. The writing is slanted heavily forward; letters run into each other; the writing slants upward; the capital letters are large but not meticulously formed; t-crosses are well to the right of the t-stem, indicating haste; the writing is broad, heavy and brutal.

B. A case of acute close-mouth: The writing is small and refined; o's and a's are closed and knotted; t's are hooked to the left. The left and right margins retreat. The slant is vertical and, in some instances, backwards. Lower loops are close-set and one is sealed shut.

FIGURE 2

lems (and some of our people really have them!) to explore further.

Scope of Intelligence Application

We have a limited-access problem when we have to uncover the character and capabilities of a person who 1) is dead, and so no longer available for questioning, 2) is unwilling to talk and be tested, 3) is out of reach of personal interview, maybe behind the "curtain," 4) is untruthful in his answers to tests and questionnaires, 5) cannot be formally tested and assessed because of expense, time factors, or security considerations, 6) is not supposed to know we are assessing him. Where full access is possible, a battery of tests, particularly of the real-situation type used in OSS, and a careful study of the subject's past performance and reputation will give as reliable a result as we can expect at this stage of our knowledge of man and yield something like a scientific picture of his inner workings. But where access is limited, graphology offers a not unsatisfactory substitute.

In most cases, competent graphologists can supply reliable estimates on the following important character-traits:

Disposition to talk too much. There are, to be sure, some people who can talk much and betray little, but by and large the man who talks a lot lets many a thing slip out of his mouth.
Emotional stability under stress. People who crack easily show cracks in their calligraphy.
Agressiveness, resistance, and tenacity.
Attitude toward money; ability to control the handling of it. (*Not* ability to invest it.)
Disposition to deceive, prevaricate, evade, double-talk (as distinct from capacity to succeed in it).
Ambivalence, *i.e.*, disposition to take both sides of an issue; to have divided loyalties.
Inclination toward opportunism, *i.e.*, to approach moral questions and matters of principle on the what's-in-it-for-me-I-have-to-make-a-living basis.
Desire for power, predominance, prominence.
Willingness to follow the lead of others.
Rebelliousness, crankiness, indisposition to conform, insubordination.

Recklessness and rashness.
Important changes in character (by comparison of present with past calligraphies).

The graphologist can also provide reasonably good estimates on certain capabilities:

Capacity for abstract thinking and logic.
"Diplomacy," ability to deal with people.
Powers of observation.
Imagination.

Then there are a few characteristics on which a graphologist can make a good educated guess:

Sex difficulties. Their existence is often detectable, but their nature may not be.
Disposition to engage in criminal activities, *i.e.*, violation of laws the validity of which the subject acknowledges.
Disposition to engage in violence against persons. (It is important to note that these dispositions may never be overtly expressed either because of fear or other restraining factors or for mere lack of opportunity, provocation, or need.)

Graphological techniques also have medical applications. Some calligraphies bear the warning signs of cancer and circulatory ailments; others the signs of incipient mental illness and nervous breakdown.

There are certain things a graphologist can *not* tell:

Sex of writer.
Age of writer (in chronological terms, as distinct from level of emotional maturity).
Mechanical ability or other special skills.
General level of ability to perform acts to which the subject may be disposed. (For example, subject may be strongly disposed to lie and evade, but inept at putting lies across.)
"Fortune" or future in store for the writer.
Past history of work, crime, etc. (although very cogent estimates can be made as to cultural background from the type and level of calligraphy).

I have the impression that most people with serious limited-access assessment problems would be very glad to get some of the information outlined above about the people they handle

at a distance. It is an odd coincidence that the graphologist can shed most light on precisely those character traits which are of significance in clandestine operations. The art has thus a peculiar potential in the half-world of espionage and counterespionage, where paranoid and split personalities abound and frustrated executives are the order of the day.

The Dry Run

I hope that there will soon be pressure to resolve the key question—can any person claiming to be a graphologist come up consistently with reasonably good character descriptions? If any one at all can do it, then it can be done. If after all these years no one can be found who can do it then it cannot (for our purposes) be done. It would be all too easy to devise a proving problem to show it can *not* be done, just as it is possible to prove mathematically that a bumble-bee cannot fly. The best way to get a meaningless result would be to tie it into the strange pattern of abstruse psychological jargon which has of late come to infest some quarters of the psychological world and which reflects what I believe to be the sheer delusion that any group of men is able to formulate scientific conceptions of the qualities of human character. Man is, after all, just emerging from the Sea of Ignorance and cannot at this point comprehend so simple a force as gravity. He is hardly in a position to claim to understand the most complex of natural phenomena, man himself. Practical executives want simple, practical descriptions of character-traits without implied moral judgments or technical jargon, and those with limited-access assessment problems are willing to settle for a good deal less.

I would like to recommend the following specific procedure for the proving problem that will eventually have to be run somewhere:

It should be controlled, and the final judgment made, by practical executives, not psychologists, psychiatrists, assessment men, or graphologists. They should be men who need help in assessment problems, and one or two should be executives handling espionage agents. In this matter, neither the graphologists nor the psychological-psychiatric fraternity are disinterested parties. The latter, rightly or wrongly, see in the graphologist what the

doctor sees in the chiropractor—a quack. To what extent this is due to vested interest I cannot presume to judge; but I rather feel it touches upon the Achilles' heel of the entire psyche-testing fraternity, the fact that man is not now competent to assess man scientifically.

A minimum of fifty sets of handwriting specimens should be secured, at least meeting the specifications and including the auxiliary data prescribed on page 37. They should bear false signatures and be written in ignorance of the fact that they are to be used for any purpose other than communication. The writers must be men whose character is a matter of record, not established by some other series of tests. (Famous men cannot be used; graphologists know their handwritings.) The greatest precautions should be taken both to prevent the writers from knowing what is afoot and to prevent the analysts from learning the identity of the writers.

It should be required that the analyses be couched in common everyday descriptive language, with jargon and technical terminology ruled out. They should be short and to the point, and exclude such ambiguities as "This man is basically honest and sincere, but is capable of theft and deception under pressure." A proper statement on these points would run something like one of the following: "The writer will say what he thinks as long as this is safe." "The writer will say what he thinks and take chances to do so, but does not speak recklessly." "The writer will say what he thinks, no matter what the risk." "The writer will steal anything not nailed down." "The writer will not steal under ordinary conditions." "The writer has strong moral scruples against stealing and would rather starve." These are definitive statements with which the layman can come to grips.

Each graphologist tested should be required to state what specific character-traits and capabilities (*cf.* pages 38–39) he can identify and describe, thus avoiding the danger of pushing him into having to deliver something he cannot. None should be required or permitted to go off the deep end and try to describe a character at large; they should stick to the specific character-traits each claims he can de-

lineate and let us assume that the rest of the picture will either be deducible from these main traits or "average."

Each graphologist should have the right to reject 20 percent of the specimens if he wishes. We do not want to force him into the educated-guess area, and it will also be most interesting to see whether they all reject the same 20 percent.

Some graphologists may wish to operate as a team, and that would seem as allowable as any other team exercise. But the tests must not be aimed at groups of graphologists; the purpose is to test the performance of individual graphologists without regard to affiliation.

Some European graphologists of stature should be included, as the art is far more advanced in Europe.

A few amateurs should be permitted to participate. Of these I should like to be one.

The content, procedure, and results of these tests should be circulated in the intelligence community.

BIBLIOGRAPHY

Analysis of Handwriting	H. J. Jacoby	Geo. Allen Unwin, London, 1939, 1948
Deine Handschrift—Dein Charakter	Hugo Ries	Siemens Verlag, Bad Homburg, Germany, 1950
Der Verbrecher und Seine Handschrift (The Criminal and His Handwriting)	Roda Wieser	Altdorfer Verlag, Stuttgart, Germany, 1952
Handschrift und Charakter	Ludwig Klages	H. Bouvier & Co., Bonn, Germany, 1949
Handwriting, A Key to Personality	Klara Goldviher Roman	Pantheon Books, N.Y., 1952
Handwriting & Character	Dewitt Lucas	Bell Publishing Co., Drexel Hill, Pa., 1950
Intelligenz im Schriftausdruck (Intelligence Expressed in Handwriting)	Max Pulver	Orell Fuessli Verlag, Zurich, Switzerland
Symbolik der Handschrift (Symbolism of Handwriting)	Max Pulver	Orell Fuessli Verlag, Zurich, Switzerland
Trieb und Verbrechen in der Handschrift (Drives & Criminality Reflected in Handwriting)	Max Pulver	Orell Fuessli Verlag, Zurich, Switzerland
Vernehmungstechnik, Ch. 7 (Interrogation Techniques)	F. Meinert	Verlag fuer Polizeiliches Fach-Schrifttum, Luebeck, Germany

A professional assessor supports the amateur graphologist's appeal for validity tests, although not sharing his enchantment with the art.

THE ASSESSMENT OF GRAPHOLOGY

E. A. Rundquist

Two threads of argument run through the foregoing article on handwriting analysis. The first asserts the great need for research studies because "a proper test run has never been devised and carried out, at least not in the United States, to determine whether *any* graphologist can consistently deliver accurate results in the area of character delineation." The second asserts the value of graphology here and now as an assessment technique, making sweeping claims of what it can do. The arguments are essentially incompatible. If the claims are correct, the research is unnecessary; if there is no research evidence, the claims are unsupported. With the need for research to establish the value of graphology as an assessment technique I am in full agreement. I disagree with the claims for its current effectiveness.

The article makes a number of cogent points. It distinguishes between the well-established branch of graphology devoted to problems of personal identification and the branch devoted to character analysis; it stresses the need for research studies; it recognizes many of the pitfalls that need be avoided in carrying out such studies; it acknowledges that traditional psychological assessment is preferable to handwriting analysis when direct access to the individual is possible. With these points I am in general agreement. A little elaboration of all but the first, which is too well established to require comment, may be helpful.

Scope of Research

In evaluating graphology—or any other assessment technique—not just one, but many studies are required. Studies of agreement among graphologists, the development of objective techniques for measuring characteristics of handwriting,

refinements in the methods used, hypotheses such as "small handwriting with closed and knotted o's and a's indicates secretiveness"—all these are useful and interesting, but they do not answer the main question: How well does it in fact predict behavior? Or in the terms psychologists like to use: What is its validity? Studies should therefore be concentrated in this area, a point I stress not in disagreement with Mr. Laycock, but because of its importance.

Validation studies in the area of personality assessment are not easy to do. There are many complicating factors—getting a representative sample of persons to participate, getting the same kind of information about each, getting information in sufficiently specific terms on the behavior one is trying to predict. This last problem is recognized by Mr. Laycock as a semantic one. "What is a brave man?" he asks. If there is no agreement on what a brave man is, there is obviously no means of checking on anyone's assertion that a person *is* brave.

More Pitfalls

This semantic problem has another aspect which is often overlooked. It is not hard to write a personality description that applies to the vast majority of people. This "Barnum effect," as it has been called, is one of the charlatan's best friends. Psychologists prepare such descriptions to show their students that a person's agreement with the correctness of a personality description is not proper evidence of the value of any assessment technique. I once capitalized on the Barnum effect when instructing a group of twelve European intelligence officers, most of whom were favorably inclined toward graphology. I asked them for handwriting specimens, and after a suitable interval produced personality descriptions for each of them, which ten of the twelve agreed fit very well. Then they were allowed to discover that I had given them all the same identical description, one I found in a German periodical before I left the States.

To demonstrate further the dangers of accepting agreement with a personality description as evidence in favor of any assessment technique, I asked the twelve to describe themselves by answering true or false to a number of personality statements. All answered true to two of the statements—

"You have a tendency to be critical of yourself" and "You prefer a certain amount of change and variety and become dissatisfied when hemmed in by restrictions and limitations." And ten answered true to a third statement—"While you have some personality weaknesses, you are generally able to compensate for them." Experimenting thus with a few more questions, one would soon have enough "true" statements to write a full description which every member of a group would agree applied to himself. This kind of demonstration underscores the passages in Mr. Laycock's article which call for specific, objective, and understandable items of behavior as the criterion or yardstick by which the validity of any assessment technique must be judged.

Capabilities of Psychological Assessment

"Where full access is possible, a battery of tests, particularly of the real-situation type used in OSS, and a careful study of the subject's past performance and reputation will give as reliable a result as we can expect at this stage of our knowledge of man and yield something like a scientific picture of his inner workings." I take this to mean that direct assessment of the kind done by my staff in the CIA Office of Training is to be preferred over the graphological technique when access to the individual is possible. With this view, of course, I should like to agree wholeheartedly. But this brings me back to the article's claim that "In most cases, competent graphologists can supply reliable estimates on . . . disposition to talk too much . . . emotional stability under stress . . . aggressiveness, resistance, and tenacity . . . attitude toward money . . . disposition to deceive . . . inclination toward opportunism . . . desire for power . . . willingness to follow the lead of others . . . rebelliousness . . . rashness" and "reasonably good estimates on . . . capacity for abstract thinking and logic . . . ability to deal with people, powers of observation, imagination" as well as "a good educated guess" about "sex difficulties . . . *disposition* to engage in criminal activities . . . *disposition* to engage in violence against persons."

Even for the extremely thorough assessment process conducted by my staff I would not claim so much. Either our own methods have greater capabilities than we credit them with, or the article errs in conceding the superiority of "direct-

access" assessment over handwriting analysis. If evidence can be produced to establish that graphology can do all this, I shall hasten to incorporate it into our assessment process and eliminate much of the interviewing and testing we do.

"There are certain things a graphologist can *not* tell," writes Mr. Laycock. Certainly my list here would be much longer than his. But I am genuinely puzzled by some of the things included in this list, and by the statement that "the graphologist is entitled to know the writer's age, sex, national origin, and profession, since he cannot tell these facts from the specimens, and they are invaluable interpretive aids." I am confused by the inclusion of sex, because there are studies indicating quite clearly that differences in handwriting do exist[1] which permit determination of sex at a better than chance level. I haven't seen any studies on the other characteristics, but except for exact profession they are the kind of thing I would think might be inferred from handwriting at a little better than chance level.

Psychologists are impressed by the difficulty of making predictions about a changing individual in a changing environment. They are very much aware that such predictions can refer only to probabilities. Psychologists desire, therefore, as the core of their assessment process, means and techniques which have been validated by methodical research. Tests of general intellectual ability, of some aptitudes, and of interests, along with information about past behavior, are among these means. New means can be developed only by testing claims for special techniques in the same methodical way.

Prospects for Graphology

Up until recently the evidence concerning graphology as an assessment technique has been so negative that psychologists generally have preferred to concentrate on techniques that showed more promise. The negative evidence came from studies of graphological tenets equating specific handwriting characteristics, such as upward sloping lines, with specific traits, such as ambition. On the basis of such studies, graphology as a means of assessment has been lumped with astrology, phre-

[1] A. Anastasi & J. P. Foley, Jr., *Differential Psychology* (Revised edition; New York: Macmillan, 1949) p. 663; C. L. Hull, *Aptitude Testing* (Yonkers-on-Hudson: World Book Company, 1928) p. 147.

nology, and other systems for reading character from physical characteristics such as length of fingers or color of hair.

Handwriting is, however, the product of a person. There is therefore some reason to expect it might tell something about him. This reasoning, fostered by graphology itself as it became concerned with the movements underlying handwriting rather than the handwriting itself, has led to the devising of different kinds of studies. These studies, while not yet convincing, do make it clear that the value of graphology is not yet a closed question. One of the better ones, for example, found that a graphologist trying to infer from handwriting how 50 neurotics would answer 27 questions (1,350 items in all) achieved an accuracy of 62 percent as against the 50 percent to be expected by chance.[2] The graphologist may have been helped by knowing that all were neurotics, and so the 62 percent may be a bit high. Even taking the data at face value, these predictions turned out not much better than chance results; but the study suggests that research in this area might be more worthwhile than many had thought. It also points to the need for more research to pin down just what kinds of things can be predicted and what kinds of things cannot.

In Mr. Laycock's list of things a graphologist can determine is included "important changes in character (by comparison of present with past calligraphies)." Research on change in handwriting over time and under various conditions appears to offer some promise. At least common observation suggests that changes are caused by illness, either physical or mental.

At the present time I do not consider the evidence for graphology as an assessment technique sufficiently impressive to include it in assessments for which we have direct access to the individual. I don't sponsor research on it for this purpose as a matter of economics. I have only so many dollars, and I think I will get a better return from other assessment techniques. And even if we did not have access to the individual, I'd still place my bets on investigation of his past behavior, his education, his jobs, social status, income, and so on.

[2] H. J. Eysenck, "Graphological Analysis and Psychiatry: An Experimental Study," *British Journal of Psychology*, 1945, 35, 70–81.

It is interesting that graphologists, according to the article, require some of this investigative information (sex, age, national origin, and profession) as a prerequisite for their analysis. They also get the informational content of the handwriting specimens themselves. From these data a number of inferences are already possible. Consider, for example, the differences in characteristics one might assume with confidence between an age 50 female English secretary and a 21-year-old male German lawyer. I'd be inclined to rely on the implications of this information, and would be extremely cautious in accepting inferences, whatever their source, that were inconsistent with it. The article claims, for example, that "most accountants and bookkeepers can tell you, without even thinking, how a man feels about money by the way he writes a check." I'd rather have the evidence on how he uses his money that can be obtained by looking at his cancelled checks. So, I guess, would the banker, who lends money on investigation of background and permanence of job, not on handwriting analysis. It is dangerous to allow inferences from less well validated information to influence those obtained from valid sources.

For the clandestine services, however, graphology as a validated assessment technique might have application in a sufficient number of instances, those where background investigation is impossible, to warrant considerable research to determine its effectiveness. I would like to see these studies start on whatever simple verifiable characteristics graphologists are willing to try. Should these prove successful, studies of more complex traits can be undertaken.

I can agree with Mr. Laycock that the study should cover the abilities of a number of particular graphologists—that graphology may be an art, but certainly is not a science. In my mind there is even the nagging question whether it is a practical art. A problem with an art is that a particular person's skill in applying it may change over time. There is no way of knowing whether a practitioner's predictions a year later will have the same value as those he made when he was tested. It is for this reason that psychologists, as scientists, keep trying to find ways to convert the art of judging people to a science. They try to tease out, objectify, and measure the basis for their predictions, so that the assessment skill can be

communicated to others and used reliably with a variety of persons in a variety of situations.

Mr. Laycock is greatly concerned with getting some research started. So am I; for until we get more information on the validity of graphology for specific purposes, the differences between his views and mine on graphology as an assessment technique, and my concern over the danger of unwarranted credence in graphological findings, will persist. Psychologists charged with personnel assessment are ready to cooperate in such studies. Their only requirement is that the research be so conducted that a group of scientists will agree on the kinds of conclusions that can be drawn from it.

Sketches a prospective space-age system for handling air intelligence data, centered on a massive electronic brain.

DEVELOPMENTS IN AIR TARGETING: PROGRESS AND FUTURE PROSPECTS

Kenneth T. Johnson

Four preceding articles in this series described how the USAF Directorate of Targets has been seeking to increase its capabilities by developing mathematical models and other techniques for the mass handling of data. This final article will look briefly at the progress of these techniques since the articles describing them were published and then examine some other analytical tools in process of development for the target intelligence specialist.

The three mathematical models previously described were the Military Resources Model, the Air Battle Model and the Damage Assessment Model. The Military Resources Model [1] estimates the capability of the Soviet Bloc military establishment, with its supporting economy, to carry out military action and analyzes the effects of planned attacks. The Air Battle Model [2] war-games the interaction of battle forces on the basis of a most exacting layout of both sides. It answers the question, "After x time of the game, to what extent have offensive and defensive plans been carried through or disrupted?" But it must first be supplied data describing what resources are available to each side, what courses of action each will attempt, and all other conditions affecting the outcome; and the preparation of these data is a demanding task and a stimulant for intelligence. The Damage Assessment Model [3] predicts the probable physical, functional, or operational effects of atomic weapons on targets or target systems. It answers questions of the type, "Did the building collapse?" "How many casualties were caused?" The most recent article

[1] See *Studies*, Vol. II, No. 1, p. 51 ff.
[2] See *Studies*, Vol. II, No. 2, p. 13 ff.
[3] See *Studies*, Vol. II, No. 3, p. 23 ff.

of this series [4] treated these models as illustrating one aspect of the manifold problem of data handling, described the Consolidated Target Intelligence File, and highlighted the necessity for better and faster ways of storing and retrieving information.

The Analytical Models in Operation

Many months have been spent in developing these models to bring the fantastic capacity and speeds of electronic computers to bear on the increasingly complex data which must be considered in making operational decisions. How are the computer techniques working out in practice? The Air Battle Model has been in constant use, making test runs to evaluate different target systems, battle plans, and strategies. Lists of ground zeros—points of burst—from the Air Battle Model have been fed into the Damage Assessment Model for the calculation of damage and radiation effects. These results have then been used by target analysts to determine the residual capabilities of affected installations.

The Damage and Assessment Model has kept pace with the Air Battle Model's output of ground zeros and other data requiring effects analysis. Improvements in the form in which the results of the damage and contamination runs are presented have evolved from consultation between analysts and machine programmers. The latest of these improvements has been effected by feeding into the Model criteria for determining automatically from damage and contamination values whether an installation is still operational after attack.

Since publication of the article on the Military Resources Model in the beginning of 1958, a series of operational runs has been made on its economic grid to show the multiple direct and indirect economic effects of Soviet civilian and military programs. Completely effective use of the economic grid is still hampered, however, by data gaps in such important areas as guided missiles and atomic energy; and aggregations in the Model which exclude consideration of certain specialized items of equipment limit the results to statements of general economic capability.

[4] "Data Handling Techniques," *Studies*, Vol. III, No. 2, p. 95 ff.

Developmental work on the military logistics and transportation grids of the Military Resources Model, in progress in the spring of 1958, has provided the basis for the development of a new model covering USSR regional air defense capabilities. This model assesses the capability of a specific region—either an air defense district or a penetration corridor—to mount defensive sorties and missile firings after its logistic and transportation facilities have been damaged by an air attack of any given scope and magnitude. The initial model has just been constructed and an initial run made; further development is in process. The construction of this new model shows how the mathematical modeling technique can be adapted to serve new purposes.

Models have thus already assumed some of the targeting load, but much remains to be done in determining whether and how models can be used in other analytical areas. What is intriguing for intelligence analysts, however, is that in some areas models have brought them to the threshold of a precise means for determining what items of information are of critical importance, a determination which will provide new, sure guidance to collection and analysis activities. This "sensitivity analysis," as it is called, is done by rerunning the same problem several times with varying parameters to determine which variations have a critical effect on the results. It provides also a good antidote to the tendency of analysts, having available the models' huge capacity for data, to become involved in the pursuit of minutiae which have no substantial importance for their problem.

Although the article on Data Handling Techniques appeared in the most recent issue of the *Studies*, some new gains can be counted here, too. Of the more than 200 requests for machine processing of the CTIF already levied by analysts, about 65 can be handled by existing programs and another seven are now being programmed, leaving a substantial 128 yet to be translated into machine language. The bridging of the gap between an analyst's statement of his needs and the marching orders for the machine requires a high degree of rapport between analyst and programmer, and this rapport is being developed. The programmer must discuss the requirement step by step, and patiently record each step in an ungarbled instruction to the machine. Laborious

as this process is, it pays off in a better product, and the analyst man-hours that are made available for more difficult jobs grow and grow.

The acquisition of an electronic data plotter has very practically enhanced the utility of the CTIF system. The plotter accepts coordinates from a machine tape or from cards and records the locations directly on a linear projection map. Programs are now nearing completion which by converting latitude and longitude to linear coordinates will enable the machine to plot locations on a map of any projection and any scale that will fit on the 48″ by 60″ plotting board. Single symbols can be plotted at the rate of 65 to 70 points per minute. The usefulness of the machine is attested by the long queues of waiting analysts eager to short-cut the tedious task of massive data plotting.

In an earlier paper in this series[5] General Samford was quoted as saying that the extent to which intelligence should contribute to the process of war gaming might be disputable but that if an advanced war gaming process were kept closely in mind during all processes of intelligence preparation, the intelligence necessary to a strategy would be better. The validity of this statement is already being demonstrated as the need for detailed layouts of enemy capabilities reveals inadequacies in our estimates. The operation of the Air Battle Model has properly been moved out of Intelligence to the Directorate of Plans, but because Intelligence personnel did the pioneering work on the Model, the Air Battle Analysis Division in Plans is largely staffed with former intelligence analysts. This arrangement facilitates not only the feedback of requirements on intelligence but also the interpretation of the intelligence data to be fed into the Model and the understanding of intelligence requirements for data from its output.

At the Model Application Branch in the Directorate of Targets, a cadre of target intelligence analysts has been assembled and is being oriented to improve the input data for the Air Battle Model and the utilization of its output. The Branch must also keep under review the operations of the Damage Assessment and Military Resources Models, which are wholly and

[5] "Developments in Air Targeting: The Air Battle Model," *Studies*, Vol. II, No. 2, p. 13.

appropriately placed in the Directorate of Targets; new questions arise every day about how best to use the existing models in solving targeting problems. At the same time it is working on the development of new models to handle current problems and anticipating other problems which targeting is going to face tomorrow.

The Data Problem

The inescapable task of assembling intelligence data assumes an aggravated form when the data is to be used as input for a mathematical model. It is not that the use of models creates a data demand; the data problem is there anyway, models or no models. But what the models often do is make the analyst face up to kinds of data the likes of which he had never considered, for example the number of metric tons of pumps and compressors required for each major military component in a prewar build-up of forces. A prolonged bout with the stern requirement of a model for enemy data coefficients, enemy strike plans, or the capacities of enemy installations can bring an analyst to the point of despair. Yet he can take comfort from the ease with which problems can be rerun. The data do not have to be perfect the first time, and a rerun with a new figure may show that the variation is not of critical importance. A capable officer of ours is wont to interrupt a hot debate over input data with "You don't like our figure? Give me one of yours; I'll use it."

The Consolidated Target Intelligence File described in the last article is proving a valuable device in this battle with the data and constitutes a giant step in facilitating mechanized support of target analysis. Another giant step is anticipated in the near future with the application of the new Air Force Intelligence Data Handling System, designated 438–L. The system is scheduled to be operational early in 1962 for the Washington area.

The development of System 438–L was initiated in response to a Headquarters USAF requirement, formalized in March 1956, for an integrated system to accept information from any and all sources and to organize, store, manipulate, and disseminate it without the limitations of capacity and speed inherent in present practices. The aim is the best possible system to meet present and anticipated requirements, whether a fully

automatic system of machines and computers, a combination of manual and machine methods, or just human beings. The contractor is putting a broad selection of talent to work on the system, including library scientists, experimental psychologists, computer programmers, and computer engineers.

Although the best approach to a design for this system is still being worked out, it is already apparent that it will be based on a large-scale, high-speed, general-purpose computer to accomplish many tasks. Such a computer will make feasible the development of a rich indexing system, not only by document but by key words on individual pages. This indexing system will enhance the ability of analysts to make subtle correlations of data and develop significant interrelationships which may exist in available information. Data storage and retrieval can be accomplished primarily through microfilm libraries.

The computer in the system will make possible the fast and accurate communication and dissemination of newly collected data, notably that necessary for evaluating enemy intentions and giving warning of attack. Many types of information must be examined rapidly, for example that obtained by missions flown specifically to develop certain intelligence data. It will also analyze reports and documents to produce Order of Battle, Current Intelligence, Technical Intelligence, etc., accumulating bits and pieces of raw information and associating them for development into meaningful products. In target analysis it will be invaluable, for example in the evaluation of foreign target systems, the charting of foreign air facilities, and the development of strategic and tactical targets.

The retrieval facet of the system may function in any of several ways. A question may be given by an analyst to the operator of a Flexowriter or similar device in his working area. It would be put into proper form and automatically transmitted to a Flexowriter in the computer area, which would print it out. Here it would be checked for format and validity and then fed to the computer system. The computer would differentiate among types of questions. The answer to one concerning evaluated intelligence holdings would be obtained from a file of evaluated intelligence directly connected to the computer system. As the result of automatic search procedures the answer would be printed out or displayed, as appropriate.

A demand for raw information, on the other hand, might be answered in any of three forms or some combination of them—a listing of documents or pages pertinent to a study, the documents or pages themselves, or statistical information derived from the documents. If the document itself were desired, the computer system would identify the specific document number. This identification would be hand-delivered to a separate raw information storage device, which would produce either aperture cards or a full-size reproduction of the document.

Information might also be added to the system in several ways. The evaluated intelligence provided by analysts of all agencies would be entered through the same Flexowriter-type device used for querying the system. Raw information selected and extracted from documents by a screening panel would be entered as part of an index storage file. The documents themselves would be microphotographed and placed in the raw information storage section of the system.

The analytic application of the system will cover war gaming, damage assessment, and determining the economic effects of military action, as foreshadowed in the mathematical models we have described. It will also cover target materials and production control, an almost independent area, under a fairly routine application of processing principles. It will provide document security control for all the highly classified information disseminated through the computer. It will make possible a more accurate formulation of collection requirements and furnish a means of evaluating both the requirements process and the collection process. Even our comparatively limited experience with the models we have been using gives us ground to anticipate that actual application of the proposed system will stimulate continuing development of new analytic techniques to enhance the capabilities of Air Force intelligence.

For target intelligence the 438–L system is indeed going to be a quantum jump ahead, and none too soon. The most intensive target analysis effort is now directed against Soviet guided missiles (especially operational launch sites), air defense (particularly the SAGE system), and command control systems, objectives around which the most stringent security barriers are arrayed. The most direct and forthright advances against these objectives could come from a successful collection effort—a drawing, a paper, a plan, a photograph, a defector.

But the more important the target to us, the more important it is to the Soviet that he deny us information on it, and the tougher the collection task. Some people seem even to believe that he can continue to be totally successful in this denial in the areas where it really counts. This brings us back to mass data handling and the possibilities it offers. The realistic solution in these high priority areas may be to break into the complex of activities associated with the target and let them lead us to it.

What is suggested is that we collect and process the less sensitive information, of which there may be an abundance, along with the sensitive. This approach is not new; intelligence analysts have always recognized that bits and fragments of information about persons, places, things, and movements can when assembled, analyzed, and synthesized enable us to make a sweeping end run around a formidable security barrier. What is new is that science has come up with the technology that will permit us to use this practice on a scale and with a speed never before possible. The exploitation now made possible of the vast amount of data already on hand in different forms in many agencies offers immediate promise. It gives impetus to the Air Force's effort to develop yet better techniques for the mass handling of data; for the consequences of failure to provide target information in these critical fields are grave indeed.

Lest the impression be left that target analysis begins and ends with data on individual installations, it is important to round out the picture somewhat. As the Soviet nuclear delivery capability and military might in general have assumed greater and greater proportions the targeting emphasis has shifted from economic and industrial targets to military forces and their immediate supporting resources. Furthermore, it has become more important than ever to draw the full implications of the effects of attacks—to translate the physical destruction calculated to result from planned attacks and the residual military inventories of men and materiel into terms of post-attack operational capability. The criteria for the selection of targets and target systems lie in the implications of these effects; and in this sense effects analysis is the mainspring and director of target selection.

It is clear that the models and data handling developments described in this and preceding papers all contribute in great measure to the central work of target selection and effects analysis. But this is only a part of the picture: the keystone of the effort is the human being, the target analyst, who emerges as the manager, collator, and interpreter of data, instructing the machines, guiding the collectors, using finished intelligence produced by other analysts in their specialized fields, and finally producing integrated intelligence on live enemy forces on a command basis. In these force studies the interrelationships of the forces, their bases, support facilities, and restraints of time, space, command, communications, and competition for common support items such as transportation and fuel are analyzed in detail.

The force study is prepared on a command-wide basis. The producer in effect puts on the enemy hat and examines the interrelationships of the forces in his command, say the First Long Range Air Army, the installations they occupy, the support facilities and activities necessary for their continued operation, their training and maneuvers. This presentation of real-life force intelligence gives new meaning to the importance of targets and target systems. It provides an integrated rational basis for the prediction of wartime deployment and missions and the prediction of qualitative and quantitative peacetime growth. Finally it provides the framework within which targets and target systems may be nominated for attack, a clear understanding of the reasons they are nominated, and, through analysis of the output from machine runs on the damage and contamination model, a realistic interpretation of the operational effects of given attacks.

The preparation of force studies is under way. One has been completed on the Soviet Northern Naval Fleet, another on the Ground Forces in the Caucasus area. Studies will eventually blueprint the opportunities for air action against all forces which threaten the United States and its allies and will be maintained current for immediate application in war planning and war gaming.

Future Data Problems

As the target intelligence analyst strains to see what lies ahead he is awed. As he thinks toward the 1970's he realizes that he must deal with enemy weapon systems not yet in

being, ones which Soviet strategists are currently engaged in planning to bring into the Soviet arsenal at that time. Qualitatively, they will attempt to outdo US and Allied weapon technology. Quantitatively, they will try to provide so many and varied means for fast delivery of nuclear weapons that US defenses will be insufficient to fend off the attacks and US offenses not quick or massive enough to neutralize the Soviet capability. It is the target analyst who must wrestle with the realities of this problem and figure out how to cope with the threat.

In this future period the collection and evaluation of target data will be performed with improved technology, and conclusions will be reached and decisions made with greater speed. Some of the technology for collection devices can be predicted now. For example, aerospace vehicles with a variety of sensing devices—electronic, radar, infrared—promise data in volumes never before dreamed of. The prospect that unfriendly neighbors can look into each others' back yards day in and day out is going to have a profound effect upon what they decide to try to hide, how they decide to hide it, and what they decide is just not worth hiding. Some of the new data, for example infrared detector readings which give warning of missiles being prepared for launching or being launched, will go directly to warning centers for immediate decision on US and Allied action. All of it will be grist for the analyst, to be evaluated against the background of the data stored in the 438-L or some improved system, and all will automatically be added to this massive store. From it the analyst, using advanced techniques, must draw conclusions on which to base action in an era when minutes can decide eternity.

CRITIQUES OF SOME RECENT BOOKS ON INTELLIGENCE

MY TEN YEARS AS A COUNTERSPY. By *Boris Morros*. (New York: The Viking Press. 1959. Pp. 248. $3.95.)

The story told in this book is that of a Russian immigrant to the United States—the author—a person of sound educational background and musical competence, who after reaching professional heights in the entertainment and movie worlds got himself involved in espionage. According to his account, his desire to assist his aging parents in Russia led to a recruitment proposal by the Soviets for clandestine work against the United States, which he accepted under the threat of reprisals to his family. Subsequently, and quite belatedly, he came into contact with the FBI and under its guidance continued his association with the Soviet intelligence service for ten more years as a double agent or counterspy. The fruit of this effort was the dissolution of an important Soviet spy ring.

The value of the book is not the story told. Tales of the same ilk in numbers line the operational coffers of intelligence organizations throughout the world. Its true merit from a professional point of view is embodied, rather, in the operational data—those intimate, indispensable, but hard-to-come-by details—that it reveals concerning the formidable yet vulnerable chief target of U.S. counterintelligence, the Russian intelligence service. The validity of this assessment becomes immediately clear when one considers the cost in time, money, and personnel of procuring such details through other clandestine operations. Yet here are intimate and damaging data on RIS objectives, personnel, modus operandi, and vulnerabilities overtly available for the modest price of a book. The obvious conclusion is that the coordination of overt and covert information remains an important and obligatory aspect of the intelligence process.

The Communist cause is more than a political creed; it is a religion to an otherwise atheistic group. Its devotees are or are supposed to be dedicated men who preach and live by the credo that selflessness is the cornerstone of their religion. The concept of the Cause as overriding all considerations of per-

sonal loyalty and ordinary ethics is illustrated in passages like the following:

> "How in hell did Myra—who, like you, pretends to be my friend—write that terrible report about Katerina?" "What else could she do? She only did it for your own good."
>
> Myra looked like a full-blooded passionate woman. I am sure that if it had been necessary for the sake of the Cause to be unfaithful to her husband, she would not hesitate to give herself.
>
> I never got a chance to use that Sunday punch because of what he said next: "No matter what the Communists do, I'll always be true to them, ideologically."
>
> Korotkov's affection for his old friend was truly sincere. I am convinced of that. . . . But then he asked, "What in the world can I do if he continues to cause me so much trouble?" "Oh, he will come out of it in time," I said. "And if he does not? I suppose then there will be nothing for me to do but order him liquidated."
>
> [Comment on Beria's arrest:] "After all, to preserve the system requires continuous examination and re-examination of each of us."

It is important for the intelligence professional to understand this religion and the Marxist code of ethics, for they permeate the relations among Communists, the attitude of the intelligence center toward its agents, their operations, and even the conduct of the lowliest sub-source on the intelligence totem pole. In them lies the secret to their thinking and behavior. They are a source both of great strength and of critical vulnerability. For the utter self-abnegation required by the Cause is something more—or less—than human. This human vulnerability is illustrated in Morros' words:

> If a man like Soble is useful to his masters in Moscow, he is also an ever present danger to them. They have no choice; they must use men like him, and the Jack Sobles, no matter how often they are put through the psychological meat-grinders, remain *men*. Like everyone else, like all people everywhere, they have their vanity and pride, their weaknesses and strengths.
>
> "Idealists, you see," said General Korotkov, "have something soft in them always . . . and that soft side exposed to sufficient temptation will corrupt them."
>
> If it were up to [Korotkov], he would not let one of his men stay in America for more than a year. He said the capitalist regime, with its easy living and emphasis on false values, was too corrupting.
>
> [Soble] was pulled both ways. He believed with all his heart in the "Communist ideal." At the same time he wished to take his wife and son out of the ever-present danger that was an integral part of his role as a secret agent operating in a foreign country. The two dreams he nourished for the future were dragging him in opposite directions.
>
> The clue to the strange fate that caught up with Jack Soble may lie in his passionate love for his son and his wife. In the non-Communist world this sort of devotion is accepted as the norm. In the Soviet world it is regarded with deep distrust. If a man lets family love interfere with his duties to the state, the Kremlin considers his usefulness ended.

Moscow recognizes well this vulnerability in the persistent humanness of human nature, but its corrective efforts serve only to create other vulnerabilities, the rigidity of strong centralization and the resentment created by its mistrust of its people:

> "People back Home sat there with their maps, deciding what should be done in a certain city and how it should be done, even though they had never been in the United States themselves. . . . No detail of the plans they make at Home can be changed without permission. . . . They should know by this time that emergencies arise even in a checker game that one cannot foresee."
>
> They are always testing you, trying to find out if your sympathies have shifted, listening for the chance remark that will betray a weakness or character flaw. . . . Even when their conversation appears casual, there is some purpose behind it.
>
> These contacts, I was soon to find out, were continually being changed. The NKVD never trusted even its own people very far, did not believe it wise or safe to leave any secret agent in the same city for any great length of time.

Reviewing the Soviet intelligence effort as portrayed in this book, we observe specific differences between it and the parallel operations conducted by Western powers—the Soviet stress on sex both as a tool for the control of women agents and in the procurement of information from men; the regular use of threats for recruitment and control of agents; the extensive countersurveillance mounted over rendezvous and têtes-à-tête; murder as a means of agent disposal. But in broader view we

find that the principal difference lies in the insecurity of Soviet operatives stemming from their continual struggle to remain human beings under the demands of an autocratic, inflexible, and unrealistic credo that seeks to convert them into unquestioning instruments of the Cause.

SAMUEL R. BURVICK

THE HOUSE OF SECRETS. By *Gordon Young*. (New York: Duell, Sloan & Pierce. 1959. Pp. 179. $3.75.)

Gordon Young, a veteran foreign correspondent whose name frequently appears on these pages, gives in this book an account of the Narodno Trudovoi Soyuz (People's Alliance of Russian Solidarists), or NTS, as the group is more commonly known. The NTS is an organization of Russian emigrés who believe that Communism in the Soviet Union can eventually be overthrown through popular revolution. To hasten this day, it has been active since 1930 in trying to introduce propaganda into the USSR.

During World War II members of the group reached the German-occupied areas of Russia and attempted to organize NTS cells. By infiltrating various German institutions and agencies, they had a direct influence on the initiation and furtherance of the Vlasov movement. This period of "collaboration" with the Germans was ended by the Gestapo's arresting the Solidarist leaders. After the war the NTS was reorganized in West Germany, began a boisterous search for Western support in all quarters, and in recent years has carried on a sizable propaganda program through leaflets, pamphlets, books, radio, and personal contacts with Soviets travelling abroad.

Mr. Young's description of the NTS organization, of the ideology of Solidarism which it proposes as an alternative to Communism, and of the group's propaganda operations is highly readable if somewhat superficial. The author has obtained most of his information from interviews with NTS leaders and members, rather than from the fairly large mass of available documentary material. Necessarily, the picture of the NTS that emerges is an extremely favorable one.

Available information does corroborate the bulk of the factual material in Mr. Young's book. There are exceptions, such as the grossly exaggerated claim that within the past five years more than 100 million copies of NTS newspapers and leaflets have been dispatched into the Soviet Union. (The 100 million figure is more probably the amount of literature printed by the NTS Posev publishing house for the five-year period.) By and large, however, the story of the group's unequal, often tragic, sometimes heroic struggle against the Soviet Goliath is told without the wishful thinking that has characterized pro-NTS publicity in the past.

For the professional intelligence man, *The House of Secrets* will be useful as an easy-to-read, rapid review of this militant emigré group.

W. P. ZIMMOCK

COUNT FIVE AND DIE. By *Barry Wynne*, as told by Colonel William Eliscu, O.B.E. (New York: Ballantine Books. 1959. Pp. 152. $0.35.)

This purports to be an OSS story, a recent addition to the literature of the over-stuffed American pocket. It was originally published in England early in 1958 [1]; it subsequently appeared in a Dutch edition [2] and in a movie version. Mr. Eliscu (who allegedly took part in the operation) is one of the sponsors of the OSS television feature which has appeared in the United States since the fall of 1957.

Both the English and American editions claim to be true accounts except for changes in "certain minor incidents and the names of leading participants." The American version reinforces this claim with a purported introduction by General Donovan. General Donovan's alleged accreditation of the story makes the book of interest to the intelligence specialist and injects an element of mystery into what appears to be a hastily scaled-up version of a movie script. The mystery: How was General Donovan led to underwrite as factual and truthful, if he did, an account of OSS activity so patently a figment of the imagination?

[1] London: Souvenir Press.
[2] *Tel tot Vijf en Sterf!* (Amsterdam: Scheltens and Giltay, 1958.)

The book's story line is as diaphanous as the habit of its principal character, one Hannie Herodsen, a toothsome Abwehr agent. At the story's start in the spring of 1943, she is plying her blond lissomeness on a "nameless Lt. Colonel" of OSS Algiers. Having learned from the hapless officer the place and time of the Allied attack on Sicily and perhaps the details of some OSS missions, she repatriates to Germany by submarine at the end of 1943. She receives the personal attention of Canaris' successor, Kaltenbrunner, who sends her early in 1944 to England.

Infiltrated by submarine in March, Hannie is the same Dutch refugee she was in Algiers: cover in her case is as light as her baggage. She sets herself up in a London apartment and proceeds to take over direction of a resident German IS net consisting of four individuals, including two radio operators, which had presumably been successful in defying British security forces from the beginning of the war. Her principal target is the Americans; her mission is to ascertain the time and place of the upcoming Allied attack on the continent. With a lucky—though, one feels, predestined—assist she locks with an OSS officer in London, this time a Captain. Traces of her Algiers activity carried in the heads of officers in OSS London are her downfall.

A joint British-OSS operation ("Stampede") is laid on under OSS supervision to permit the Captain to develop the relationship unwittingly with Hannie and guide her into a specially tailored Dutch resistance organization in London. Thereafter Hannie, a singular example of an unwitting double agent, is built up and fed deception material on the cross-channel attack. OSS London sacrifices the lives of two Dutch resistance operatives in order to make this a better fly-trap. In a cops-and-robbers ending the GIS net in England is rolled up by OSS (and the British), but Hannie is permitted to deliver the tainted information to Berlin. The outcome, according to the author, was a diversion of Nazi military forces to Holland, a significant contribution to unbalancing the strength available to oppose the Allied landing in Normandy. Hannie forfeits her life to Kaltenbrunner when it is realized that her information was false.

All of this is fiction purporting to be fact. An examination of OSS and other official materials has produced no evidence to authenticate the account, even if one allows the maximum for changes "in certain minor incidents and the names of leading participants." Beginning with Mr. Eliscu's colonelcy, his O.B.E., and his claim of participation in the "Stampede" operation, the story comes apart at the seams when subjected to critical review. The record of German intelligence activity in World War II knows no character or composite identifiable with Hannie Herodsen. It is now known that the British security services controlled or neutralized all GIS operations in the UK during that period. There is no trace in OSS documentation of an operation entitled "Stampede" or otherwise identifiable with what is described in the book. The extensive interrogations and testimony of Kaltenbrunner in 1945–46 contain nothing to support the story. Finally, the official Dutch resistance has been unable to identify the two individuals purportedly sacrificed.

The mystery of the Donovan imprimatur is, therefore, of more than casual interest: the endorsement was decisive in quieting the skepticism of a reviewer in one of the national news magazines.[3] The issues raised by Mr. Eliscu's TV portrayal of OSS were put sharply in the press in 1957.[4] Because the OSS is the foundation of U.S. national intelligence and counterintelligence abroad, the questions raised by *Count Five*

[3] *Newsweek*, January 26, 1959, page 106: "If *Count Five and Die* were not introduced and vouched for by Gen. William J. Donovan . . . it could easily be mistaken for a highly implausible piece of spy fiction. However, British author Barry Wynne's story is true, and it's a corker."

[4] The New York *Times*, September 1957, observed: "There could be an engrossing TV series in some of the courageous and imaginative achievements of the men who served in O.S.S. But these are stories that should be presented with careful fidelity to detail and without the shabby, melodramatic flourishes that marked this telecast." In November 1957 the Washington *Daily News*, in a similar review, questioned whether "it's a good idea for the OSS to be memorialized on TV by the series under that name," which it found to be "nothing more than the same old foreign intrigue stuff that has cluttered the little screen since 10-inch days."

and Die are basic. Who are the residuary legatees of the OSS tradition? Is the tradition served by publicity which is as speculative in substance as it is in purpose?

JAMES G. WANNINGER

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Articles and book reviews on the following pages are printed without classification and without identification of the writers, for the convenience of readers who may wish to detach them from the classified body of the *Studies*.

MORI/HRP THIS PAGE

In
Memoriam

William J. Donovan

1 January 1883
8 February 1959

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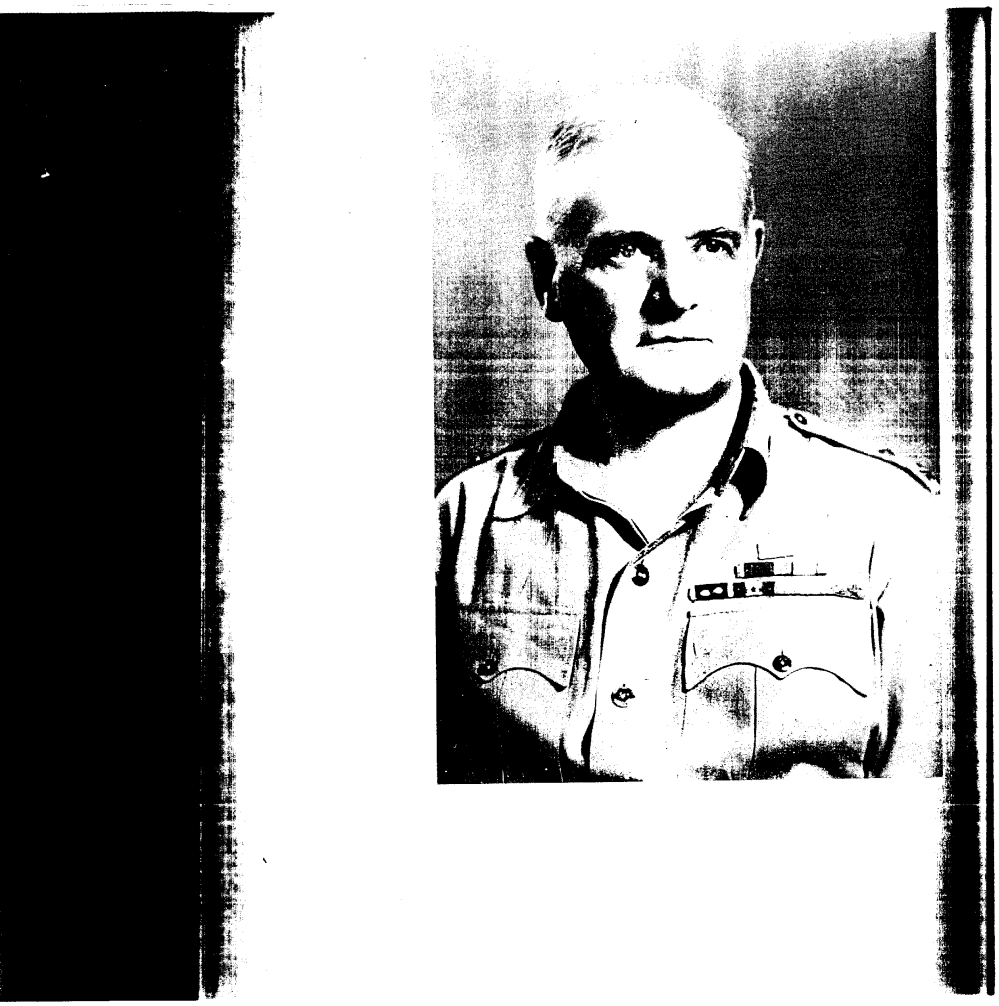

Adaptation from an address delivered in tribute to the father of central intelligence.

WILLIAM J. DONOVAN AND THE NATIONAL SECURITY

Allen W. Dulles

It was my privilege to be associated with William J. Donovan both as a lawyer between the wars and then during World War II, when I served under his command in the Office of Strategic Services. His courage and leadership made a profound impression on me. I should like to convey to you something of that impression, and some idea of what his pioneering has meant to all of us.

His interest in our national defense and security started early. In 1912, as the war clouds gathered in the Balkans, he helped organize Troop I of the New York National Guard. In 1915 he went to Poland as a member of a Rockefeller commission charged with relieving the great shortage of food there, and particularly of milk for the children. When the National Guard was mobilized in 1916, he came home to join his Troop I on the Mexican border.

War Service

Then came his fabulous career in World War I with the 165th Infantry of the 42nd Division—the renowned "Fighting 69th" of the Rainbow Division. Here he got his nickname Wild Bill. The legend goes that after the regiment landed in France he ran them five miles with full packs to limber them up. As the men were grumbling with exhaustion, Donovan pointed out that he was ten years older and carrying the same 50-pound pack. One of the men replied, "But we ain't as wild as you, Bill!" Another story has it that the honorary title was transferred to him from a professional baseball pitcher of the same name whose control left something to be desired. Whatever its origin, the title stuck.

The citations Colonel Donovan received in France tell the military story: On July 28, 1918, a Distinguished Service Cross: "He was in advance of the division for four days, all the while under shell and machine gun fire from the enemy, who were on three sides of him, and he was repeatedly and persistently

counterattacked, being wounded twice." Three days later the Distinguished Service Medal: "He displayed conspicuous energy and most efficient leadership in the advance of his battalion across the Ourcq River and the capture of strong enemy positions. . . . His devotion to duty, heroism, and pronounced qualities of a Commander enabled him to successfully accomplish all missions assigned to him in this important operation."

And then, for action in combat in the Meuse-Argonne on October 14, the highest of all awards, the Congressional Medal of Honor: ". . . Colonel Donovan personally led the assaulting wave in an attack upon a very strongly organized position, and when our troops were suffering heavy casualties he encouraged all near him by his example, moving among his men in exposed positions, reorganizing decimated platoons and accompanying them forward in attacks. When he was wounded in the leg by a machine gun bullet, he refused to be evacuated and continued with his unit until it withdrew to a less exposed position." "No man ever deserved it more," said General Douglas MacArthur, who had seen this action.

Three aids were killed at Donovan's side in the course of these actions. Reverend Francis P. Duffy, the chaplain of the 69th, said, "His men would have cheerfully gone to hell with him, and as a priest, I mean what I say." Several years ago General Frank McCoy, describing his close association with Bill Donovan during World War I, said he was one of the finest soldiers he ever saw in his life-long service in the Army, that he had the qualities of the ideal soldier, judgment and courage and the respect and affection of his men.

Law Career

In 1922 Donovan was appointed U.S. Attorney in Buffalo, N.Y., and shortly thereafter he entered a new phase of his career. In 1924 President Coolidge reorganized the Department of Justice and called Bill to Washington to be assistant to the Attorney General, heading the Antitrust Division. Here he showed both his fearlessness in law enforcement and his intense interest in making law a practical vehicle to promote the economic welfare.

He was firmly convinced that individual freedom is vitally linked to our system of free enterprise. He attacked restraints and monopoly with effective enthusiasm. In the Trenton Potteries case he won Supreme Court agreement that price fixing among dominant competitors is of itself illegal. He brought under legal attack such diverse industries as oil, sugar, harvesting machinery, motion pictures, water transportation, and labor unions. Yet he recognized that the uncertainties of our antitrust laws pose serious business problems, and accordingly instituted the practice of giving advance opinion on the legality of proposed mergers and other business activities that might be questioned under the law.

Offered the Governor Generalship of the Philippines when President Hoover entered the White House in 1929, Bill turned it down and went into law practice in New York City. He was soon appointed counsel to several of the New York bar associations in connection with a general overhauling of the bankruptcy laws. During this period he also served as counsel to a committee for review of the laws governing the State's Public Service Commission. In 1932 he unsuccessfully ran for Governor of the State.

As a corporation attorney he won in 1935 the important Humphrey case, in which the U.S. Supreme Court held that the President could not arbitrarily remove a chairman of the Federal Trade Commission. He also won an important decision in the Appalachian coal case, upholding the right of coal producers to organize a joint selling agency in economic self-defense. This agency is still in existence.

During this period of corporate law practice, Bill never lost his interest in world affairs. He took time off to visit Ethiopia during the 1935 Italian invasion. He was in Spain during its Civil War, carefully observing the Axis efforts to test their new equipment in these foreign adventures.

Presidential Emissary

In the early days of World War II Donovan was called into action by President Roosevelt. In 1940 he was sent on a fact-finding mission to England and in 1941 to the Balkans and the Middle East. Anthony Eden told Washington that the Balkan

mission had been most helpful to the British assessment of the situation there.

From the first trip, the one to Britain not long after Dunkirk, Bill had brought back to Washington a very important report. You will recall there was skepticism at that time in some quarters as to whether the British could effectively carry out Churchill's thrilling promise, "We shall defend our island, whatever the cost may be, we shall fight on the beaches, we shall fight on the landing-grounds, we shall fight in the fields and in the streets, we shall fight in the hills; we shall never surrender." Donovan reported to Roosevelt that the British could and would do just that. This had a direct effect on American policy. He also warned Harry Hopkins that the Germans might strike toward Suez through French North Africa—a prophecy that soon became a reality.

Donovan also recommended to the President that the United States start preparing immediately for a global war. He particularly stressed the need of a service to wage unorthodox warfare and to gather information through every means available. He discussed this idea at length with his close friends in the Cabinet, Secretaries Knox and Stimson, and with Attorney General Jackson.

The seeds which Bill planted bore fruit. In July 1941 the President established the Office of the Coordinator of Information and called Donovan to Washington to head it. In original concept this Office was to combine the information and intelligence programs with psychological and guerrilla warfare. This proved to be too big a package for one basket and in 1942 the organization was split. That portion of it coordinating wartime information services became the Office of War Information, and the intelligence and unorthodox warfare work, where Bill's greatest interest lay, was put under an Office of Strategic Services.

The O.S.S.

Truly one of the remarkable accomplishments in World War II was the organization and activity of the O.S.S.—feats which would never have been achieved without Bill Donovan's leadership and his vast interest in the unorthodox, the novel and the dangerous. Starting from scratch in 1941, he built

an organization of about 25,000 people that made a real contribution to the victory. Many of the deeds of O.S.S. will have to remain secret, but with the passage of time many have been disclosed.

Bill conceived the O.S.S. as a world-wide intelligence organization that could collect the facts necessary to develop our policy and war strategy. He was convinced that Axis secrets were to be found not only in Berlin, Rome, and Tokyo, but in other capitals and outposts around the world. So he immediately set about dispatching officers to key spots in Europe, Asia, and later Africa. The pay-off justified the effort. He was able to obtain information of great value from carefully established agents with contacts in Berlin, in the German High Command, and in the Abwehr, the German military intelligence service. The work of these agents gave us advance information about the development of German jet aircraft, about German work with heavy water in the effort to develop a nuclear weapon, about the V–1's and V–2's, and about the plot against Hitler.

In addition to his organization for the collection of strategic intelligence, Donovan provided means to help gather tactical information in the combat areas, forming teams of parachutists—Americans as well as indigenous—to drop behind enemy lines. But not content with passive intelligence, he also wanted action. He knew that well-organized guerrillas operating behind enemy lines in areas where the local population was friendly could wreak havoc on enemy lines of communication and tie down troops that could otherwise be used in combat. Working with our allies, he built up teams of leaders and communicators to organize resistance in the countries occupied by the Nazis, Fascists, and Japanese. There were also air drops of supplies and equipment deep behind the Axis lines in France and Italy, in Burma and elsewhere.

These action teams were well supported by a headquarters technical group, which under Donovan's guiding hand was imaginatively developing new ways to sabotage the enemy war effort and new gadgets either to harass the enemy or help our own cause—equipment ranging from the most sophisticated communications systems to a repellent used by personnel forced to bail out in shark-infested waters. Not all of the products were so practical as these. Ambassador David

Bruce, one of Bill Donovan's closest associates, in a recent tribute to the General's qualities of leadership, vividly described his excitement over ideas. Ambassador Bruce wrote, and I subscribe to every word of it:

> His imagination was unlimited. Ideas were his plaything. Excitement made him snort like a race horse. Woe to the officer who turned down a project, because, on its face, it seemed ridiculous, or at least unusual. For painful weeks under his command I tested the possibility of using bats taken from concentrations in Western caves to destroy Tokyo [with delayed action incendiary bombs]. The General, backed by the intrigued President Roosevelt, was only dissuaded from further experiments in this field when it appeared probable that the cave bats would not survive a trans-Pacific flight at high altitudes.

Many ingenious ideas to work on the nerves of the enemy were born in another part of the O.S.S.—the Morale Operations Branch. This was the undercover psychological warfare branch of the war effort. While the Office of War Information was telling the enemy about the magnitude of the U.S. war effort and getting the facts and figures well circulated, this Branch was dedicated to confusing the enemy and breaking their will to resist.

General Donovan was convinced that there were great untapped reservoirs of information in this country about foreign areas which had become of vital interest in the war effort—data in the archives of business organizations, information acquired abroad by American scientists, academicians, and tourists, and also that held by foreign experts residing here. He set about to collect this information and data and a mass of photographs of foreign areas. As the war reached more and more areas of the globe, this information came to have great importance.

He also realized the importance of analyzing and presenting information to the policy makers in readily usable form—one of the most difficult tasks of intelligence. He established in the O.S.S. a major branch for research and analysis, assembling in Washington the best academic and analytic brains he could beg, borrow, or steal from the universities, laboratories, libraries, museums, the business world, and other agencies of government. Theirs was the task of probing the political and economic aspects of the war, assessing both our

allies and our enemies, both neutrals and the occupied lands. Theirs also was the task of estimating Axis vulnerability and war potential and the staying power of the Russians, who even then told us almost nothing about themseives.

Bill Donovan had the qualities a great intelligence officer must have. He took nothing for granted and at the same time was insatiably curious. He had a good nose for the news: a faint whiff of something unusual would speed his mind into a dozen possible explanations, generally as ingenious as the wiles of the enemy. He wanted to see things on the spot and judge for himself. He was constantly on the move and drove his staff wild trying to keep him from places they thought too exposed. He also put them into a state of near exhaustion trying to keep up with the pace he set himself. One of his great qualities was his dedication to the men who served under him, and his ever-readiness to give them his full support. He, in turn, had their complete loyalty, respect and affection. I vividly recall a personal instance.

For about two years, from November 1942 to September 1944, I was working for Donovan in Switzerland, then entirely encircled by the Nazi-Fascist forces. In September 1944 the American Seventh Army, coming up from Southern France, broke through to the Swiss border near Geneva. Under orders to return to Washington to report, I had joined a group of the French underground in a secret hideout in the Rhone Valley between Geneva and Lyon to await a clandestine flight to take me to London. As far as I knew, General Donovan was in Washington and had not the slightest idea where I was hidden. After weather had held up my plane for several days, there was a knock on the door of my hideout in the middle of the night. It was one of General Donovan's aides, telling me that the General was waiting for me at the nearest available airstrip south of Lyon, which had just been evacuated by the Nazis. He had been searching the area for some twenty-four hours before he discovered where I was.

Together we flew back to London, arriving, I well remember, on that day in September 1944 when the Germans launched the first of their ballistic missiles on the British capital. It descended near the center of London after a flight of nearly two hundred miles. Both the American and the British intelligence services had been closely following the development of this

missile. I have often wondered why, in this country, our technicians and strategists failed to see earlier the full implications of the success of the V–2, as I believe the Soviet did, and to realize much earlier in the game that the combination of the ballistic missile with the atomic bomb, which was then about to be unveiled, could change the nature of war and the security position of this country.

Few men of his time were more alert than Donovan to the new threats that might develop. In late 1944, sending a man to Cairo to take over the direction of activities at that post, he gave oral instructions to the effect that the main target for intelligence operations should now be what the Soviets were doing in the Balkans rather than German activities in the Middle East. The German threat was receding. The Soviet danger was already looming. Operations were to be adjusted accordingly, although such instructions could not be put into official writing.

Also, while the war was still in progress, General Donovan was looking forward to the peace. He foresaw the need for a permanent organization not only to collect intelligence but, perhaps even more important, to coordinate the whole government intelligence effort and see that the President and policy makers get comprehensive and consolidated analyses to guide their decisions as to our course of action.

The Father of Central Intelligence

In the fall of 1944 Donovan presented to the President a paper proposing an intelligence organization operating on a world-wide scale and having direct responsibility to the President. While it was not to take upon itself the responsibilities of the departmental intelligence services, it would act as a coordinating mechanism for all intelligence. The paper stressed that the proposed organization would have no police or subpoena powers and would not operate in the United States. President Roosevelt expressed considerable interest in this proposal, and a week before his death in April 1945 asked Donovan to poll the Cabinet and the heads of agencies concerned for comment on it. These comments, ranging from the opinion that there was no need for such a peacetime organization to the belief that it was vital to national security, make interesting reading today.

18 November 1944

MEMORANDUM FOR THE PRESIDENT

Pursuant to your note of 31 October 1944 I have given consideration to the organization of an intelligence service for the post-war period.

In the early days of the war, when the demands upon intelligence services were mainly in and for military operations, the OSS was placed under the direction of the JCS.

Once our enemies are defeated the demand will be equally pressing for information that will aid us in solving the problems of peace.

This will require two things:

1. That intelligence control be returned to the supervision of the President.

2. The establishment of a central authority reporting directly to you, with responsibility to frame intelligence objectives and to collect and coordinate the intelligence material required by the Executive Branch in planning and carrying out national policy and strategy.

I attach in the form of a draft directive (Tab A) the means by which I think this could be realized without difficulty or loss of time. You will note that coordination and centralization are placed at the policy level but operational intelligence (that pertaining primarily to Department action) remains within the existing agencies concerned. The creation of a central authority thus would not conflict with or limit necessary intelligence functions within the Army, Navy, Department of State and other agencies.

In accordance with your wish, this is set up as a permanent long-range plan. But you may want to consider whether this (or part of it) should be done now, by executive or legislative action. There are common-sense reasons why you may desire to lay the keel of the ship at once.

The immediate revision and coordination of our present intelligence system would effect substantial economies and aid in the more efficient and speedy termination of the war.

Information important to the national defense, being gathered now by certain Departments and Agencies, is not being used to full advantage in the war. Coordination at the strategy level would prevent waste, and avoid the present confusion that leads to waste and unnecessary duplication.

Though in the midst of war, we are also in a period of transition which, before we are aware, will take us into the tumult of rehabilitation. An adequate and orderly intelligence system will contribute to informed decisions.

We have now in the Government the trained and specialized personnel needed for the task. This talent should not be dispersed.

William J. Donovan
Director

THE WHITE HOUSE
WASHINGTON

April 5, 1945

MEMORANDUM

TO: MAJOR GENERAL DONOVAN

Apropos of your memorandum of November 8, 1944, relative to the establishment of a central intelligence service, I should appreciate your calling together the chiefs of the foreign intelligence and internal security units in the various executive agencies, so that a consensus of opinion can be secured.

It appears to me that all of the ten executive departments, as well as the Foreign Economic Administration, and the Federal Communications Commission have a direct interest in the proposed venture. They should all be asked to contribute their suggestions to the proposed centralized intelligence service.

F.D.R.

Donovan received an Oak Leaf Cluster to his Distinguished Service Medal for his wartime work, but his plan to develop the O.S.S. into a peacetime intelligence organization was beset with conflicting views. Some would have the new organization, like the O.S.S., report to the Joint Chiefs of Staff, while others preferred that it be put under the Department of State. And there was controversy as to whether one individual could or should be responsible for presenting a consolidated view of the intelligence picture to the policy makers, rather than leave this the collective responsibility of the chiefs of all the intelligence services. No agreement had been reached by the time the war ended in August 1945, and the O.S.S. was soon ordered disbanded.

A proposal for a central intelligence organization such as Donovan had conceived was contained in the first draft of the so-called unification act submitted by Ferdinand Eberstadt to Secretary Forrestal in October 1945. And in January 1946, to preserve assets while the issue was being settled, President Truman issued the order creating the Central Intelligence Group, which later picked up some of the functions and personnel still remaining from the O.S.S. and other scattered independent intelligence activities.

Bill Donovan's dream was not yet completely realized. Congress still had to act. After extensive hearings to which General Donovan contributed important testimony, the provisions for a Central Intelligence Agency were incorporated into the National Security Act of 1947, which created a Department of Defense and set up the National Security Council to advise the President and oversee the new intelligence agency. In July 1947 final executive and legislative endorsement was thus given to the views which Donovan had been striving to have accepted. I have always felt that the decision to place the C.I.A. under the President, as Donovan recommended, was wise and necessary.

Bill Donovan's restless energy had turned elsewhere with the disbanding of O.S.S., although he never gave up his interest in the organization or stopped hammering home to the public the necessity for providing adequate and accurate information to the policy makers of the government in order to protect the national security. His varied talents were being called on for other important services. His legal ability and

vast knowledge of German wartime activities were used to help prepare the Nuremburg trials for the Nazi war criminals. He went to Greece to investigate the murder of newsman George Polk, a clear effort of the Communists to prevent the truth about the extent of their activities in the Greek civil war from seeping out.

The more General Donovan saw of the Soviets in action the more concerned he was with alerting the American people to the dangers. He co-authored an article in the Yale Law Journal for July 1949 presenting a "Program for a Democratic Counter Attack to Communist Penetration of Government Service." The article said:

> The Communist Fifth Column . . . seeks to identify itself with every social grievance. Russian espionage and subversive operations are made up of trained and skilled spy technicians and intelligence officers, propaganda specialists, experts in spreading rumors. Instruction is planned so that the agent will find it as easy for a minority to operate a labor union, or a pacifist league, or any other such movement, as it is for a minority group to control a large corporation when most of the stockholders take no active interest in the management.

In 1950 President Eisenhower, then President of Columbia University, presided on the occasion of the award to Bill Donovan of the Alexander Hamilton Medal, given by the Columbia Alumni Association for distinguished service and accomplishment in any of the great fields of human endeavor. In 1953 the President named him Ambassador to Thailand. At this time the ancient kingdom of Siam was a main target for Communist subversion. With a vigor that belied his years, this remarkable man of 70 threw himself into the job of helping the Thais bolster their defenses against the Communists so that this keystone of anti-Communism in Southeast Asia could continue free.

Upon his return to the United States one might have expected him to seek retirement, but nothing was further from his mind. He became National Chairman of the International Refugee Committee and the director of that group's fight against the Soviet program to induce Russians who escaped from Communism to return home. At the time of the Hungarian Revolution he turned his energies to aiding the refugees of this unsuccessful effort to win freedom from Soviet tyranny.

He was Chairman of the American Committee on United Europe from its inception in 1949, and through this organization he continued to further the efforts of our major allies in Western Europe to achieve a greater unity in the face of Communist danger.

Even after ill health forced his retirement to Walter Reed Hospital, General Donovan continued his interest in the fight against Communism and the development of our intelligence work. In recognition of his role in the intelligence field, President Eisenhower in 1957 awarded him the National Security Medal. The citation reads:

> Through his foresight, wisdom, and experience, he foresaw, during the course of World War II, the problems which would face the postwar world and the urgent need for a permanent, centralized intelligence function. Thus his wartime work contributed to the establishment of the Central Intelligence Agency and a coordinated national intelligence structure.

In February 1959 he passed away at Walter Reed among the men he had led. As soldier, public prosecutor, leader of the bar, director of the Strategic Services in wartime, public servant in time of peace, he had left his record with the nation he served so well. He was a rare combination of physical courage, intellectual ability, and political acumen. He was a mild-mannered man, with an insatiable curiosity, an unflagging imagination, and the energy to turn his ideas into action.

The heritage of Bill Donovan is written in the national security. He woke the American people to the need of a permanent peacetime intelligence service. He bestirred Washington into creating a mechanism whereby all the government components which receive information on what is going on anywhere in the world pool their knowledge, share their interpretations, and work together to make one unified estimate of what it means. He helped place intelligence in its proper perspective and stimulated the policy makers to recognize its role in determining American policy abroad. He was one of the architects of an organization that should keep our government the best informed of any in the world.

History's epitaph for William J. Donovan will be:

He made his nation more secure.

CRITIQUES OF SOME RECENT BOOKS ON INTELLIGENCE

A STUDY OF MILITARY INTELLIGENCE. By General *Cheng Chieh-min*. (Taipei: Kuo-chia An-ch'uan-ch'u. 1958. Pp. 706.)

This work, whether or not it was so intended, is a summation of the experience and studies which have made General Cheng an authority in his field. While in substance it contains little that has not been presented elsewhere, its Chinese point of view gives a fresh perspective to familiar subjects. The author's background includes extensive research into Western thought, philosophic and military, from the writings of the ancient Greeks to training publications of the United States Army; but it also includes a solid grounding in Chinese thought and strategy from Lao-tse and Confucius to Mao Tse-tung and Chiang Kai-shek. Clausewitz and Jomini, Lenin and Liddell Hart, Toynbee and Sherman Kent are seen in a new light when interpreted through the thinking of Hsün-tzu and Mencius, Sun-tzu and Szu-ma Kuang, Sun Yat-sen and Chiang.

The author, at the age of 60, in poor health and in semi-retirement, is still Director of the National Security Bureau, the highest intelligence agency in the Nationalist Government. A graduate of the second class of the Whampoa Military Academy in 1925, he studied in Moscow and Western Europe, served as combat commander and general staff officer in China, and had liaison duties with various Allied commands during World War II. He has been consistently close to the Generalissimo, a member of the Central Executive Committee of the Kuomintang, Vice and Deputy Minister of National Defense, Director of Military Intelligence, Director of the Office of Mainland Operations, and a member of the President's Advisory Committee on Strategy. He spent 1957 in "a year of convalescence," revising and expanding his two previous works on intelligence into the present study.

General Cheng states that the purpose of his book, designed for the Chinese military community, is to correct long-standing misapprehensions about the nature of intelligence work, and to arouse interest or furnish guidance in a sadly neglected field. He proposes to take up in order "all questions connected with military intelligence" with a view to establishing a com-

plete and sound foundation for those who may be called upon to work as intelligence officers. Considerations of security and limitations of space, however, force him to gloss over details of intelligence organization and specific techniques of application.

He has nevertheless achieved a comprehensive study of the huge field marked out for treatment, embracing national policy, the nature of intelligence, national strategic intelligence, military strategic intelligence, combat intelligence, counterintelligence, and psychological warfare, and including specifics on strategems, signal intelligence, the intelligence process, and intelligence training. He draws a thousand examples from as many sources—Hannibal's campaigns, the Napoleonic era, the two world wars, and every stage of Chinese history. He sometimes yields to a passion for categorizing and occasionally belabors seemingly obvious points; but such shortcomings seem inevitable in the light of his announced purpose to fill a void in the Chinese literature on intelligence. They are more than offset by the insights he gives into Nationalist Chinese ideas of national policy and strategy and the role of intelligence in their formulation and execution.

The author's discussion of such matters as the function of intelligence, its several types, the stages of the intelligence process and their interrelations, or intelligence training and its supervision follows generally the lines of standard Western works on the subject. More stimulating, to a Westerner at any rate, is his development of the concept of intelligence as the basis for effective strategems and for economical victory, the foundation of every type of activity in cold or hot war, and so the tool without which no adequate decision can be made, no determined policy executed. Here the argument is peculiarly Chinese.

General Cheng himself feels that he is taking a traditionally Chinese view, as opposed to Western glorification of power and naked force, when he says, quoting President Chiang, "War is based essentially on benevolence, though its methods are savage; war has peace for its end, though its means are terrible—even barbaric." He thus considers war the last-ditch defense of the people's welfare, to be waged only when there is no other means of safeguarding the welfare of the people in a "peace" which is the external manifestation of benevolence." But even

victory in war, he emphasizes, does not necessarily mean profit for the nation; a military triumph can leave the people and the government far worse off than if there had been no war. Therefore any victory, as Sun-tzu insisted, must be economical. The sage military leader is the one who "fights without battles," who "creates victory out of opportunities offered by the enemy."

It is precisely here that intelligence is given its most important role and that the value of "strategems," repeatedly emphasized throughout the book, is most clearly illustrated. Strategems "are the struggle of wits in which intelligence copes with intelligence; they are unconventional but legitimate expedients, a method of war in which deception of the enemy is used as the only means to attain a predetermined objective. Under all conditions, favorable or unfavorable, they are the most valuable, most economical, and most effective activity of warfare." The author's pronouncement that strategems are to be used against enemy, neutral, and ally alike, together with his statement that there are inevitably differences of goals and policies between allies and "today's allies are tomorrow's enemies," shows the vigorous nationalism of his thinking. He believes that strategems are an aspect of strategy gravely neglected in Western studies.

It is unfortunate, with respect to these revelations of Chinese thought, that this authoritative book is not available in English. Since, however, the Chinese concepts of peculiar interest are scattered widely through the massive work, translation *in toto* or in significant part would hardly be worth while. For the Western student of intelligence it will probably remain little more than a reference, difficult of access.

WHY MEN CONFESS. By *O. John Rogge.* (New York: Nelson. 1959. Pp. 298. $3.95.)

The evaluation of the Chinese indoctrination process used on Americans during and immediately after the Korean War remains a topic of lively interest, and the search for antidotes to this kind of indoctrination gives purpose to continued studies of its nature. The dissemination of the Code of Conduct by the Defense Department, with its strong emphasis on training, has resulted in many attempts to synthesize current knowledge of the process in manageable and teachable form. But an oversimplified and distorted popular concept of "brain-

washing" has become so well established, not only with the man in the street but with many whose association with intelligence work should make them more sophisticated or at least better informed, that the problem of furnishing a better foundation for understanding, combatting and resisting Communist indoctrination becomes formidable.

Kinkead's *In Every War But One*,[1] written in support of the Code of Conduct, explicitly discounts any occult art of brainwashing, but in its straining to dramatize the need for better morale among enlisted men it bypasses the problem of preparing air force or intelligence officers, for example, for the kind of interrogation and indoctrination they may face as prisoners of the Communists. But if Kinkead's viewpoint is too narrow, it is almost impossible to round out the picture by pointing to books with a wider vista or with more specific applicability to the intelligence specialist. The more general books range from the obviously well-intentioned but scientifically inaccurate ones of Hunter [2] to those like the quasi-scientific but highly controversial *Rape of the Mind*, by Joost A. M. Meerloo.[3] The definitive book on the indoctrination process particularly as it pertains to the intelligence specialist is yet to be written.

Why Men Confess is certainly not the definitive book, but it does represent an important contribution to a growing literature. It treats the Communist process as one manifestation of a standard inquisitional method used by others today and in the historical past, and it becomes therefore an encyclopedia of the history of confession and a sort of concordance of literary allusions to the confession process. It does not have the journalistic polish of Hunter or Kinkead or the sensationalism of Meerloo. The skill of a practiced lawyer has been applied to produce what is in effect a brief on the subject as seen from his experience and reading. His experience is largely in the "confessions" of the criminal courts, which are so often fallible and sometimes dictated by pathological motives; his reading has been historical, literary and scientific. As far as can be determined, he has been both catholic and thorough in these researches. Consequently, even though fault can be found with some of its conclusions, his work is very useful as a source book.

[1] New York: W. W. Norton. 1959.

[2] Edward Hunter, *Brainwashing: The Story of Men Who Defied It* (New York: Farrar, Straus and Cudahy, 1956) and *Brainwashing in Red China* (New York: The Vanguard Press, 1951).

[3] Cleveland: The World Publishing Co. 1956.

It is apparent that Mr. Rogge is more at home with historical and literary research than in evaluating scientific articles. Except in citing the Senate testimony of experts and the descriptive (rather than evaluative) paper of Hinkle and Wolff,[4] he uses scientific authorities inappropriately. His rather heavy emphasis on psychoanalytically based concepts that are at worst obscure and at best controversial is unfortunate. The book would be more solid if he had stuck to the approach he used with his literary and historical materials. Dostoevski, Gogol, and Beck and Godin [5] represent much more effective documentation for his position than Reik, Berg, or Freud. Perhaps this criticism would not be necessary were it not for the blurb on the dust jacket (for which the author is presumably not responsible) ". . . Mr. Rogge tells us all that psychology knows about the compulsion to confess."

Mr. Rogge uses his historical concordance to present a brief for protecting individuals against the inquisitional methods of modern states, including our own:

> The inquisitional method, which the communists have exploited for a quarter of a century, is a throwback to the past and should be abandoned, especially in view of the growth and power of modern states. (p. 29)
>
> Neither the system of legal proofs nor the use of physical force will explain the many confessions to communist, French, and clerical inquisitors. But there was one thing which the different regimes of these inquisitors had in common: the inquisitional system. (p. 199)
>
> All roads led to the same conclusion: the primitive and irrational nature of most of the mind together with the power of modern states, our own included, make it necessary to abandon not only the inquisitional technique but also any of its challenged fruits. The world should have done with investigative authorities questioning a suspected individual, like a powerful parent interrogating a helpless child. The inquisi-

[4] "Communist Interrogation and Indoctrination of 'Enemies of the States,'" *AMA Archives of Neurology and Psychiatry*, August 1956, Vol. 76, pp. 115–174.

[5] *The Russian Purge and the Extraction of Confession* (New York: Viking, 1951).

> tional system stands in the way of the development of equalitarian societies and the growth of human beings into mature individuals. (p. 246)

Woven into this thesis and making up the climax is his belief that silence is a right of man that is basic, inviolable, and the only true defense against authoritarianism. The dust jacket promises a further application of these ideas in quoting Mr. Rogge: "*Why Men Confess* is the first of three books on the subject of confessions. I am now working on the next, which will deal with the First and Fifth Amendments."

THE SILENT LANGUAGE. By *Edward T. Hall.* (New York: Doubleday. 1959. Pp. 240. $3.95.)

Practically everyone in and out of government is full of ideas for practical steps to make U.S. representatives abroad more effective. Dr. Hall's book seeks to lay a theoretical basis for these practical efforts, to the extent that they are directed toward minimizing the reaction that takes place when one moves into the area of a foreign culture. Some people have chosen to call this reaction a "culture shock." Hall explains it as the "removal or distortion of many of the familiar cues one encounters at home and the substitution for them of other cues which are strange." Proceeding from the proposition that "most people's difficulties with each other can be traced to distortions in communication," *The Silent Language* "treats culture in its entirety as a form of communication" as it seeks to outline "a theory of culture and a theory of how culture came into being" and to present "the technical tools for probing the secrets of culture."

The author is in a position to know what he is writing about. He is an anthropologist who has travelled and worked abroad to develop principles and concepts for teaching U.S. representatives how to be more effective. He has done such teaching in the State Department, the Strategic Intelligence School, and elsewhere. He now makes this subject his business.

The study points out basic differences in languages and ways of speaking, but emphasizes the actions which speak louder than words, and particularly the kind of communication that takes place "out of awareness." "This notion," it says, "that there are significant portions of the personality that exist

out of one's own awareness but which are there for everyone else to see may seem frightening. The point, however, is a crucial one and will grow in importance as men begin to grasp its implications." Another subtle complication in the communications process of particular significance for anyone who anticipates service abroad is brought out in elaborating the fact that "people reared in different cultures *learn to learn* differently."

Some readers may not be persuaded of the validity of the author's conceptual construction. His *time, space,* and *order* as communications media seem unnecessarily abstruse. His "map of culture" may be over-billed as "a mathematics of cultures." His classification of behavior patterns as formal, informal, and technical is an effort toward unattainable precision. He uses a great many words in a specialized sense when it seems that a garden variety of meaning would serve the purpose just as well.

But dissatisfactions such as these only serve to point up Dr. Hall's own contention that there is much work to be done in this field. The understanding of foreign cultures is critical to intelligence operations and to intelligence analysis; and such a considerable contribution of new thinking as *The Silent Language* makes can but stimulate more progress toward this understanding.

ROMMEL RUFT KAIRO (Rommel Calling Cairo). By *John W. Eppler.* (Guetersloh: C. Bertelsmann Verlag. 1959. Pp. 300. DM 6.85.)

Operation Condor was a bold, even desperate stroke—the attempt to place a German resident agent in the heart of the British North African command center, one who could provide Rommel with vitally needed order-of-battle information. It failed, partly because of bad luck, but mainly because of the agent's cowboy operational methods, brash and almost incredibly insecure.

Published just on the heels of a British account of the same events,[1] Eppler's tale of his espionage activities in Cairo for Field Marshall Erwin Rommel during the struggle for

[1] Leonard Mosley, *The Cat and the Mice.* (London: Arthur Barker Limited, 1958. 160 pp.)

North Africa reveals little new substantive information. Mosley's report, reviewed in the last number of the *Studies*,[2] will be of more interest to the professional intelligence officer. Eppler has told an adventure story in a romantic, intensely personal style characteristic of much of the recent spate of German war reminiscences. The fact that a motion picture is being made in Germany based on Operation Condor is perhaps indicative of the nature of the book.

We learn nothing from Eppler about how he was spotted and recruited by the Abwehr; the story opens with his posting to Rommel in North Africa, and the first 130 pages deal with the problems and experiences of his 4,000-kilometer trip across the Sahara to reach the target area. He gives passing mention to technical intelligence preparations for the mission, such as documentation, communications equipment, and clothing. Inasmuch as he is arrested by British security forces on page 216 and devotes himself from then on to his treatment by his interrogators, it will be seen that he gives relatively little space to his actual work in Cairo. Details on the recruiting of sub-agents are almost completely lacking, as well as a useful account of what, if anything, was accomplished. One incident is described, the separating of a British courier from his pouch of battle plans by the belly-dancer Hekmath Fathmy; a satisfactory account of this is available from Mosley. Mosley also deals at some length with the tracking down of Eppler by British security forces, to which Eppler's own account adds nothing of significance.

Eppler never again made radio contact with Abwehr base stations after his initial report upon arrival. The two special radiomen assigned to service him had been posted too close to the front by order of Rommel and had been captured with their codes during a raid by the Long Range Desert Patrol. Eppler was cut off (*eingemauert*) after this in order to prevent a play-back. Eppler's radioman tried night after night without success to make contact with base station, and the title of his story would therefore more logically read *Cairo Calling Rommel*. This book can safely be passed by, especially by those who have read *The Cat and the Mice*.

[2] Vol. 3, No. 2 (Spring 1959), p. 139.

PROPAGANDA ANALYSIS. By *Alexander L. George*. (Evanston, Ill.: Row, Peterson and Company. 1959. Pp. 287. $6.)

This scholarly and imaginative book by one of Rand Corporation's social scientists is of special significance because it evaluates propaganda analysis techniques actually used in an operational situation and has therefore had to consider the dynamics of politics, rather than the formal structures to which the usual scholarly study in political science is devoted. Mr. George's validity research is based upon the analysis of German propaganda done by the FCC's Foreign Broadcast Intelligence Service during World War II. He examines this in the light of information obtained later from German war documents and German officials, which provides a unique opportunity to validate the inferences drawn from propaganda bearing on intelligence problems and questions critical to Allied policy. Some 80 percent of the FCC inferences that could be scored proved to be accurate.

The reader who does not make a specialty of propaganda analysis will be most interested in Part III, "Methodology and Applications," in which 20 case studies are presented to illustrate the broad range of intelligence problems approached by the FCC. The analysts' reasoning is reconstructed and their inferences matched against the available historical record on such important problems as the question of a German offensive against Russia in 1943, German expectations in 1942 of an Allied second front in North Africa, the German public's attitude toward the Nazi information policy, and a predicted change in the propaganda presentation of military setbacks on the Russian front.

The first case study, on the German V-weapons propaganda, is cited as one in which the FCC analysts did not do so well as their British counterparts. The brilliant British analysis may be known to some readers. Reasoning from the substantiated hypothesis that German propaganda would not deliberately mislead the German people about an increase of German power, it concluded that the Germans actually had some sort of new weapon and were not merely bluffing. It accurately described the German leaders' evaluation of the new weapon and made the tentative estimate, based on subtle shifts in the propaganda, that in November 1943 the Germans

expected to have it ready between mid-January and mid-April 1944. This estimate proved amazingly accurate.

As Mr. George writes:

> The deduction concerning the German leaders' private estimate of the timing of the V-weapon was based upon ingenious use of a general observation about Nazi propaganda practice. The British analyst reasoned that Goebbels would be careful not to give the German public a promise of retaliation too far ahead of the date on which the promise could be fulfilled. . . . Taking a number of factors into account, the British analyst reckoned that Goebbels would give himself about three months as the maximum period . . . to propagandize forthcoming retaliation in advance.

One of the reasons advanced for the lower caliber of FCC analyses on this problem is that the FCC analysts, unlike the British, worked on their own and were not asked to coordinate their V-weapon research with that of other intelligence specialists. They assumed that other intelligence techniques more appropriate than propaganda analysis were being applied to the problem. This lack of coordination may also have damaged the quality of their analysis in another case study cited: they were not informed of TORCH or briefed to look for indications of Nazi concern over possible invasion of North Africa, and so continued to search for signs of the Nazi attitude toward a possible second front across the English Channel or in northern Europe.

These two cases, in both of which the analysis was directed toward predicting a major action, are not regarded as covering the range of situations with which propaganda analysis can fruitfully deal. The author recognizes and discusses at some length the possibility that leaders may decide to forego any propaganda preparation which might reveal a planned action in advance. In either event, he points out,

> The value to the policy maker of inferences assessing the nature and objectives of the major action once it is taken should not be underrated; in many cases they overshadow in importance the usefulness of having predicted the action before it occurred.

Writing for scholars and experts, Mr. George has set himself a much subtler task than presenting these interesting case studies. He has sought: (1) to identify general types

of inference made about conditions which helped to determine the communication content (for example propaganda goals and techniques, "situational factors," and elite estimates, expectations, and policies); (2) to identify other possible determinants about which the FCC did not attempt to make inferences, and then to depict the relationship among all the various factors making up the system of behavior; and (3) to identify reasoning patterns in individual inferences and codify the more general methods, direct and indirect, that were used. Out of this thorough and painstaking study comes his cautious conclusion:

> It seems that propaganda analysis can become a reasonably objective diagnostic tool for making certain kinds of inferences and that its techniques are capable of refinement and improvement.

The book is not easy to read, in part because of both undefined and overrefined terminology. The author never defines "propaganda," but apparently uses it interchangeably with other undefined terms, "propaganda communications," "political communications," and "public communication." Yet propaganda is distinguished from "mass communication," also undefined. Readers may find quite confusing the relationships between propaganda analysis, communications analysis, content analysis, quantitative analysis, and nonfrequency analysis. And many a reader may never get beyond a choker on page 79, in the introduction to Part II:

> 4. Dichotomous attributes (that is, meaning or nonmeaning characteristics which can be predicated only as belonging or not belonging to a given unit of the communication material).[4]

If he persists, however, footnote 4 on page 81 will refer him to page 96, where he can learn that a dichotomous attribute is merely "the presence or absence" of a designated symbol or theme.

Addressing an academic audience which historically has tended to make content analysis synonymous with counting, the author overstates his criticism of quantitative techniques in propaganda analysis. The casual reader may miss his references to the fact that quantitative techniques are important in the first elementary step in analyzing propaganda,

that is in describing its content, and his judgment that "another deficiency of FCC's procedure was its failure to make use of systematic quantitative procedures in evaluating certain aspects of Nazi V-weapon propaganda." Debate over quantitative *vs.* qualitative techniques is actually beside the point. The real question is how best to combine these techniques in attacking each specific intelligence problem.

Despite these minor shortcomings, it is gratifying to find such an eminently qualified and objective expert as Mr. George reaching conclusions like the following:

> Provision must be made for examining all of the output of a propaganda system and for evaluating its over-all propaganda strategy. Any division of labor which divorces trend analysis on individual subjects from cross-sectional analyses of the entirety of propaganda and propaganda strategy may result in incorrect or misleading interpretations of specific trends.
>
> The propaganda analyst makes the basic assumption that propaganda is coordinated with elite policies, but he needs more concrete knowledge which he can obtain only from a set of empirically derived generalizations about an elite's operational propaganda theory. . . . [He also] requires knowledge about technical expertise and skillfulness of propaganda systems under scrutiny and that of individual propagandists employed therein.
>
> The investigator must have rather specific, detailed knowledge of the propaganda organization whose output he is analyzing in order to appraise the situational context—who says it, to whom, and under what circumstances. . . . Comparison of what is said to different audiences is generally of considerable value in making inferences.
>
> In propaganda analysis, it is typical for the investigator to be concerned with establishing slight changes in propaganda lines or minute or subtle differences in the wording employed by different speakers or by the same speaker to different audiences.

COMMUNICATION TO THE EDITORS

Dear Sirs:

This letter is prompted by the suspicion that B. B. Bennett's diverting essay, "The Greater Barrier," (*Studies,* Fall 1958) on the need for good English prose in intelligence was not calculated only to entertain, which it did, but was also intended to instruct, which, regrettably, it did not. The very solemnity of your journal compels the assumption that behind the author's frivolous shoals ("Chaucer, Shakespeare, Conrad, O'Neill, Wolfe, Spillane" [imagine putting Wolfe in there!]) lies the open water of Serious Purpose. The reader is admonished at the outset that "the time is upon us when we should face and begin to penetrate a barrier even greater than that of foreign languages—the English language barrier." Face it we then do, throughout much of the remainder of the article. But penetrate it we do not.

The article does seem about to get down to business in the section called "Spying the Land," devoted to discovering three constituent parts of the barrier, or perhaps factors which obscure its existence—"Self-Exculpation" (which is merely the universal human tendency to avoid recognition of self-guilt); the "Literary Bent" (a common subjective failing [or triumph, depending on who has it]); and the forced "Viability of the language," with its offspring, "linguistic chameleonism." But having identified these characteristics of bad writing, the author abandons us, the article ends. It is necessary to identify symptoms in order to diagnose an illness, but we do not ordinarily stop there and seek to cure the disease with a mere analgesic. The proper pathology finds the agent responsible for the condition and then treats it with antibiotics, not aspirin. The problem with diseased writing is not the determination of the all-too-obvious symptoms, but the identity of the causal virus.

A word or two must be put in here in defense of the writing in the estimates, where a "predictive conclusion," your author says, is "useful only to the extent that it is precisely qualified." Can this be an accurate axiom? We think not. As a matter of fact, estimates which are too liberally sprinkled with precise qualifiers sometimes seem to lose their way.

There is still room, we think, even in an estimate, for suggestions, degrees of emphasis, perhaps innuendo. For many readers, the neat shadings of probability are either lost or soon forgotten. What is more often remembered is the general drift of a paper, the over-all impression shaped by many things, qualifiers among them. Thus the writer of an estimate, though duty-bound to assign exact degrees of probability if he can, must also remember that he is usually creating more a rounded image than a sharp picture. We do not mean to rise here in defense of slovenly presentation or inexact qualification; we merely hope to refute the unkind notion that an estimate must stand or fall solely on the strength or weakness of its adverbs and adjectives, important as they are.

Moreover, the precision gained by assigning such words as "possible" and "probable" a value on a mathematical scale appears to upset your author most of all: by using mathematics, he says, we have "departed the realm of language." The fact that a word has a mathematical meaning, however, does not entitle him to suggest that it is no longer a part of our language. Words, after all, are used to express feeling or thought, mathematical or otherwise. Should we follow his argument to its absurd end and conclude that using the word "oak" would propel us from the "realm of language" into the realm of trees?

Beyond distinguishing the estimate from other varieties, "The Greater Barrier" makes no attempt to subdivide categories of intelligence writing. That is too bad, for there is no such thing as intelligence writing in general. Not yet, anyhow. And if that's what Dr. Bennett and the Office of Training would like to establish, then woe to us all. There is not now, nor should there be, a common school of prose for, say, current intelligence, national estimates, and technical memoranda. There are certain standards of good practice common to all intelligence writing, but most such standards can be applied to all prose; Self-Exculpation, the Literary Bent, and Viability are certainly not the exclusive properties of the intelligence community.

Perhaps, in some instances, we should admit that learning to write is a hopeless task; some of us just cannot master it. Why should this be any more disgraceful than the proposition that some of us just cannot draw, or paint, or sculpture? But let us assume that most of us are not completely hopeless, and need only apply to the Office of Training for instruction in the art. No special talent is needed to draw a recognizable chair, nor any great gift to write an understandable sentence. And presumably, with training and experience, the minimal chair or sentence can be improved upon.

Now one critical ingredient in such training and experience is not mentioned by your author and might be overlooked in the OTR. We should not begin by endlessly drawing chairs or endlessly writing sentences. First we must *look* at chairs. And first we must *read* before we write. Any normally perceptive person, exposed to a quantity of good reading, will soak some of it up. There is no point at all in instituting a course in creative writing, intelligence writing, or any other kind of writing for persons who have not read. This is not to say that reading will make it so. Not all readers are writers. But there is no such thing as a writer who has not read. And while this is—or should be—obvious, it is all too frequently forgotten.

Exhorting us to write better, to communicate more clearly, and to surmount the Greater Barrier is a pious exercise but one with little hope of practical accomplishment. It will remind those who probably cannot that they should. It may also remind those who can that they can. It may even lead to some worthwhile self-examination for those who are somewhere in between. But until Dr. Bennett loses his modesty and tells us how *he* penetrated the barrier, he must, in all good grace, rest content, albeit surrounded by all of us self-exculpitators.

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The reconstructed history of a Soviet deep-cover intelligence operation against the United States.

COLONEL ABEL'S ASSISTANT

W. W. Rocafort

This history ends in Paris, in the spring, two years ago. On Monday the sixth of May, 1957, the American Embassy received an incoherent, urgent telephone call; someone had information of importance to U.S. security. Late in the afternoon the caller came in—a burly man wearing a blue-and-red-striped tie, fortyish, unmistakably alcoholic but showing under his uncertain equilibrium the remnants of a once sure military bearing. He claimed to be a Soviet intelligence officer on his way back from the United States to Moscow.

An American intelligence representative was called, and questioned him for hours. The man had all the qualifications of a crackpot, but his story, if disjointed, was circumstantial, and he offered some concrete evidence of his profession. He was kept in contact until his data could be checked. In return for purported information about the KGB, it developed, he wanted to be taken back to New York, to his wife, and hurriedly. He couldn't wait, began communicating with her by tapping messages on his chest, his other arm held up as an antenna. Word came, none too soon, that his facts checked out. He was got onto a plane on May 9. In the ensuing weeks, sustained by quantities of brandy and plied with questions in his more lucid intervals, he furnished the essential fragments of the dismal tale that follows.*

State of Soviet State Security, 1948

Colonel Aleksandr Mikhailovich Korotkov was exasperated. It wasn't the endless reorganizing of the intelligence and se-

* The presentation of this case as a chronological narrative has been accomplished by filling gaps with hypothetical material, cutting Gordian knots of conflicting probabilities, and manipulating the arrangement of some facts. The circumstances of these semi-fictional reconstructions are discussed in the numbered notes assembled at the end of the narrative.

curity agencies at the top; that scarcely affected him. As head of security's deep-cover foreign intelligence operations, he had the same job to do whether it was under the NKVD, the NKGB, the MGB, or, as for the past year, the KI. About the only innovation under the KI had been the effort, now aborted, to amalgamate the deep-cover activities of military intelligence with his own; and the military people had shown the same stuffy aloofness in his own shop that characterized them before and after in the GRU. Now that that was over, it seemed certain the KI would eventually be dissolved, and Korotkov had already begun to think of his outfit as back with the MGB.[1]

The source of Colonel Korotkov's present exasperation was a different policy matter, one that affected operations—the unrealistic impatience of the Big Brass, all the way up to Stalin. He himself had been telling them for years that it was going to be necessary to concentrate intelligence resources on deep cover to avoid being limited more and more to purely overt information on the West. Especially in America, just at the time when the initials *U.S.* began to dominate all the Top Priority Intelligence Objectives, the Gouzenko blow-up—those military people, again!—had put an end to the lush years when you could go anywhere and do anything under paper-thin official cover. You simply couldn't run an effective agent net while under the kind of surveillance Soviet officials were getting in America nowadays.

But now that the Brass had finally been convinced that things had changed since the war years, they expected you to triple your deep-cover operations overnight. He and Shiryayev, who was in charge of his American section, were doing what they could, but it takes time. Shiryayev had remarked the other day that Comrade Beria and the men around him must be too busy with matters of state policy—meaning in-fighting and intrigues—to be concerned with the problem of lead time in getting officers out under deep cover. They couldn't understand why it should take years, even if you had a man already trained, to establish and document a legend to serve as a water-tight biography of his cover identity. They had even wanted to send one of their darlings—"Big Shot," Shiryayev called him—right off under a cheesecloth

and patchwork legend to take charge of deep-cover operations in New York.

Korotkov had got that one sidetracked, anyway. In a few months one of his veterans, Rudolph Ivanovich Abel, would arrive in New York to handle things for a while. Colonel Abel was not the ideal man; he was too straightforward and inflexible—that's what had caused his trouble with the Party a decade ago and permanently retarded his career—and now he was getting on in years. But if he lacked pliability and youthful zest he was as sound and solid as an old oak; he would do a good routine job with irreproachable security, and if worst came to worst you could depend on him. Meantime Big Shot could be building up the documentation for a decent legend for himself, if he still wanted to take over when Abel retired.

You couldn't put all your powder behind one shot, though, especially not a Big Shot who liked to cut a swathe rocking around in fast cars.[2] Someone in reserve should be readied during the next three or four years, preferably a young officer with initiative, intelligence, sound character, and practical training. Korotkov studied through the personnel papers General Baryshnikov[3] had sent him to look over; Vladimir Yakovlevich, Deputy for Personnel in the MGB Foreign Intelligence Directorate—or was he still in KI? No matter—was a friend of his and especially looked out for his needs. This batch of potential recruits was a good one. Most of them had domestic security experience, providing an indication of their reliability and obviating some of the need for training, and a few were bilingual in Russian and some language which would lend itself to the establishment of a biographical legend outside the USSR.

One of these still unwitting candidates seemed outstanding. He was a Party member of five years' standing, a senior operative at one of State Security's posts in the Karelo-Finnish SSR, and only 28 years old. He came of good peasant stock from the Leningrad area, where a lot of Finnish was spoken; his elementary and secondary schooling, in fact, had been in Finnish, and he had learned some German too. He had been graduated with honors from the secondary school and accepted at a teachers' college without entrance examination. After graduation from college he had taught physics and mathe-

matics in his old secondary school and at the same time a class in a nearby primary school. Called up in the regular draft, he had been grabbed eagerly by the security service, then under the NKVD, at the age of 19, just before the Finnish war broke out. During that and the Great Fatherland War he had served continuously in counterintelligence and security duties in the north and had become expert in many operational skills, notably in the recruitment and training of agents. He had nine years of efficiency ratings characterizing him as intelligent, energetic, resourceful, and dedicated.

The one blemish on this man's record, from Korotkov's point of view, was his apparent devotion to the girl, Aleksandra Ivanovna Moiseyeva, whom he had married six years ago and to their adopted son. Well, he could learn to live without them; others had. Korotkov consulted Shiryayev and then asked Baryshnikov to recruit Lieutenant Reino Andrey Hayhanen, among others, for foreign intelligence operations under deep cover.

Basic Training in Estonia

Family Hayhanen, riding south and west through the lake country, in its summer greenery, to Tallin, were excited and happy. They had done a lot of traveling during the war, mostly in the KFSSR, but they had been stuck in Padany for two years now, and they had never been to Estonia. Aleksa imagined it might be less raw and wild than the northland, more like her own quiet countryside southeast of Moscow. Tallin, they said, was a city of about the same size as Tambov. The boy was forever making stupendous discoveries from the train window or getting into other people's things. Reino thought about his three days in Moscow.

He seemed to have made a tremendous impression on them there at No. 2 Dzerzhinskiy Square. Very important people—Baryshnikov, Korotkov, Shiryayev and his deputy Akhmedov, not to mention the Major Abramov who squired him about—seemed to consider his accomplishments remarkable and to be terribly pleased that he knew Finnish and Russian equally well. He had enjoyed his wartime work in Finland, the land of his father's folks, and now looked forward to a new and more important kind of activity there. Presumably it *would*

be Finland, although they double-talked it—"the country of your future assignment."

The caginess and mystery both titillated and disturbed him. Only one man in the MBG office at Tallin, Colonel Pavel Panteleymonovich Pastelnyak, would know that he was training with Korotkov's outfit. Foreign intelligence was fine, a higher-grade profession than being a glorified policeman, but he wished it could be under official cover. The role of a clandestine foreign agent was bound to be an inconspicuous one, and the compartmentation might hurt his career as a Soviet officer. Yet General Baryshnikov had assured him that he would advance much faster this way—captain after a year, major in two or three more, etc. And if they were going to put all foreign intelligence under deep cover that helped take the curse off it. At least he had their promise that Aleksa and the boy could accompany him. Otherwise it would be no go. She was so dependent on him. . . .

In Tallin Hayhanen found himself spending half his time on cover duties for the local MGB—familiar work, spotting and evaluating agents for activity in Finland, Sweden, and maybe other countries. The rest of the time, when he was supposed to be on "personal assignment" to Colonel Pastelnyak, he was learning both the chauffeur-mechanic and the photographer jobs, as tradecraft skills and as alternative future cover occupations. Before long Pastelnyak told him to start learning English: apparently he was not going to operate in Finland, but in Britain, in America—where Pastelnyak himself had served—or somewhere in the Far East. He arranged private lessons for himself and a reluctant Aleksa; she was no linguist and was beginning to be apprehensive about shipping off to some strange country far from home.

Meanwhile he had a chance to compare notes with a couple of other Korotkov men in Tallin, and they ridiculed the notion that a deep-cover operator could take his family along with him. This worried him; but he was reassured within the month when Abramov, the junior officer of those who had interviewed him in Moscow, came to Tallin for a few days. Abramov told him he would be going to the United States with his wife and son, that he should read books about America, and that after the turn of the year he would report for a couple of weeks to Moscow to firm up the legend for his

cover identity, to check on his progress in English, and to get additional briefing.

Eugene Maki Gets a Double

In Moscow, early in 1949, he found that Korotkov had two possible cover identities ready for him. One was represented by an American passport showing a boy of about 12 who had arrived in Russia with his parents in 1925. But this boy would now be some seven years older than Hayhanen, and besides he had relatives in the United States that might prove embarrassing. The other was better: one Eugene Maki, born in Idaho the year before Hayhanen, had come with his family to Estonia in 1927 and now worked in the KFSSR as a chauffeur-mechanic. An MGB officer who had seen Maki thought that Hayhanen had a sufficient likeness to him. He could assume this American identity in Estonia, if at a sufficient distance from Tallin where he was already known. They would get him a mechanic's job in the government garage in Valga, down on the Latvian border. The apparently confiscated Maki birth certificate which Korotkov gave him could be used after a while to apply to some U.S. consulate for a passport. His English, as good as could be expected after half a year, he should in the meantime improve by himself without a teacher.

There was no specific provision in the Maki legend for a family, and when Hayhanen asked about it Korotkov was evasive: he should leave his wife and son in Tallin when he went to Valga as Maki, at any rate; he could go up to see them weekends. It seemed pretty clear that his superiors were maneuvering to back out on their promise, now he was in so deep that his whole career was involved in these plans. He did not tell Aleksa this, but she knew it intuitively. She stopped her English lessons, saying that she did not want to go on with them alone. She sat tight, dreading even the partial separation at opposite ends of Estonia, hoping that something would happen.

As the late winter and spring were frittered away in unstimulating garage work and strained weekend commuting, the new Eugene Maki grew impatient to get on with his assignment. He got the promised captaincy in May; perhaps that meant he would be moving soon. In a month or so Abramov

showed up in Valga; they had reviewed the Maki legend, he said, and decided that in its present form it was clearly unsatisfactory. It called for him to go to America after recent residence in the USSR, thus inviting the attention of the U.S. authorities; it required fluency in Estonian; it did not take advantage of Hayhanen's knowledge of Finnish. Hayhanen wondered whether these obvious considerations had really just occurred to them.

Now in 1943, Abramov went on, when the Soviet armies were liberating Estonia from the Germans, there had been a considerable exodus of Estonians to Finland; what more logical than that Eugene Maki had joined this migration and been in Finland ever since? He was therefore to quit his garage job and come to Moscow to make new plans. He would have to spend some time in Finland to back up this amendment to his legend. His wife and son had better stay in Tallin: they had only a smattering of Finnish, would complicate the legend, and would seriously inhibit his mobility. He could get back to see them occasionally.

This was too much for Aleksa. She couldn't bear the thought of more months alone in a strange city, without friends, living only for an occasional weekend. She would go back to her own country, stay with her own people, and wait for him as so many soldiers' wives had done during the war years, half of them in vain. Hayhanen took her to Tambov, said goodbye with tenderness but with some sense of relief from the strain of conflicting demands on him, and went to Moscow for another round of conferences with Korotkov and the staff of the American section.

The Fledgling in Finland

He was told that the several months in Finland needed to backstop his legend would be useful experience in living his cover in a foreign country, making contacts with a superior under official cover and with local agents, and using drops and communications channels. He could resume his English lessons, too. He could even be of some operational use if he took advantage of the opportunity to find out more about the details of Finnish documentation. For his own documentation in Finland, aside from the Maki birth certificate and a picture of Maki's father, he was given a KFSSR chauffeur-

mechanic's work certificate—this insurance against the possibility that the Finns had some record of the real Maki would also help to explain the false Maki's deficiency in Estonian—and on his way through Tallin he was to pick up from Pastelynak a card showing that as far as the MVD was concerned Maki had no citizenship.

This documentation was not for the purpose of getting into Finland—he was supposed to have gone in in 1943—but only for attesting his identity while there. His entry now was effected in simple if undignified secrecy, in the trunk of a car belonging to the Soviet embassy in Helsinki, driven across the border from the Soviet base at Porkkala. The visible passengers were an embassy official and Ivan Mikhailovich Vorobyev, chief correspondent in Finland for the paper *Trud* and Maki's channel back to Moscow. Vorobyev was also to help him back up the legend of his residence in Finland for the past six years, since 1943.

In September, on Vorobyev's orders, a Finnish agent took Maki on a "hunting" trip above the Arctic circle, in the agent's native Lapland. He told his Lapp friends that Maki was a deserter from the Finnish Army who needed help, and he paid two of them to certify that Maki had lived with them successively from 1943 to 1949. The past thus sketched, he filled in the present by getting Maki a job as blacksmith's helper. Working among the Lapps in this capacity into the dayless winter, Maki was not unhappy when Vorobyev suggested that he move closer to Helsinki where they could meet more often. In January he got a helper's job in a steel fabricating plant in industrial Tampere.

As 1950 dragged on, not idly but insignificantly—work at the plant, monthly meetings with Vorobyev, reports on living conditions in Finland, on attitudes of the population, and on the industries around Tampere; made-work, thought Maki—it began to seem high time that these "several months" in Finland should be up. One late summer evening he was going over his legend, reexamining it for flaws, trying to anticipate Moscow's discovery of other considerations that might delay his departure for America. He picked up the Maki birth certificate, and his eye fell on the routine Warning, "This certification is not valid if it has been altered in any way whatsoever. . . ." He held it up against the light. It was only too apparent: in Moscow they had tried to erase a stamp which recorded the real Maki's application for a Russian passport, and had done a poor job of it.[4] This might easily do more damage than merely delay him. The certificate itself was perfectly all right, if he could get a copy of the original before it had been stamped. Why not? He sat down and wrote a letter to the Department of Health, Enaville, Shoshone County, Idaho: "Dear sirs, I lost my birth certificate. . . ."

He didn't tell Moscow about this right away: they would probably tear their hair over anything so naive. They had still said nothing about applying for a passport, and by the time they did he'd have the new certificate. His eagerness to be off, thus dampened for a while, was soon to be thoroughly quenched.

Eugene Maki Takes a Wife

The quencher was Hanna Kurikka, young, blonde, and graceful, crowned Queen of the Fete in a recent beauty contest. Maki was bewitched; this girl's gay and open spontaneity was so different from the almost anguished affection of Aleksa, so different from anything he had known in his life, something from another world. He was not bothered by her lowly social status or by the rumors about means she had used to supplement her wages as a housemaid. These things only brought her quintessence of vitality within his reach and comprehension. Hanna, for her part, was overwhelmed. She had never aspired to the affections of such an upstanding man, so well educated, so generous and kind. There was a mysterious *savoir faire* about him which must reflect his origins in America. She loved him for himself, but she thrilled with half-conscious expectations at his hints that he might some day go back to visit his native land.

They met in September. By November they were inseparable, floating through a dream-world, intoxicated. Maki stopped going to work at the plant; it seemed a stupid waste of time. In January the new photostated birth certificate came. He showed it to Hanna. She kissed it. In March they moved to Turku in order to be by the sea. Hanna began to mention marriage wistfully once in a while. Maki was em-

barrassed, and felt vaguely guilty about Aleksa waiting there in Tambov.

Maki now worked off and on for some plumbing contractors, and found odds and ends of information to report to Moscow through Vorobyev. Of course they knew nothing about Hanna. He had better tell them about the birth certificate, though; he didn't much care if they did think him half-baked now. But Moscow was pleased, seeing in his initiative a confirmation of their estimate of his resourcefulness, and this maybe triggered their decision that it was time for him to apply for his U.S. passport. He stalled a while, but filed the application in July 1951. Fortunately there were complications—he had to show proof that he had not served in the Finnish armed forces or registered to vote—which would serve to delay action for some time.

Hanna was now more outspoken about her wish to get married. She was right, of course, from her viewpoint: a woman doesn't feel secure without that legal tie. And it really shouldn't matter to him, he told himself; after all, he was not Reino Hayhanen, with a wife in Tambov, but Eugene Maki, who could marry when he chose. Some day this wild, delicious dream would be over and he would be Reino Hayhanen again, back in the work-a-day world. As for Moscow, they hadn't played it very square with him; they needn't know. The Makis moved to nearby Tammisto and were married in November.

Hayhanen Readied for the Plunge

So passed another winter, and the spring and early summer. Late in July of 1952 came the inexorable passport, and swift on its heels the order to report to Moscow for three weeks' training and final briefing. Hayhanen's grayed enthusiasm began to glow again. A business trip to France and Italy, he told Hanna; he'd be back. He crossed to Porkkala in the same car-trunk that had brought him in three long years ago. He visited his mother in the KFSSR, and sent word to Aleksa to meet him with their son in Moscow. He was back to reality, the same vigorous career-and-family man he had been before these ties were dissolved in Maki's dream. He threw himself into his final intensive Moscow training.

His headquarters had moved to the KI building on the outskirts, although the KI itself was now defunct. Colonel Ko-

rotkov was not in evidence. Neither was Abramov. Colonel Vitali Gregoryevich Pavlov, who had interviewed him before as a member of the American section staff, was now its Deputy. But it was mostly the Training Officer, Captain Aleksey Kropotkin, that took charge of his TDY. The training was conducted from a safe-house, with two shifts of instructors. He learned how to use ciphers, and was issued a cipher of his own which he was never to reveal to anyone. When in New York he'd get one-time pads, they told him. He had a refresher in taking photographs of documents and learned to dissolve their hard backing, leaving only the emulsion as "soft film." He was taught how to make and hide microdots, and how to signal their location separately. He practiced tailing and evasion on the Moscow streets.

He was given a full set of instructions for his American operations, which he memorized in part and in part noted down. He was introduced to the official who would be his contact and communications channel, Mikhail Nikolayevich Svirin, about to leave for New York as First Secretary to the Soviet UN delegation. But the effort to minimize the use of official cover was still on, and later, when he had built up his own network of agents, he would be made assistant to the deep-cover resident in New York,[5] who would have direct communications to Moscow. On arrival in New York he should go to a Finnish club and get them to help him find a place to live. He could live wherever he wished, but should keep Moscow informed. He should let them know he had arrived safely by putting a red thumbtack on the "Horse Carts" sign near the Tavern-on-the-Green restaurant in Central Park. If he suspected surveillance the thumbtack should be white.

He was not ordinarily to meet Svirin in person. He was given a list of numbered places—"banks"—where messages could be hidden. When he had banked a message he should go to the railing in front of 150 Central Park West and put a chalk mark on the horizontal bar corresponding to the number of the bank. If he needed a meeting he could mark one of the railing posts. He should watch a different location for the signal that Svirin had banked a message for him.

He could lay low for the first three months, establishing his cover and making sure that he was not watched. On the

twenty-eighth of each month during this period, at ten o'clock in the morning,[6] he was to be at the Prospect Park subway station in Brooklyn and simply walk through the south exit; thus Moscow would know that he was alive and well. After three months he should begin to circulate, joining all the Finnish clubs and exploring all means to build up his agent network.

It was *Major* Hayhanen, this time, who ducked into the car-trunk on the Porkkala side of the border and emerged as Eugene Maki on the Finnish side. The promotion and his elaborate instructions gave him a renewed sense of purpose and responsibility, which Hanna, when he reached Tammisto, dimmed but could not dispel. He took her to Turku, his port of sail, in order to be with her as much as possible while completing his preparations for the voyage. It was a torn and poignant month, the Maki idyll continually interrupted with Hayhanen business. As soon as he got settled he would send for her, he said, because it was the thing to say.

The Promised Land

He sailed on October 10, via Stockholm and London. From London he sent a wish-you-were-here picture postal to his Lapp benefactor, care of general delivery, Helsinki. It would tell Vorobyev and Moscow he had got that far. He docked in New York October 21, and was passed through the immigration and customs formalities without incident. He found temporary lodging at a cheap hotel in Harlem. He put a red thumbtack on the "Horse Carts" sign.

He walked the streets and rode the subways, getting used to the dizziness of the city. He spotted his message banks—a hole in a cement wall on Jerome Avenue, a bench in Riverside Park, the space under a lamp post in Fort Tryon Park, the iron fence on Macombs Dam Bridge. He sampled the night-life, thinking of Hanna's fascination with its distant glamor. He went shopping, and because he missed Hanna he bought a present for Aleksa, splurging on a modish fur coat. He applied to a Finnish club and obtained room and board with a Finnish family in Brooklyn. He left a message for Svirin suggesting that the Jerome Avenue bank be changed to a more convenient place in Brooklyn, a gap in a mortar joint between some stone steps in Prospect Park, and asking

that Svirin forward his package to Aleksa. On the twenty-eighth, as scheduled, he walked through the Prospect Park subway station. Svirin answered his message and gave him a new signal location, the metal fence at the 86th St. entrance to Central Park; by a horizontal mark on the first post Maki could indicate that he had left a message at Bank No. 1, etc.

In November he enciphered his first message to Moscow since the London postcard, his Letter No. 1: He wanted to set up a business as his cover means of livelihood; he needed $5,000 for this purpose. He had forgotten the name of the chemical used to dissolve the backing from soft film. Did he have any mail, and what was going on at home generally? He would send details about where he lived and worked later on; when would he receive the promised one-time pads? Did Aleksandra Ivanovna get the package, and how was she?[7]

He photographed this message with his Exacta, developed and trimmed the film, and placed it in a small round silver case. He snapped the lid on—a Finnish 50-markka piece, its special construction undetectable save for a tiny hole through which a needle could push the two halves apart. He put the coin in a magnetic change-container. He went to Riverside Park, sat on the designated bench, and left the container fixed to a steel brace on its under side. He put a mark across the second post of the 86th St. fence. Every day now he walked past a fence off New Utrecht Avenue in Brooklyn; soon a vertical mark appeared on the second post there; the message had been picked up. He went back to 86th St. and rubbed his own mark off.

Then he waited, rather idle and lonely for Hanna, and drinking perhaps too much. He got a job in a body and fender shop. In December Moscow's reply found its way back through the same machinery, reversed. Maki pushed a hollow American nickel open and took out a microfilm showing ten columns of five-figure groups. Using his own cipher, he converted it into the Russian text of Moscow's first message:

1. We congratulate you on a safe arrival. We confirm the receipt of your card to "V" and the reading of your Letter No. 1.
2. For organization of your cover we have given instructions that $3,000 be transmitted to you. Consult with us prior to investing it in any kind of business, advising the character of this business.

3. According to your request we will transmit separately the formula for the preparation of soft film and the news, together with a letter from your mother.
4. It is too early to send you the one-time pads. Encipher short letters, and for longer ones use inserted numbers, transmitting separately the corresponding insertions. All the data about yourself, place of work, address, etc. must not be transmitted in one cipher message.
5. The package was delivered to your wife in person. Everything is all right with the family. We wish you success.

Greetings from the comrades. No. 1, 3 December.

Maki put the film back into the coin and snapped it closed. $3,000. Not as much as he'd asked for, but as much as he really expected. It would cover the down payment on one of those little neighborhood garages he'd seen advertised. He thought of his work in the big garage at Valga, puncuated by weekends with Aleksa. That made him think of Hanna—everything made him think of Hanna—and how utterly unimportant all other people were. Hanna in New York, Hanna riding in a new American car. He put the trick nickel in his pocket and went out to buy some American vodka. Next day when he wanted to check the message over he couldn't remember where it was. Funny, he thought, how he'd picked up Hanna's habit of hiding things away so carefully he couldn't find them himself. He had no premonition that on some Brooklyn corner a newsboy would spill his change and see one nickel spring apart.[8]

Living was unbelievably expensive in New York; just keeping a supply of his favorite brandy on hand put a big dent in Maki's salary. By the time he'd made up his mind which garage to buy he'd already let too much of the $3,000 slip through his fingers to make the down payment. And he couldn't get out of his head the picture of Hanna riding in a sleek American car. He still had enough money to make the picture real. And it was not complicated; Hanna was in preferred immigration status as the wife of an American citizen. She arrived in February 1953, and they took an apartment in Brooklyn and bought a car.

Maki now sent Moscow his Letter No. 2, the first in a long series of bimonthly equivocations and deceptions about his operational activities. As he had learned in Finland, he could

either have Hanna or pursue his operational career, not both; and he had chosen. Of course he had to go through the motions, and sometimes these motions were considerable.[9] For one thing, he had to keep a watch on Svirin's New Utrecht Avenue signal fence. One spring day he found a number 6 chalked there. You add 2, he remembered, and that means you meet at this Brooklyn subway station on the next eighth, eighteenth, or twenty-eighth of the month. You both get on a subway train, but keep apart, and ride past three stops. Then you both get off and take one going in the opposite direction. Then if you haven't been followed you transact your business. Then you get off and Svirin keeps on going.[10]

Maki thus held his first meeting with Svirin. All this to collect your salary and a routine message, he thought; much easier to let the old man, the courier Svirin had mentioned, put them under the Fort Tryon lamp post in a hollow bolt.[11] It was complicated enough at best, this triple deception. Moscow must be made to think he was busily building up an agent net. Hanna had to have an explanation of where he got his money and of certain mysterious activites he couldn't share with her. (He hinted to her that illegal traffic in narcotics was a real gold mine.) He had to have some honest source of income in the eyes of neighbors and the U.S. authorities. (He was fired from his body-and-fender job in May; he watched the want-ads and worked off and on as shipping clerk, vacuum cleaner salesman, or utility man.) He wasn't really on the square with anyone. Least of all Aleksa. That summer he discovered that a shot of liquor before breakfast would steady him and clear his brain.

In the fall he had his second and last meeting with Svirin in person.[12] Svirin gave him a less routine message this time. In order to reduce his dependence on official-cover channels he was being assigned a courier, a Finnish sailor under the pseudonym Asko, whose ship called at New York three or four times a year. Asko could carry messages for Moscow and bring back hollow coins and pencils. Maki should meet him at a certain movie theater in Brooklyn. Maki would wear a blue tie with red stripes, Asko a blue tie with flowers. There were greeting formulas for recognition.

The appointment came off as scheduled. Maki and Asko set up joint locations—under the seat of a telephone booth in a New York bar, atop a partition in the men's room of a Brooklyn bar—where Finnish notes could be tacked to signal a meeting or to say that a message to or from Moscow had been deposited in one of their "banks." Such a message would be on microfilm, concealed, say, in the split cover of a matchbook. Asko had previously been using a bank in a Riverside Park lamp post with another deep-cover man—this man couldn't understand Finnish, and so Asko had a hard time doing business with him—but he and Maki agreed on a bench in Brooklyn's Sunset Park and a place behind the toilet in another Brooklyn bar as the most convenient banks for them. For future meetings, they chose yet a third Brooklyn bar. It was always fun when Asko came to town.

It may have been Asko, though, who caused Maki a bit of work once early in 1954. Normally Moscow did not trouble him with assignments; he was supposed to be operating on his own initiative.[13] But now some agent, they notified him, had lost contact with his principal, wasn't receiving messages, and had posted a danger signal; Maki was to meet this man and give him a message setting up new arrangements. He always suspected that Asko's language difficulties with the man he'd worked for before had something to do with this confusion. He took care of the unwelcome chore, anyway, and never heard any more about it. He was soon to begin getting more assignments than he would have liked to think about.

The Master Craftsman

Colonel Rudolph Ivanovich Abel was both an artist and an imaginative, accomplished artisan, and he took pride in his art. *Arts,* rather, for intelligence tradecraft is hardly a single craft, with its range of skills from forgery to radio repairing. He was proud, for instance, of his forged New York certificate attesting the birth in 1897 of one Martin Collins, an identity he might have to fall back on some day. True, he had not staked his present and last previous identity on his forger skill:[14] six years ago, in 1948, it was as U.S. citizen Andrew Kayotis that he had arrived in New York via Le Havre and Quebec because the real Kayotis, after gambling away his other valuables during a Copenhagen fling, with desperate

bravado put up and lost his authentic U.S. passport in a final game.[15] And the imposter Kayotis, once he was inside the country, had melted into Emil Goldfus, who held the photostat of an authentic New York certificate of birth in 1902, because there was no danger that the real Goldfus, having died at the age of some fourteen months, would prove embarrassing. Goldfus was safer than the completely imaginary Collins, but he would not be afraid to become Collins if necessary; he did his forging meticulously well.

Another painstaking pleasure for the master craftsman was the fabrication of the hollow containers he used to transmit or store messages, money, and other secret valuables—the wooden pencil inside which he kept on microfilm the letters from his family and Moscow's radio schedule, the trick sanding block where he stored his one-time pad,[16] the hollow bolts, screws, and nails with threaded heads, the cuff links with removable faces, the toothpaste tubes opened at the bottom, the matchbox with the double sliding compartment, the dry cell with the threaded top, the metal cylinders and plugged lengths of pipe to hold money and other bulky items. He spent a good deal of time making these devices for himself and his agents, and it was satisfying work, the creation of physical projections of an orderly, inventive mind.

He had developed his own formula for secret ink and his own method of making microdots, both improvements over what Moscow had given him.[17] He enjoyed thinking up new ways to transmit microdots—under the staple in the binding of a magazine mailed to an accommodation address in Paris, say, or under the stamp on a letter to one of the "stamp dealers," Vladinec and Merkulow, in Moscow. He liked to hunt up better message banks than the usual iron fences and park benches—a spot under the carpet in a theater, for instance, or an aperture behind a telephone booth. He would try out a new bank by leaving something in it for ten days to see if it remained undisturbed.

Photography was his special hobby, and since it also provided his cover occupation he could indulge in it openly. He now had a separate penthouse studio, on Fulton Street in Brooklyn, after five cramped years in his earlier studio-apartments on West 99th St. and on Riverside Drive. Aside from

photographic work, the new studio was a convenient place to keep his machine tools, his radio receivers and equipment, and his Morse printer, rather than in his Hicks Street apartment. Radio was a lesser specialty of his, but he made friends among the neighbors by fixing their receivers for them.

Partly, perhaps, because radio was not his first love, he was less than enthusiastic about Moscow's project that he set up a transmitter so he could send messages to them as well as receive their traffic. He understood the desirability of getting communication channels independent of the official-cover people and their diplomatic facilities, but he was at a loss for a safe practical way to set up a powerful secret transmitter in the crowded New York area, with radio and TV sets all around to pick up its interference and the radio police, the so-called FCC, keeping such a close watch. Even the proposed two-minute bursts of ultra-high-speed Morse would not be likely to go undetected. It might work in the open country if he could find a sufficiently secluded high spot, but then he would need a more portable and hidable transmitter than the elephantine set proposed by Moscow.[18] Perhaps he could make one himself. He would also need an operator, if he was to have any time for his other duties and his agents. Certainly something had to be done, if only against the eventuality of war, when there would be no diplomatic communications, when one would be willing to run greater risks, and when submarines lying off the coast could figure as relay points as well as operational recipients.

He himself would be out of it then, unless war came sooner than anybody expected. He was getting on toward sixty, and in less than three years he'd have his thirty years of service in. He looked forward more and more to his retirement. The work was fine, but it was really quite a sacrifice to stay so long away from his wife and daughter and from Mother Russia. He hoped this new assistant they were giving him turned out to be a better prospective replacement than Big Shot had. Flamboyant character! And arrogant: thought he was the boss already, before he was dry behind the ears. Wanted *twenty thousand dollars* for a cover business. Kept running back and forth to Moscow. Cracked up his sports car [19] on the parkway; $1,800 just in doctor-bills. He'd be quite a time recuperating, back in the Crimea.

The Abel Assistant

The new man might be just the opposite—that is, over-cautious—to judge by what Moscow said, that during his two years in New York he had asked for a number of name-checks but hadn't produced a single agent. Abel himself had spent the first year just looking around, but after that you should start producing. He would soon be able to form a first-hand opinion of this man: On Labor Day, at Moscow's direction, he was to meet this "Vic"—using for himself the code-name "Mark"—at a movie house in Flushing, on Long Island. Vic would be wearing a blue-and-red-striped tie and would make certain motions with his pipe as a recognition signal. Mark should arrange regular and frequent future meetings, provide training and supervision as necessary, and pay him a major's salary plus expenses.

Vic—whom the reader will have recognized as Hayhanen-Maki—agreed to meet Mark at least once a week. At each meeting they firmed up the time and exact arrangements for the next, with an alternate date in reserve against unforeseen circumstances. The usual arrangement was for Vic to wait in his car near a specified street corner; Mark had no car and did not drive. If contact between them were broken each was to check the sign at the entrance to Tillary Street Park every day for a signal from the other. It was convenient that they both lived in Brooklyn.

Mark's developing impression of Vic was not bad, at least by comparison with the late lamented Big Shot. He was intelligent, seemed interested and responsive, and caught on quickly to new techniques. He had even done some original work in microdot methods. On the other hand, his preposterous narcotics-trade cover showed poor judgment,[20] and his reasons for not having produced any agents were thin: he was afraid that fraternizing in the Finnish clubs might blow him, he said; Moscow kept him too busy with specific assignments; they had refused him enough capital to get started in a garage business. Mark told him to go ahead and join the clubs and promised that when he had some more training in photography he could set up his own studio.

At least he was useful as a leg-man and chauffeur, and that was a good way for Mark to get a better idea of his capabilities.

He used him a lot in those capacities during the rest of 1954 and early 1955. One of Mark's assignments, for example, was to check secretly on the activities of a man who lived in Queens, perhaps an agent Moscow didn't trust. He turned this assignment over to Vic. They drove to Queens together and Mark pointed out the man's house; whenever Vic had a free day he should drive up and mount surveillance on it. Mark didn't much like this counterintelligence business, which proceeded from the assumption that no one was to be trusted. A similar distaste subconsciously motivated his attempt shortly thereafter to shunt another job to Vic, that concerning an agent under the code-name Quebec.

One day Mark had found in his bank in the bridge-wall near Central Park reservoir a broken slot-head bolt. He took it to the studio, unscrewed the head, shook out a rolled and tissue-wrapped frame of microfilm, and put it in his viewer. He scanned the message:

> QUEBEC, Roy A. Rhodes . . . former employee of the US Military Attache . . . recruited to our service in January 1952 . . . on the basis of compromising materials . . . is tied up to us with his receipts and information . . . in his own handwriting. After he left our country he was to be sent to the school of communications . . . at San Luis, California. He was to be trained there as a mechanic of the coding machines.
>
> He fully agreed to continue to cooperate with us in the States . . . He was to have written . . . special letters, but we had received none. . . . It has recently been learned that Quebec is living in Red Bank, N. J., where he owns three garages. The garage job is being done by his wife. . . . His brother . . . works as an engineer at an atomic plant in Camp, Georgia . . .[21]

He had Vic drive him to Red Bank to make inquiries, and on the way told him something about the case. In Red Bank he found that Quebec's wife was indeed running a garage business, but had no idea of her husband's present whereabouts; probably he was out west somewhere. It was a wild goose chase, thought Mark; blackmail was the least dependable of agent motivations, especially when you weren't in a position to exercise a continuity of psychological pressure. He reported his findings to Moscow, suggesting that if they wanted to pursue the matter they might assign it directly to Vic; the job would increase his sense of responsibility, he wrote a little speciously.[22]

When in a few weeks Vic received Moscow's instruction to locate Quebec, with a further lead on relatives in Howard, Colorado, Mark turned over to him the original message in its bolt container and gave him three weeks free of other duties to go out west and see if the relatives knew the defaulting agent's address. On the way Vic could make some observations Moscow had requested about certain installations in the Chicago and Detroit areas.[23] It was close on to Christmas before he got back; he had not been able to make the observations in Chicago and Detroit, he said, because he had been sick throughout the whole trip, but he had telephoned the Quebec relatives and got an address in Arizona for the delinquent. Mark told him to report direct to Moscow, hoping Moscow might let it drop there.

As time went on Mark came to the conclusion that Vic would perform competently if given a specific task and specific instructions on how to go about it, but poorly if left with a general assignment calling for his own initiative and judgment. He had indiscreetly had a woman with him, Mark learned quite by accident, on the trip west that drew the blank in Chicago and Detroit.[24] Moreover, he treated alcohol altogether too much like water, even if he did carry it well. Mark had several talks with him about that, without any lasting effect, and so beginning in 1955 confined his independent assignments to the simple ones—taking a hollow pencil from Asko in a routine reliability check and sending it back to Moscow through one of Svirin's banks; knocking on a door at a Boston address Moscow wanted checked and sending Moscow a description of the man who answered it. Even on cases like that of Quebec last year—there was this other one-time agent Moscow wanted to reactivate, but it turned out that his own Atlantic City relatives wouldn't trust him as far as they could throw him—Mark was afraid Vic might encourage Moscow's unrealistic pursuit of dubious agents, and so used him only as chauffeur.

That's just the way the Quebec business had turned out. In the spring Mark received instructions from Moscow to contact Quebec and get him back on the job. In Arizona yet, and separated from his wife, undoubtedly the fulcrum of the blackmail lever. Well, he wouldn't; his home leave was coming up,

and talking to them in person there in Moscow he could make them see the light. His more important business at home would be to report on Vic, though; he would tell them that Vic would do as an assistant, working under supervision, but that he seemed to lack motivation and as a replacement he would be quite inadequate for the foreseeable future. He wanted to impress on them the urgency of getting a competent man out to take over so as not to delay his own retirement.

Five Grand for Helen Sobell

Mark scheduled his departure for not later than the end of June, so as to make the west-east transit in Vienna easy, before the Soviet forces pulled out under the terms of the new treaty. He gave Vic the equipment and some money to set up his promised photo shop, suggesting that he locate in Newark and take advantage of the relative freedom from assignments to get it started during his own absence. He also repaired the AC–DC shortwave receiver which had burned out when he tried to plug it in on Vic's car—not knowing that the car had a twelve-volt battery [25]—and gave it to Vic to practice reading Morse; Vic might some day have to handle the Moscow traffic if Moscow never came through with an operator. He had things about in shape to leave when Moscow sent him word to give $5,000 to Helen Sobell.

This was not so simple as it sounds, with Morton Sobell serving thirty years for espionage and his wife still under surveillance. It wouldn't do to simply walk up to her address, or even telephone to arrange a meeting. Best hide the money and then get word to her where to pick it up. He had Vic drive him upstate to Bear Mountain Park, taking the $5,000 in two tin cans. They walked up the Major Welch trail. They put one can under a heavy flat rock and tacked a sign like a disused trail marker on a nearby tree. The other can they hid in the hollow between some rocks at the root of a tree which already carried a trail marker, and they added an x-mark and the figure 2 to this sign.

Mark, his departure imminent, had to leave it to Vic to get word to Helen Sobell, but he gave him detailed instructions. Vic should go to a sympathetic friend of Helen's [26] and say that he was Morton's brother—Mark furnished him credentials

to that effect—that he was lying low but anxious to help, and that Helen should contact him at such-and-such a place and time. Helen would know enough to be careful. Mark handed him two photographs of her to avoid recognition complications.

This matter arranged, Mark took off. He caught a plane to Houston, and a train from there to Mexico City. Leaving the country this way, all you needed was a smallpox vaccination and a citizen's travel permit, and he had seen to these. In Mexico City he chalked the letter T on the telephone pole opposite 191 Chihvahaa St., on the street side. The next afternoon, at three o'clock, he was outside the Balmora theater looking at pictures of the current film. A sightseer standing next to him was smoking a pipe and carrying a red book in his left hand. Mark asked in English, "Is this an interesting picture?" The man said "Yes. Do you wish to see it, Mr. Brandt?" They went inside and transacted their business, principally arranging another such contact in Paris, where Mark-Goldfus-Abel should telephone the Soviet Commercial Mission at a certain time and speak a set French phrase. In Paris he would get his instructions for travel to Vienna and for contact there, and then he would be off to Moscow.[27]

In Moscow he reported on the status of the Sobell money and other unfinished business. He was able to persuade them not to pursue the quest of Rhodes-Quebec as an agent, but he was less successful in getting them to accept his evaluation of Hayhanen. It was one thing to question the motivation of a debased creature of the capitalistic environment, another to entertain such doubts about a Soviet citizen who had proved himself with many years in the Service and met the highest Party standards. They seemed to suspect rigidity and perhaps even some professional jealousy on Abel's own part, and pointed out that it was Abel's job to see that his assistant's enthusiasm was maintained and his full capabilities developed. The best Abel could do was to get a compromise agreement that on his return to New York he should secretly observe Hayhanen's performance for a while without revealing that he was back. They disclosed to him for this purpose the Eugene Maki cover name and his Newark address.

A final point of conflict with the headquarters staff was the matter of setting up transmitting equipment in New York. They argued down his objections, gave him a refresher course in radio techniques, and told him they already had an operator en route. He agreed to take more vigorous action on his return.[28] Thus settling his official business, he managed to spend most of his time during the remainder of 1955 with his wife and daughter, a delightful foretaste of his coming retirement. Toward the end of the year there arrived a message which Hayhanen had dispatched though his courier Asko: he had given up attempts at surveillance of that suspect agent whose house Mark had shown him in Queens, because surveillance was too obvious in such a suburban district; but he had delivered the $5,000 to Helen Sobell. That last was a tricky job involving some risk, thought Abel; perhaps the man has something in him after all.

Back in New York after the turn of 1956, Abel with some distaste set his agents to make a full check on Eugene Maki. They found immediately that he had indeed rented a store-apartment suitable for a photo shop and had opened a bank account, giving his occupation as "color photographer." But the details of his life in Newark, as they were gradually revealed, grew less and less favorable. He had made no further attempt to activate the photographic business, as far as could be found. He had a woman named Hanna living in the apartment with him as his wife. He rarely went out alone; she was almost always with him. They had a reputation in the neighborhood for keeping a slovenly house and drinking constantly. There were rumors that they dabbled in narcotics, perhaps not just as stock in trade. Maki had never applied for membership in any of the Finnish clubs in the New York area. There was no evidence of operational activity.[29]

Abel reported all this to Moscow in early April. Meanwhile Moscow, as he later learned, having received an inquiry from Helen Sobell about her $5,000, had sent Maki a request for full particulars on how he had passed the money to her. Showing continued trust in him, however, they had also furnished him the name and photograph of a potential courier, a member of a foreign airline crew, whom he should meet at a theater in Queens after an exchange of notes in a message bank there. Maki had failed to make this contact, but had sent a message

describing how he passed the $5,000 to Helen Sobell through an intermediary on September 15 last year.[30] Moscow had instructed him to make a new contact with Helen to arrange a joint check on this intermediary, and Maki had pleaded that it was too dangerous.

Moscow now informed Abel of all this and asked his recommendations. Abel replied in May: he had checked the Bear Mountain caches and found them empty; Maki had just moved to Peekskill, to a house he had bought last September and had renovated; [31] he recommended that Helen Sobell be given another $5,000 and that Maki be recalled for interrogation about the source of his funds for buying the house, about the woman Hanna, and about his operational activities or lack thereof.

Moscow was cautious. There was evidently some bad blood between Maki and Abel. It was quite possible that the unproved intermediary had taken the Sobell money. The neighborhood stories from Newark were inconclusive; they could be inventions, or a smoke-screen for cover. Finally, if Maki had indeed turned bad, it would be well to hold off and find out what compromising associations he may have built up. Svirin would be coming home in October; he could do some investigating first. In the meantime Abel could reestablish contact with Maki and keep him under observation. They authorized a new payment to Helen Sobell.[32]

Abel was annoyed. Recontacting Maki in July, he told him that since his photographic enterprise had flopped he had better apply now to Moscow for home leave; he had talked to them about it while he was there, he said. He added rather pointedly that while waiting for an answer Maki could make another contact with Helen Sobell so that Abel himself could personally give her the new payment of $5,000. As Abel expected, Maki stalled around on that assignment. Abel tried to keep him busy as a chauffeur, notably in searching out a suitable spot for the radio transmitter, although the promised operator never arrived.

Exit Maki; Exit Abel

In October Moscow was convinced by Svirin's report [33] that they had a bad egg in Maki, but they were relieved that apparently no one else was involved. They now agreed with alacrity

to his home leave. Abel wanted him to go right away, taking the Mexican route which didn't require a passport, but Maki, stalling and with Hanna's security in mind, insisted on applying for one. Abel, concerned at having Maki running around loose for more weeks or months, tried to get him to come live with him in a hotel. Maki gave the excuse that ever since he'd been hauled in on a traffic charge last summer he'd been detecting signs of surveillance on him, probably the FBI or narcotics agents, and he didn't want to risk compromising a second man. Abel didn't believe him, but to be on the safe side promised to forge him a birth certificate to support a new identity in case Eugene Maki had to disappear.[34]

The passport was issued early in December, but Maki stalled about leaving. He was getting worried: Mark was so curt now, and Moscow noncommittal. As if aware of his fears, Mark told him Moscow had sent notification that he was being promoted to Lieutenant Colonel. In January 1957 Moscow, now impatient, told Abel to get Maki under way. Abel again wanted him to go via Mexico, but Maki, still stalling, insisted on asking Moscow's approval for departure from New York by ship. Moscow, leaning over backward not to alarm him, agreed and told Abel not to see him any more; they would handle him themselves from here on out. They were afraid that Abel's stiff hostility might precipitate a bolt.

Abel had a final meeting with Maki in February, to give him the forged copy of an Oregon birth certificate. In emergency Maki would become Lauri Arnold Ermas, born in 1920 in Portland. On the eve of his departure from the States he should leave notification of his ETD and mode of travel in a magnetic container on the railing of a Prospect Park fence; Abel would check this bank for it every Friday. They said goodbye with forced cordiality, each with suspicion of the other in his eyes.

Maki-Hayhanen embarked, finally, on the S.S. Liberté on April 24. Moscow watched his progress anxiously. The ship docked at Le Havre on April 30. On May 2, as scheduled, the Soviet Commercial Mission in Paris received a telephone query in Russian: "Can I send two parcels to Russia through the Morey firm?" On May 3 at 10 a.m., as scheduled and confirmed by the telephone call, the man in the blue tie with red stripes appeared at the Chardon Lagache Metro station. He asked

for a travel advance, and was given it. He was told to take a train to Munich and thence a plane to West Berlin, where he could cross over to the east sector on the elevated. There he should telephone to 502805 between 5:30 and 6:00 p.m. and ask for Mr. Wojchek. Regardless of the answer, he should be at the Kaulert photo shop at 7:00 p.m., where someone would address him as "Andrey Stepanovich."

On the evening of May 3 Hayhanen was seen to walk, as scheduled, down the Avenue Victor Hugo. There was no newspaper in his pocket. Good; that meant that he would proceed as arranged to Berlin. But in Berlin the imaginary Mr. Wojchek waited in vain for his telephone call on May 5. Again on May 6 nothing. KGB officers all over Europe were alerted. But by the time they found out where Hayhanen was he was beyond their reach, in the solicitous hands of the Americans, recounting his years of training that ripened to this rottenness and betraying the lifetime service of another at its very close.

Hayhanen had known his boss only as "Mark," and didn't know where he lived in Brooklyn or the address of his studio. But he could tell enough about the studio from his conversations with Mark for the American authorities to identify it. Surveillance was mounted on it. When the radioed warning came that his erstwhile assistant was missing, Emil Goldfus disappeared. Martin Collins moved from hotel to hotel, getting ready to leave the country. But the studio still had to be made as sterile as possible: he had to take his chances and go back to Fulton Street. Thereafter he knew he had picked up an ineluctable tail. He couldn't shake it long enough to board a train or ship or plane. Early on the morning of the summer solstice, 1957, still in his nightshirt in a room at the Latham Hotel, Collins-Abel was arrested. He hasn't talked. In the federal penitentiary at Atlanta they prize his skill with things electric and mechanical, his quiet helpfulness, his paintings and designs for prison Christmas cards.

DOCUMENTARY NOTATIONS

1. The *Komitet Informatsyy* was not dissolved until 1952, but some of its functions were transferred back to the MGB as early as December 1948.

2. "Big Shot" was Abel's nickname for a high-level official sent to New York early in 1953, apparently to break in as Abel's replacement in the deep-cover residency. The 1948 antecedents to this move are postulated here. Big Shot's penchant for fast cars is not a matter of record.
3. Names and titles of RIS headquarters officials are presented here with somewhat greater definitude than is actually established.
4. This is one of Hayhanen's several divergent explanations for having sought a new certificate.
5. Whether Hayhanen was to start from scratch building up an agent net or was to be turned over an existing net is a question complicated by uncertainty as to his planned status in relation to Abel. It may be that he was originally intended to report immediately as Abel's assistant and take over the direction of some already active agents, but that some unforeseen circumstance—conceivably "Big Shot's" presence—made it advisable to leave him on his own for two years. For the purposes of this narrative it is assumed that his independent operation was deliberately planned as a test of his potential and as a means to build up a reserve against the contingency that Big Shot might be ineffective or even blow the Abel residency.
6. Hayhanen's recollection of the date and time of these monthly appearances is not clear.
7. The contents of this message are inferred from Moscow's reply. Hayhanen says it was a request for money without specifying the amount or purpose.
8. Hayhanen's denial that he ever received the Moscow message No. 1 can be viewed with some skepticism. Turned over to the FBI after the newsboy discovered it, it was deciphered when Hayhanen's defection provided the key.
9. Hayhanen insists that his operational activities were as slim as herein described. Although his statement is taken at face value for the purposes of this narrative, it is in fact open to considerable doubt: it is hard to believe that Moscow would make so few demands of an operative, be so entirely misled by him, or knowingly acquiesce in such a lack of production. Hayhanen talks freely about many phases of his life and work, but some of the information he did supply on operational activities had to be elicited by repeated questioning.
10. This procedure was described for one of the meetings with Svirin, not necessarily the first.
11. Precisely what business was transacted with Svirin is not known; a supply of soft film may have been passed. Hayhanen did not learn that the courier who serviced Svirin's drops was an "old man" until Abel told him later.

12. Hayhanen acknowledges only two meetings with Svirin but has told conflicting stories, and the real number is uncertain. The whole question of what role Soviet officers under official cover, like Svirin, play with respect to deep-cover operations, whether merely that of a communications channel or one including some kind of supervisory function, is a critical one unresolved by the information on this case. It is not known what business was actually transacted at this fall meeting, either; the Asko message may have been delivered by other means.
13. See note 9, above.
14. Although Abel is adept at graphic arts, it is questionable that he personally did the forging herein credited to him.
15. The real Kayotis, an unstable person, it is said, won a large sum gambling in the United States, left in mid-1947 for a three-year European visit, and was last heard from in Lithuania. Abel says he bought the Kayotis passport in Copenhagen for a thousand dollars while on his way to the United States. Abel's story probably implies too casual a procedure for the documentation of Soviet operatives: the Soviet authorities presumably acquired the Kayotis passport by bribery, confiscation, or some such accident as the narrative suggests, and furnished it to Abel in Moscow.
16. These things were found so concealed in 1957; they may not have been kept thus in 1954.
17. Hayhanen says that Abel's microdots were better than his own, and his own better than those he had been taught to make in Moscow. But he has alluded also to smaller Moscow microdots made on a special film of Soviet manufacture, and these may have been the same as Abel's.
18. It was actually a year later, when Abel was in Moscow, that this proposed transmitter was shown to him.
19. The type of car in which Big Shot had his accident is not in fact recorded.
20. It seems illogical that Hayhanen would have admitted narcotics-trade activity, whether as cover or not, to his new boss; but he says that later he told Abel the fictitious story that he suspected surveillance by narcotics agents.
21. This message, typed in English, was found in the bolt buried in Hayhanen's basement; Hayhanen implausibly disclaims knowledge of it. Since transmission of the message in plain text would be irregular and insecure, this version is presumed to be Abel's transcript from cipher, passed to Hayhanen when the case was turned over to him. It was effective in obtaining a confession from Sgt. Rhodes.
22. Abel's part and his motives in getting the case assigned to Hayhanen are a matter of supposition here.
23. Hayhanen has mentioned Chicago and Detroit installations as general intelligence targets, not as an objective on this particular trip.

24. Hayhanen had in fact taken Hanna with him, but there is no evidence that Abel knew that he had not travelled alone.
25. Hypothetical explanation for this accident.
26. This friend is postulated as the reason for the forged credentials.
27. The travel and contact procedure described here is reconstructed from Abel's proposals for Hayhanen's travel and from evidence of his own plans for escape from the country in 1957. His mode of travel and points of contact in 1955 are not known.
28. The entire content of these Moscow discussions is hypothetical.
29. There is presumptive evidence that Abel made this investigation, whether by agreement with headquarters or on his own initiative; but there are considerations both in favor of the presumption and against it. As illustrated in Hayhanen-Abel assignments and elsewhere, it is Soviet practice to double-check on agents and operatives. Abel was back in New York for full half a year before getting in touch with his assistant, and did not reveal this fact to him even afterwards. He could not have failed to become quite suspicious of Hayhanen if only because of his alcoholism, and it hardly seems credible that Hayhanen had kept Hanna secret both from Abel and from Moscow all these years, as he maintains. On the other hand, if this investigation was made and it turned up evidence of his dissolute life with Hanna, as it would, one might expect Moscow to have acted more promptly in recalling him, and to have made sure as well that Hanna was not left in New York free to tell whatever she knew. The narrative tries to reconcile these opposing considerations as best it can.
30. What particulars Hayhanen actually invented to cover his embezzlement is not known.
31. The dating of Hayhanen's purchase of the Peekskill house to coincide with his exappropriation of the Sobell money is arbitrary. He has said that he and Hanna recovered it in September and spent it on hotels and liquor.
32. It is assumed in this narrative that the second $5,000 for Helen Sobell was a replacement for the first, which Moscow must therefore have known was not received. It is possible, however, that two different payments were intended. Under this supposition Moscow's request for particulars on the method of passing the first was a routine check, and a fully trusted Hayhanen was asked to make a second contact with Helen for the purpose, presumably, of passing more money.
33. The only positive indication that Svirin made such an investigation and report is the apparent firming up of Moscow's decision on Hayhanen at the time of Svirin's return. If he did, the assignment has a bearing on the relationship, discussed in note 12 above, between Soviet official and deep-cover operatives.
34. See note 14.

On the importance of knowing whether a foreign agent works for money, ideals, venture, dignity, or love, and what it is he loves.

EXPERIENCE WITH TYPES OF AGENT MOTIVATION

Paul Tollius

Late in World War II, as a young, relatively inexperienced Chief of Station, I had an eye-opening introduction to human motives for intelligence agentry. The young Moroccan waiting in my office at the American Legation in Tangier was said to have worked very successfully for the Germans in the past. He was now offering to collaborate with the United States. His motive for changing over, and indeed the condition attached to his offer, he made clear, was that I do away with his rival for the hand of a fair maiden living in Tetuan, over in the Spanish zone. I thought he was joking, and must have betrayed my incredulousness before I realized that he was absolutely serious. I have to confess that our interview that day failed to produce any plan for collaboration.

At our second meeting, however, I managed (without promising to do his unworthy rival in) to persuade him to furnish some proof of his own worthiness, the good faith of his offer. On the spot he tendered the information that 100 tons of canned fish consigned to Germany were being stored under our very noses, in a huge warehouse near the Legation. The German intelligence services had bought it some time back, he said, but as German and neutral ships had become scarcer and scarcer they had not yet devised a way to get it to a German port.

We found the fish, mostly tunny, just as he had described it; but I never saw the agent again. The full story of his motivation took some reconstructing. His original bloodthirsty proposition may have been prompted by unwarranted conclusions from the fact that another Moroccan who had worked for the Germans had been found dead in the well on the prop-

erty where I lived in Tangier. (I think he fell in trying to get a drink.) When the agent realized from his first contact with me that there was little likelihood of our literally wielding the axe on his rival, he made us the instrument for as devastating a blow as he was able to deliver him at the moment: it was the rival's father, I learned later, when as Allied representative I took over the German consular files in Spanish Morocco, who had sold the fish to the Germans. They had paid him, but left the fish for cover in his name, and he was hoping against hope that it would never be delivered, that the ending of the war would leave him with both the money and the fish.

Motives and Results

The brief collaboration of my Moroccan did not justify any great psychoanalytical effort on my part, but the motivation of a continuing agent is, or should be, the subject of constant study on the part of his case officer. Why is it, if we are getting the desired results out of an agent, that we worry about his motivation? Given the complexity of human behavior, you may say, the determination of any but the most superficial motives is a job for an expert, and if we like what the agent is producing we shouldn't particularly care why he produces it.

Maybe we shouldn't, until something goes wrong; but if we don't, by then it is likely to be too late. Results, the take from an operation, are without question a primary consideration, but so is the agent's possible dissaffection if it should result in his passing our information to the enemy. And even short of that extreme, unless a case officer knows what it is that drives his agent he cannot know to what lengths the man will go, freely or under pressure, what risks he is willing to take, at what point he will break, tell another intelligence service what he is doing, or simply stop producing. Perhaps nothing is really more important than learning just why an agent is willing to take the chances entailed in clandestine activity. And the closer the case officer comes to a true assessment of his agent's motivation, the more likely that he will be able to run a successful, long-term operation.

The experience of almost twenty years in the active handling of agents has begun to provide us with a body of knowledge about their psychology from which it should be possible to draw certain generalizations. Despite the complexity of the subject, several types of needs or wants which lead men to become agents can be distinguished and described. There is the ideologically motivated agent, a kind that was not difficult to find during the war. There is the seeker for personal security—often, after the defeat of Germany, the same agent who had earlier been motivated by the highest principles. There is the agent pursuing one aspect or another of financial gain, the camp-follower of intelligence networks since primitive man first spied on enemy tribes. There is the adventurer, the hater, the criminal, the patriot, the man driven by religious zeal.

Ethically, the motives can be noble, crass, or base, and I believe this moral scale is not without useful application in the assessment of an agent. A few case histories may serve to show how the value of an operation is affected by the character of the agent's motivation and by our understanding it.

The "Practical" Mercenary

The agent who is working for purely "practical" reasons—money—can be expected to play it practical all the way. And one eminently practical step he can take is to keep the intelligence service or the police of his own country informed of what he is doing, as a kind of insurance policy against the chief occupational hazard of spying. This is why the "fearless" agent is suspect. It is not man's normal nature to be free of fear when he is doing dangerous work. Although an occasional agent who frightens you by his disregard for his own—and unfortunately *your* own—security is fearless simply because he is not well balanced, the lack of fear is most often due to "reinsurance" with the local service. And it is not long before the agent who is in touch with his own service begins to wonder what the Russians or another Communist service would pay for what he knows. If he doesn't get the idea by himself, his local service is likely to give him guidance and help in establishing contact with other services and agents.

There may, of course, be practical reasons for not taking out this insurance. Testing one agent who claimed, and perhaps had convinced himself, that he was not working for the

money but out of patriotism—many mercenaries will not admit their true motivation—I posed him a theoretical question, ostensibly about one of my other agents. "Why," I asked, "didn't this man, since he was working solely for money, go to the police of his country and tell them about his activity as a means of 'reinsurance'?" "Oh," he replied, "the police would have made him turn over most of his pay to them." This danger, I am certain, that the police, corrupt in many countries of the world, would demand a large cut, is the only deterrent preventing a good many mercenary agents from keeping the local police or intelligence service fully informed.

The Ideological Zealot

Among the ideologically inspired agents plentiful during and for a time after the war, of particular interest were the anti-Franco Spaniards, and especially those of Socialist bent, those whose frustration and pent-up fury had been wreaked on the Communists during the last grim defense of Madrid. Case officers who recruited Spanish Socialist agents early in World War II from the refugee camps in French Africa have attested to their vitality and devotion to the Allied cause. Most Spanish Socialists with whom I became acquainted were motivated by the expectation that the Allies would finish their wartime job by effecting Franco's downfall. A chain of these men with whom I came in contact in 1945 lived with the hope that their efforts would culminate in the defeat and destruction not only of Hitler but of the dictatorship in Spain. These agents worked unsparingly and with fervor.

In 1950, when I renewed contact with groups of these agents, I at first found their motivation cooled but their work still sustained by the same hope. When in 1946 the U.N. countries had recalled their ambassadors from Franco Spain, there had been general elation and a feeling among them that their objective was finally in sight. But in October 1950 the United States and other U.N. powers resumed diplomatic relations with Franco. Now the bottom fell out of these agents' motivation.

Their disillusion soon began to color their work. A close scrutiny of their efforts as reflected in their reports revealed a substantial falling off in both the quality and the volume of information produced. As good case officers, we made every

effort to revitalize their spirit and motivate them anew. This effort continued for several years, until a final assessment convinced us that the spark was gone, the desire to work for U.S. intelligence no longer there. Not only in these Socialists: other Spanish republican elements scattered around the world, particularly in France and Latin America, had also lost heart. Our worst problem was with those who remained agents, in spite of having concluded that the fight was over, for entirely practical considerations, the necessity of earning a livelihood. Continuing to go through the motions and in some instances camouflaging their disinterest, they were harder to assess and more troublesome to terminate when their contribution had become of questionable value.

The Patriot, Bound by Personal Tie

An agent whom I had inherited from another U.S. agency seemed a questionable individual. We were in great doubt about his true reason for working for the United States and had some reason to believe that his close acquaintance with Communist leaders in his country might mean, not that he represented a penetration of the Party on our part, but that he was a Communist agent. I was constantly pushing him to prove by the revelation of Communist Party secrets that he was in fact on our side. We spent the better part of a year in close fencing over this issue, and during this time I took great care about what leads were given him.

In 1948, a revolution, rather bloody for his peace-loving Mediterranean country, broke out. He was in the midst of the fighting and obviously very close to the Communist element which bore the brunt of the battle. Before the final scrimmages in which the Communist element was routed, the agent sought refuge in my home. I hid him for some three days. Whether because his presence was suspected or because of a lot of sniping was coming from the direction of my house, I was called on by armed riflemen wanting to search the house. I told them in a voice loud enough to be heard by the agent in hiding that I could not permit them to search the home of an American diplomat but that as I had nothing to hide I would be glad to have them in and talk with them. They were young boys, obviously nervous with a rifle, more friendly than hostile.

They came in and I brought out a dozen cans of American beer. The beer was a happy choice, something they had not had and all that was needed to distract them. They were much more interested in carrying this loot off to their comrades than in searching the house. They were in such a hurry to go that one young man forgot his rifle and I had to call him back for it. A few days later, in a jeep with license plates bearing the American flag, I drove the agent about a hundred miles into the back country to his father-in-law's home. He emerged when things had quieted down and returned to work.

Whatever his leanings may have been before, this agent never forgot his rescue from a precarious situation. Before this incident, he told me years later, he had felt that the United States never trusted him and he therefore had little reason to trust us. He feared that we were even capable of exposing him to the Communists. Throughout the next ten years he proved beyond doubt his devotion and honest intent to serve the aims of U.S. intelligence.

Double Agent or Regenerate Adventurer?

An agent's motivation can be changed, either by circumstances or through the efforts of an interested and patient case officer. Some of the less desirable motive forces—money-hunger, hatred, love of adventure, fear—can be redirected and tempered by a careful program of indoctrination designed to bring out whatever finer purposes the agent has. Even the motivation of the enemy-controlled agent can be and has been changed through this process combined with a demonstration of superior tradecraft. It is surprising to see the effect on a double agent, one whose whole aim has been to serve his Russian master faithfully, when he comes to believe that the U.S. case officer is the superior of his Russian handler. This superior skill, coupled with bits of intelligence calculated to convince him that we know infinitely more about him and the Russian than he ever suspected, causes him to wonder whether he is working for the wrong or losing side.

It is often necessary to work with an agent when the direction of his primary allegiance is not clear and his motivation difficult to fathom. One such agent came to our attention by virtue of his contact with a known Soviet intelligence officer. Our preliminary investigation of him had not even begun when it was reported from another area that the man had come in and told the story of his work for the Soviet case officer. He came quite clean, a fact verified by close surveillance and substantiated by his willingness to help entrap the Soviet case officer and get him declared *persona non grata.* He admitted freely, however, that his walking in to confess was mostly a means of buying insurance with the authorities of his own and the U.S. government. It was also, although he did not say so, a means for protecting his job with a steamship line which regularly called at U.S. ports.

Probably the best present test for double agentry is a close analysis of the importance of the agent's take and the sensitivity of the target to which he has access. There are few intelligence services today that willingly give a double agent access to highly sensitive material. Now a close scrutiny of the use of this agent by the Russians led us to believe that they may have planned that he eventually become an unwitting double agent. The peculiarity of the requirements given him—the procurement of unclassified material with limited commercial distribution, for example, material the Soviets could get through any number of contacts—led us to the conclusion that they were being used for test assignments.

Further, the usually penurious Soviets seemed eager to pay exorbitant prices for this material, evidence that they believed the agent's motivation to be monetary and were building up in him a dependence on his new income. The superficial Soviet conclusion that the agent was motivated by greed was derived from his having bargained hard when first contacted, rationalizing his act in working for an unfriendly service with the justification that if he made them pay enough his crime would become honorable or at least forgivable.

While it was evident that this agent needed money and that this need motivated him, motivation is rarely simple, comprising only one element. It is as complicated as human nature, and changes with changing circumstances. This man had got along without money for a long time, and fundamentally he was not the type to whom money meant much. When he had it he spent it; when broke he cut down to cigarettes and coffee. His fixed weekly pay from the steamship line covered the sup-

port of his estranged wife and children. He must, we thought, be driven by some more compelling motive.

We kept the agent under close observation, using surveillance and technical means. It gradually became apparent that he considered his life to date pretty much a shambles. His two marriages had ended in failure. Although he was easily successful with women, now in middle age the fascination of the chase was gone. In a less than morose or despondent stock-taking of his own worthwhileness, he had apparently concluded that his ledger was heavily weighted on the debit side.

We could only theorize, on the basis of our study, that he wanted somehow to do something worth while for himself and country. By chance he had become involved in a rather shady business which he finally recognized as an opportunity to do something against the Russians and for the West. This was the only solid reason we could find for his decision to carry on in the work. And if eyebrows should be raised at this conclusion, it can be added that he also needed money, the most common motivation of the cold-war agent, and that he was intrigued at the idea of being a "spy."

Was this enough to explain what made him tick? It would have to be, for the present, until the rope from which all agents dangle became so short as to reveal his soul. Sooner or later we would know, but probably not for a good long time, perhaps not until after his termination.

The Hungerer after Recognition

An intelligent European exiled from his native land had become through his ability and hard work a kind of financial seer in his adopted country. He was an intense, strange person whose driving force permitted him no rest and whose complex character defied analysis. He was recruited by a case officer who spoke his native tongue and was able to develop with him a personal rapport that made for successful working relationships. Among other things, this officer didn't mind that the agent dictated his reports, using him as secretary.

On the departure of this case officer the agent was turned over to a younger, less experienced one, who had been born with a silver spoon in his mouth. At bottom democratic and

basically unaffected, he nevertheless usually left an impression of aloofness and perhaps condescension on many less well born. This new case officer found it unpalatable to act as a secretary. In meeting after meeting he cajoled the agent to write out his reports. He tried every trick and gimmick to this end. While the agent became more and more taciturn and stubborn, the officer grew increasingly determined that he would get him to write rather than dictate. A year of effort along these lines ended in making a once productive operation barren.

With a view to salvaging this operation a complete reassessment of the agent was now made. A careful scrutiny led to the conclusion that the agent's work for us was based largely on a desire to be accepted as an equal by the service. He also wanted to be accepted in the American community and in diplomatic circles. He needed this recognition both for its own sake and as a means of expanding his business contacts. If this analysis was correct, he should respond to carefully arranged invitations to cocktail parties of the local government and diplomatic set. A new case officer who could arrange such invitations was assigned, and he effected a complete about-face on the part of the agent. The question of dictating reports was never brought up, and after each party the reports began to flow as never before.

Motivation Misemployed

This is the case of Mr. X, exiled one-time general secretary of a European Communist Party, who in his late fifties showed the physical toll of a life divided between open and underground struggle but remained a mental giant beside the pigmies then leading the Party he had led. X was a short, bent, burly, grey-haired myopic, shambling along on his cane, whose very quietness seemed a veil to cover the dangerous quality lurking in a slowed and greying but still fierce bear.

He had challenged Stalin's high-handedness and come out only slightly scarred. He had been held a prisoner for some months in Moscow, but was finally released to return home. Ultimately he broke with the Kremlin. His brother-in-law, who had also been released from prison in Moscow, with considerably less prudence continued his Party contacts. In a

street rendezvous with Kremlin agents in a Western European city he was stabbed to death.

Now Stalin was dead and the Soviets wanted X back. Since leaving the Communist Party he had become an important left-wing Socialist. The Kremlin bosses, X concluded, wanted to replace the Party leaders in his native land. These had been hand-picked by Stalin and were undoubtedly somewhat suspect.

A contact of mine who was a close friend of X called on me urgently one day to report that an important Soviet official had visited X. The Russian had offered him a trip to Moscow to talk things over with a view to resuming the Party leadership in his country. X had turned the proposition down. My contact believed, however, that he could get him to reconsider and accept with U.S. backing. Controlled general secretaries are not easy to come by; X was worth a real try.

Every means we could muster and many hours of work and planning went into this venture. It was of no avail: X would not go back. He feared he would meet the same fate as his brother-in-law if the Russians ever got him into the Soviet Union. He was eager to establish himself favorably in the eyes of the West but gave good reasons why he could not undertake this operation:

If he went back and even became general secretary again, he would still have to do as the Kremlin told him on all major matters. He was sure that a general secretary was only a puppet.

He no longer believed in Communism and would soon be found out by the Kremlin.

He would do nothing that might reflect on his sincerity and dedication to socialism or that could unfavorably affect his role in a new government in his country. It was in the cards that sooner or later a new government would be formed in which socialism would, after an interim, play an important if not dominant role.

He was mortally afraid of the Russians.

X did agree to another Russian proposal, a meeting in France or Italy to discuss their plan, and was willing to go

with U.S. backing if we had a distinct prior understanding that he would accept no Russian proposal to return to the fold. This opportunity to explore exactly what the Russians had in mind was deemed not worth to the United States the cost of a round trip for X and his wife. It was rejected, and this was the end of the X affair.

It should have been fairly evident to us from the first meeting with X that he could not be induced to go back to Communism by our glowing offers. Although he worked for a living, money was no inducement. He had no burning desire for revenge, nor was he attracted by the possibility of deceiving the Russians. From our viewpoint his motivation was negative. His having no children or close relatives blocked another channel through which some agents can be enticed. For this operation his basic interests were diametrically opposed to our desires.

Nevertheless we had doggedly persisted. In insisting on the all which X refused we ended up with nothing. We failed to develop the obviously more realistic opportunity to use X as a key man and continuing bait for the Russians. Surely what the Russians had really planned was to use him as a penetration of the Socialist Party; this must have been the main reason they wished to rehabilitate him. And X had been agreeable to a working arrangement which might even have given us time to create a motive he did not now have. We failed because we did not understand the motivation of the agent; we had lost sight of the agent's own desires. If X had been a weaker character and we had been able to persuade him to accept the Russian offer, it would have been a sorry affair indeed.

Ethics and Pragmatics

These cases illustrate how motives noble, crass, and base are made to serve intelligence objectives, but not with equal value. It can be argued that full control of an agent is more readily achieved if he is motivated by some base desire or want: the unprincipled man soon compromises himself, exposes himself to blackmail, or falls subject to some other hold. It is my view that no type of crook can be trusted and that the best agents will be found among those who are moved by the nobler purposes.

Some intelligence officers scoff at motivation based on friendship and respect, feeling that neither is necessary or even desirable. As each case is a matter for the individual agent and the individual officer, it is certainly true that operations have been run in which even hostility was the order of the relationship between them. There are agents considered so low and despicable by the case officer that the working relationship has been reduced to pure physical control and intimidation. In my view, these agents won't last, are the source of many double agents, and are intrinsically unworthy of the time and money they cost. The crass and base desires, perhaps good enough for the short haul, are not of the stuff that will pay off over any prolonged period of time.

The higher motives, such as ideological zeal for U.S. objectives, patriotism, a parent's aspirations for his children, or religious devotion, are extremely reliable ones. In my own experience the best agent motivation has been his respect for the case officer and friendship with him, backed by an identity, even if not a total one, between his aims and the basic aims of the United States and its allies. There can be no question, even among those who may think these views ingenuous, that the case officer must know as nearly as possible what it is that drives his agent on.

How a set of mathematical curves and formulas can be used to convert data derived from the still photograph of a new whirlybird to specifications for its performance in action.

THE CALCULATION OF SOVIET HELICOPTER PERFORMANCE

Theodore A. George

The chariness of the Soviets in disclosing facts about their military establishment and the technical characteristics of their equipment extends even to items not used primarily for military purposes. Despite stringent security, however, they are not able to continue concealing a new item once it is in series production and has been issued in quantity to field units. Recognizing this fact, they finally relax to the extent of demonstrating new equipment they have in service at such public affairs as the May Day Parade, attended by all foreign military attachés stationed in Moscow. Or alternatively, a picture of a new item may appear in a Soviet military journal over some such caption as "Another Great Proletarian Achievement" or "The Highest Performance in the World."

The U.S. technical intelligence analyst thus finds before him one or more photographs of some new item of equipment along with a terse Soviet description of it implying that it has successfully passed user tests and may actually be in production. This is of course not enough. Its performance and characteristics must be determined as accurately as possible if its influence on Soviet military capabilities is to be properly gauged. The analyst can prod the field collector with requirements and wait for more information to come in. On the basis of his appreciation of the Soviet state-of-the-art in the new item's field, he can meanwhile make some guess as to what its performance should be. But on many important items he can do much more, and does. By assembling all the available information, obtaining dimensions from an accurate scaling of the photographs, and making certain assumptions

if necessary, he proceeds systematically to calculate the probable performance of the new piece of Soviet military equipment. This article shows by way of example how the principles of mathematics and engineering can be applied to estimate the performance of a new Soviet helicopter.

Required Data

The helicopter is a very complex machine, comprising a myriad of moving parts, black boxes, and structural members. Since, however, the principles of helicopter engineering are well understood and the laws of nature apply as inexorably in the USSR as in other parts of the world, it is possible, relying to some extent on U.S. developmental experience, to arrive at a number of significant conclusions about a Soviet helicopter from its outward appearance. The first step is to obtain accurate dimensions by scaling one or more good photographs. Some of the more important dimensions to be obtained are the aircraft's total length, its landing gear dimensions, the diameter of its rotor or rotors, and its rotor blade root chord and tip chord length (the width of the blades at their inner and outer ends). From these dimensions can be derived a number of values which will be needed in subsequent calculations—the area of individual rotor blades, the area of the rotor disc (the whole circle swept by the rotor), the rotor solidity ratio (total blade area divided by disc area), and the cross-section areas of various parts of the aircraft. The outward appearance of the helicopter should also help to establish whether it is powered by a gas turbine or a reciprocating engine and will show whether it has single, twin, coaxial, or tandem rotors.

All information about the aircraft obtained from other sources, overt and covert, is now assembled and recorded in table form. Two important additional specifications needed are engine horsepower (rating for normal continuous operation and for take-off) and the linear speed of rotor blade tips. But if reliable information on these is not available they can usually be estimated: the rotor disc area will usually give an indication of the engine horsepower of a helicopter of given size, and the speed of sound constitutes for the rotor tip speed an upper limit which cannot be approached (even in forward

flight) without undesirable air compression and separation effects. The type of rotor and its blade and disc area will also show the gross weight of the aircraft.

Weights and Payload

Having assembled the above information, obtainable with some interpolation from a good photograph, the analyst can now calculate probable performance values. His first computation, in my judgment, should be the weight of the helicopter empty. This he determines by aggregating the weights of its various sections and component parts, specifically the rotor blades, rotor hub assembly, body group, landing gear, engine section, power plant, power plant accessories, rotor mast, transmission drive shaft, transmission, starting system, cooling system, lubrication system, fuel system, instruments, flight control equipment, electrical system, furnishings, and communication equipment. Established mathematical expressions for the weight of each of these components in terms of the specifications determined above have been shown by statistical analysis to yield sufficiently accurate results. For example, the weight of the main transmission for a single overhead rotor powered by a reciprocating engine is $0.081\left(464\frac{HP_M\ R}{V_T}\right)^{0.88}$, where HP_M is the take-off horsepower rating of the engine, R is the rotor disc radius, and V_T is the rotor tip speed. Similar expressions have been established for each of the other sections, and the sum of these is the weight of the aircraft empty.

This net weight may now be subtracted from the previously determined gross weight to give a figure for the useful load, comprising the load of fuel, the weight of the crew, and the payload. The fuel weight can be calculated from the range of the helicopter, or if this is unknown it can be assumed at approximately 200 nautical miles, the average range of most modern helicopters. The number of crew members, usually one to three, can be estimated from the size of the aircraft, and each can be taken to weigh with his personal equipment 200 pounds. The useful load less the weight of fuel and crew is the payload, and we have thus obtained our first important performance value.

Ceilings, Speed, and Climb

In order to establish the hover ceiling for the helicopter, the altitude it can maintain without forward flight, it is necessary to plot two curves, power required against altitude and power available against altitude; the altitude at which these curves intersect is the hover ceiling. The power available diminishes with altitude, the gradient of the curve depending on the type of engine in the aircraft. Plotting data can be obtained from any standard propulsion handbook. The power required, on the other hand, increases with altitude. The same factors apply to propulsion forward, and similar curves can be used to obtain the maximum and normal cruising speeds at any given altitude.

The graphs developed for obtaining the hover ceiling and forward speed can also be used for calculating the vertical and maximum rates of climb. The maximum is attained in forward motion because the power required for forward flight is less than that required for hover. The rate of climb is a function of the surplus power available under given operating conditions, and the maximum rate of climb can be expressed mathematically as $33000\eta\left(\frac{\text{ahp}}{\text{W}}-\frac{\text{Bhp}_{\text{MIN}}}{\text{W}}\right)$, where η is propulsive efficiency, ahp is power available, W is gross weight, and Bhp_{MIN} is the minimum power required for forward flight under any conditions. The rate of climb thus calculated can be used further to establish absolute and service ceilings for the craft. The absolute ceiling is reached when the maximum rate of further climb is zero, and the service ceiling is defined as the point where rate of climb drops to 100 feet per minute. The altitudes at which the available and required levels of power satisfy the equations $33000\eta\left(\frac{\text{ahp}}{\text{W}}-\frac{\text{Bhp}_{\text{MIN}}}{\text{W}}\right)=0$ and $=100$ are therefore the absolute and service ceilings respectively.

Range and Endurance

There are a number of performance values which depend on fuel consumption rate. These include range (longest one-way flight), radius (round trip with stop), endurance (time in the air), cruising speed for maximum range, and cruising speed for maximum endurance. These values can be obtained

from the performance curves already determined plus the SFC/BHP curve (specific fuel consumption *vs* brake horsepower developed) of the engine. Since a SFC/BHP curve for this particular engine is not usually available, a curve typical for its power and type (reciprocating or gas turbine) can be obtained from a propulsion data handbook. This assumption is not likely to lead to any serious error.

The cruise fuel rate in pounds of fuel per pound of gross weight per hour $\left(\frac{\text{dR}_{\text{F}}}{\text{dt}}\right)$ can now be expressed as a curve plotted against forward speed. The minimum value of $\frac{\text{dR}_{\text{F}}}{\text{dt}}$ will coincide with the velocity (and corresponding power setting) for maximum endurance; and a tangent to the curve from the point of origin will indicate the velocity and fuel rate for maximum range. If the amount of fuel carried by the aircraft is known or can be determined (e.g., from the size of the fuel tanks), the range and radius can be calculated from these results. Conversely, however, the range of the helicopter can frequently be assumed to be 200 nautical miles and the amount of fuel it must carry can then be determined by reverse process. The radius of a helicopter is usually less than half the range because of fuel consumption in the second warm-up and take-off for the return trip.

There are a number of other performance values which are of considerable importance in estimating the effectiveness of a helicopter in service. Some of these, such as life expectancy of component parts and time required for overhaul, can not be determined by analytical methods, but only by testing the aircraft under field operating conditions. Others, such as stability and control values, can be found by calculation but in my opinion do not warrant the effort required. The fact that the Soviets have decided to mass-produce a given helicopter model is sufficient indication that it responds to its control instruments with reasonable promptness and that it does not suffer from serious aerodynamic instability. Lengthy computations to arrive at these conclusions are hardly necessary.

The principal calculations made in estimating Soviet helicopter performance are therefore those outlined above in very

abbreviated summary. The summary outline will have been enough, I hope, to show the reader how, with relatively little to go on, it is possible to arrive at significant conclusions about a new Soviet model. The performance values thus obtained are of course mere approximations, which should accordingly be used only in the absence of more reliable data. As soon as overt or covert collection media can furnish dependable information, the calculated values should be discarded in favor of more accurate figures based on observation or actual tests of the aircraft.

Describes the system of handwriting analysis currently used by intelligence for operational assessment.

GRAPHOLOGICAL ASSESSMENT IN ACTION

James Van Stappen

The two articles on handwriting analysis which appeared in the Summer 1959 issue of the *Studies*[1] debated its validity as an assessment technique without making reference to a graphological service that has been most successfully rendered to intelligence operations for the past several years. The purpose of the present article is to describe the system used in this service and indicate the nature of its results, in the hope that a sketch of graphology in operation will help dispel the confused mists which surprisingly still shroud the whole subject.

Contrary to popular opinion, a top-flight graphologist is not a product of the world of Swami, but rather a graduate in psychology of at least one first-line university, probably having done postgraduate work of a clinical nature. Usually he has obtained this schooling in Europe.[2] All German universities now make a basic course in graphology prerequisite for

[1] "Handwriting Analysis as an Assessment Aid," by Keith Laycock, and "The Assessment of Graphology," by E. A. Rundquist, pp. 23–51.

[2] A representative international list of universities where graphology is taught would include the following:
University of Hamburg, Germany—Prof. Dr. med. Rudolf Pophal
University of Munich, Germany—Prof. Dr. Lutz Wagner
University of Freiburg i. Breisgau, Germany—Dr. F. Kaeser-Hofstetter. (Institut f. Psychologie & Charakterologie—Prof. Dr. Robert Heiss.)
Instituto di Indagini Psicologiche, Milano, Italy—Prof. Marco Marchesan
Psychiatrische Klinik der Mediz. Akademie, Duesseldorf-Grafenberg, Germany—Dr. Gerhard Gruenewald
Psychologisches Institut der Universitaet Wien, Austria—Dr. H. Rohracher
Institutet foer Tillampaed Psykologi, Saltsjöbaden, Sweden
University of Berlin, Germany—Dr. W. H. Mueller

a degree in psychology, and for those who wish to become specialists in the field a two-year period of directed graduate work is required. This additional time is largely spent analyzing original specimens of handwriting, experience for which there is no substitute.

The scientific graphologist is rapidly becoming a sought-after man. In most European countries he has been licensed for years, and his services are required as a part of standard operational procedure in personnel administration. The Federal Association of German Employers is one of his larger subscribers in the commercial field, and his findings were employed in the selection of officer material from the ranks of the German army during World War II. Even in the United States, a long list of regular subscribers includes the Military Prison at Fort Leavenworth, the Manhattan Children's Court in Brooklyn, the National Hospital for Speech Disorders in New York, and King's County Hospital in Brooklyn. In 1949 Columbia University granted a Ph.D. in Pure Science on the basis of a thesis devoted to the analysis of deliquent children's handwriting.

The Lewinson Method

The system we use in servicing intelligence operations is a slightly improved and simplified form of one developed and validated by Thea Stein Lewinson and Joseph Zubin in a study[3] carried out at Columbia University, where Dr. Zubin was Professor of Psychology. Their work came as the culmination of a trend toward statistical evaluation of handwriting begun in 1925 by the great English expert on handwriting identification, Robert Saudek, and carried on in this country and in England by such scholars as Gordon W. Allport at Harvard University and Philip E. Vermon at Cambridge,[3] followed by many others. The Lewinson-Zubin study demonstrated statistically that handwriting alone could distinguish between normal persons in good mental health and persons suffering from any form of mental illness, and developed further and tested a measurement and evaluation system that was already being used by Mrs. Lewinson.

[3] See bibliography.

The procedure cannot be fully described in the space available here, but a statement of the principles used and the simplified presentation of a sample case will illustrate its main features. For purposes of analysis by this method, handwriting is regarded as a formed line having three dimensions (vertical, horizontal, and depth), in each of which it exhibits a dynamic property of contraction, balance, or release. Twenty-one major characteristics of this line are distinguished and grouped for measurement and evaluation into four components as follows:

I. FORM COMPONENT
- a) Ornamentation/simplification of form.
- b) Contraction/amplification of contour.
- c) Contraction/amplification of connecting form.
- d) Thinness/broadness of stroke.
- e) Sharpness/pastiness of stroke borders.
- f) Tension/flabbiness of stroke.

II. VERTICAL COMPONENT
- g) Height of middle zone.
- h) Proportion of upper and lower zones to middle.
- i) Direction and degree of deviation from horizontal line.
- j) Amount of fluctuation from horizontal.
- k) Space between lines.

III. HORIZONTAL COMPONENT
- l) Space between letters.
- m) Breadth of letters.
- n) Direction and degree of slant.
- o) Amount of fluctuation in slant.
- p) Left/right tendency (at margins and in letter forms).
- q) Distance between words.
- r) Breadth of margins.

IV. DEPTH COMPONENT
- s) Increase/decrease of pressure.
- t) Extent of pressure control.
- u) Depth/disappearance of connections.

Each of these 21 graphological elements is graded on a seven-point scale, from +3 (representing maximum contraction) through 0 (representing balance) to −3 (representing maximum release). The results are entered on a standard work-sheet, the distribution of ratings within each component is calculated, and a figure which might be called the efficiency quotient is obtained by dividing the number of zero ratings in each component by the number of those above and below the balance point. These figures are the decimals entered in parentheses on the right of the work-sheets shown in Figure 1.

The distribution of ratings in each component is also plotted as a graph to give a better visual picture of the dynamics of the writing in these four respects, and a composite graph summarizes the resultant tendencies of the whole. An interpretation of the personality characteristics therein indicated is then rendered in an analytical report of considerable length. An analyst will work ten or twelve hours, plus or minus fifty percent, on most specimens.

A Live Illustration

The interpretive aspect of the process is best illustrated by a real case from our files. Each of the four analytic components reflects a different aspect of character, but here, for simplicity's sake, we shall examine only a personality's overall viability as shown in his efficiency quotients and in his composite curve. The subject is an agent, a political criminal in the eyes of his country's government, who has demonstrated the stamina of his character in his actions. Escaping from prison, an act which made him even more a "wanted" man in the eyes of the security police, he would make no attempt to leave the country but would continue his underground activities until he was arrested again. Then he would go back to prison and escape once more, and the entire process would be repeated.

In 1956 his letters dating from 1949 were submitted to a graphological analysis. Figure 1 a, of the two which we used to illustrate the work-sheet, carries his early, normal read-

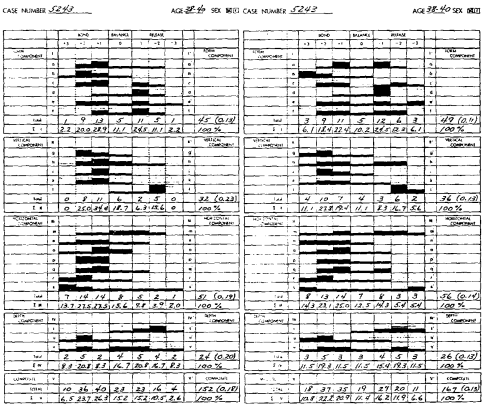


FIGURE 1

ings, and figure 1 b those in 1956. For all his remarkable ability to bounce back, his final letters indicated a considerable degree of general breakdown. Note that the parenthetical efficiency quotient has dropped in every component, and the composite from 0.18 in 1949 to 0.13 in 1956. Figure 2 is the corresponding graphic representation, the solid curves as

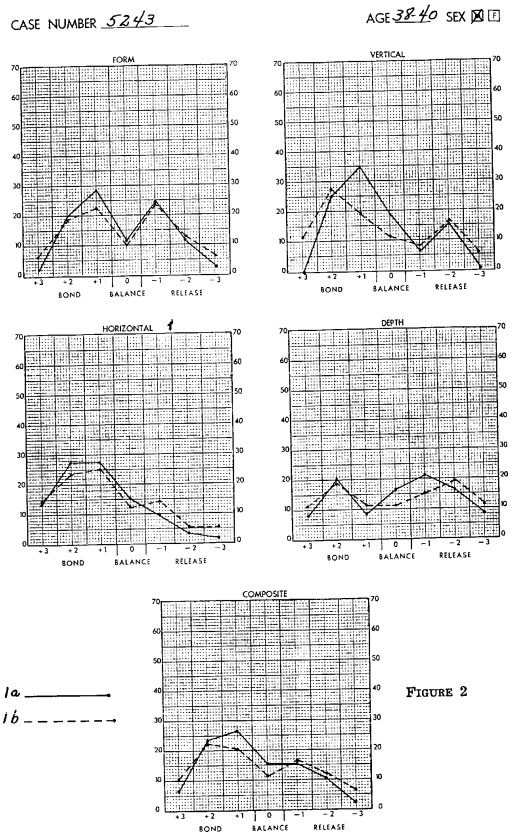


FIGURE 2

of 1949 and the broken lines as of 1956. The readings for an ideally well-balanced person yield a high convex normal distribution curve. Note how here the broken lines drop at the center and lift at the ends relative to the solid lines, showing an excess of both relaxation and tension and a serious tendency toward inversion of the normal distribution curve.

In 1957, partly as a result of this analysis, the agent was removed to a safe place and began a long recuperation. During this period he wrote an extensive diary of his entire eight years' activity. This diary validated every statement made in the report of graphological analysis executed two years before the diary was available.

Areas of Efficient Use

This sample case illustrates one kind of service that is being rendered case officers, routinely but on written request only, with respect to their agents—a periodic checking of the handwriting in agents' reports when, after initial assessment and perhaps training, they have been launched on a mission. In addition to revealing imminent physical or mental breakdown it has sometimes exposed double agents when an incongruity between the excited tone of their reports and the mildness of their assignments aroused suspicion. But there are other persons for whose assessment graphology provides not just an efficient but the *only available* method—the unknown source who supplies your agent information, the agent who refuses to submit to ordinary assessment, the VIP who cannot be asked to undergo tests, and the writer of anonymous letters.

These five categories are the ones on which this service has produced great quantities of valuable information in the past, and they seem to constitute the best area for efficient application of the technique. Many of the intelligence services that employ graphology—and they represent nations on every continent of the world—use it in the selection and assignment of their own staff personnel; a few even go so far as to teach case officers some of the fundamentals to help them find the soft spots in potential defectors or recruits. I do not endorse the use of this technique, however, on subjects available for observation and testing by standard methods which are much faster and easier to apply. Graphology should not try to replace or compete with standard techniques

for direct assessment, but apply itself to cases where these cannot be used.

Reliability of the Results

The operations chiefs and case officers to whom this service is available must have some estimate of how much they can rely on its findings. Many smugly believe it to be infallible. Some, on the other hand, are too skeptical even to try it out. The truth, as usual, lies somewhere between. Graphology is no more 100% accurate than any other means of measuring human character. But it does render judgments more accurate than can be reached by unsystematic observation, and renders them *without* observation, surreptitiously or from afar. Hundreds and hundreds of operational cases of all types and in many languages have been successfully handled by the service, and a large percentage of the findings have later been confirmed by ordinary direct assessments or by the subject's actions.

The reliability of the graphologist's analysis, however, is conditioned on the degree to which the handwriting sample submitted to him fulfills his ideal requirements. Ideally, in order for him to establish a working base and make all the observations involved, he should be furnished the subject's approximate age, sex, ethnic origin and country of elementary education, approximate extent of education, and profession or general line of work. The sample for analysis should be an original three or four pages written on unlined paper with a nib pen of the writer's choice. It should have been written spontaneously and without knowledge that it would be analyzed. A second sample, written at a different time, if one can be obtained, aids in establishing a norm. But these requirements are rarely all fulfilled; and it is possible, at some disadvantage, to analyze writing done with a ballpoint pen or graphite pencil, or a sample on lined paper. When originals are not available, properly focused photographs, if the scale is specified, can be made to serve with some difficulty. Least reliable are photostats or other crude reproductions. The lack of data on the writers of anonymous letters does not make analysis impossible, but like these other compromises with requirements it does qualify our confidence in the findings.

The summer articles on graphology advocated a test run or a series of studies to establish its validity. It seems to me that anyone acquainted with the research represented in the appended bibliography—chosen from works available in English—and aware of the mounting number of well-validated cases in the files of this service would feel no need for an elementary validity test at this late date. Such a test might, however, be useful in identifying capable analysts: there are probably fewer than a dozen competent graphologists in the United States.

BIBLIOGRAPHY

Allport, Gordon W. and Philip E. Vernon. *Studies in Expressive Movements.* The MacMillan Company, New York. 1933.

Anderson, Harold H. and Gladys L. *An Introduction to Projective Techniques.* Prentice Hall Inc., Englewood Cliffs, N. J. 1951. (Chapter on "Graphology," by Dr. Rose Wolfson, pp. 416–456)

Bell, John Elderkin. *Projective Techniques.* Longmans, Green & Co., New York, London, Toronto. (Chapter on "The Analysis of Handwriting," pp. 291–327)

Booth, Gotthard C. "Objective Techniques in Personality Testing." *Archives of Neurology and Psychiatry,* Sept. 1939. Vol. 42, pp. 514–530.

Booth, Gotthard C. "The Use of Graphology in Medicine." *Journal of Nervous and Mental Disease,* December 1937. Vol. 86, No. 6.

Chao, W. H. "Handwriting of Chinese Mental Patients," in *Social and Psychological Studies in Neuropsychiatry in China,* (edited by Lyman, R. S.; Maiker, V. and Liang, P.), pp. 279–314. Stechert, New York. 1939.

Diethelm, O. "The Personality Concept in Relation to Graphology and the Rorschach Test" *Proc. Ass. Res. Nerv. Ment. Dis.,* 14 (1934), pp. 278–286.

Downey, June E. *Graphology and the Psychology of Handwriting.* Warwick & York, Baltimore. 1919.

Epstein, Lawrence and Huntington Hartford. "Some Relationships of Beginning Strokes in Handwriting to the Human Figure Drawing Test." *Perceptual and Motor Skills,* 1 March 1959.

Freeman, F. N. *The Handwriting Movement.* Univ. Chicago Press. 1918.

Goldzieher Roman, Klara. "Tension and Release: Studies of Handwriting with the Use of the Graphodyne." *Personality,* No. 2. 1950.

Hearns, Rudolf S. "The Use of Graphology in Criminology." *Journal for Criminal Psychopathology,* pp. 462–464. 1942.

Lewinson, Thea Stein. "Dynamic Disturbances in the Handwriting of Psychotics" (with reference to schizophrenic, paranoid and manic depressive psychosis). *American Journal of Psychiatry,* July 1940. Vol. 97, No. 1.

Lewinson, Thea Stein & Joseph Zubin. *Handwriting Analysis.* King's Crown Press, New York. 1942.

Melcher, W. A. "Dual Personality in Handwriting." *Journal of Criminal Law and Criminology,* 11 (1920), pp. 209–216.

Monroe, Ruth, Thea Stein Lewinson and Trude Schmidl Waehner, Sarah Lawrence College. "A Comparison of Three Projective Methods." *Character and Personality,* Sept. 1944. Vol. XIII, No. 1.

Pascal, Gerald R. "The Analysis of Handwriting: A Test of Significance" (A Study from Harvard University). *Character and Personality,* 1943. Pp. 123–144.

Pascal, Gerald R. "Handwriting Pressure: Its Measurement and Significance" (A Study from Harvard University). *Character and Personality,* 1943. Pp. 235–254.

Perl, William R., Capt. M.S.C. "On the Psycho-diagnostic Value of Handwriting Analysis." *American Journal of Psychiatry,* February, 1955. Vol. III, No. 8.

Rabin, A. and Blair, H. "The Effects of Alcohol on Handwriting." *Journal of Clin. Psychology,* 1953. 9, 284–287.

Roman, Klara G. "Handwriting and Speech: A Study of the Diagnostic Value of Graphic Indices for the Exploration of Speech Disorders." *Logos,* April 1959. Volume 2, No. 1, pp. 29–39.

Roman, Klara G. "Studies on the Variability of Handwriting. The Development of Writing Speed and Point Pressure in School Children." *Journ. f. Genetic Psychology,* 1936. 49:139.

Saudek, Robert. *Experiments with Handwriting.* George Allen & Unwin Ltd., London. 1954.

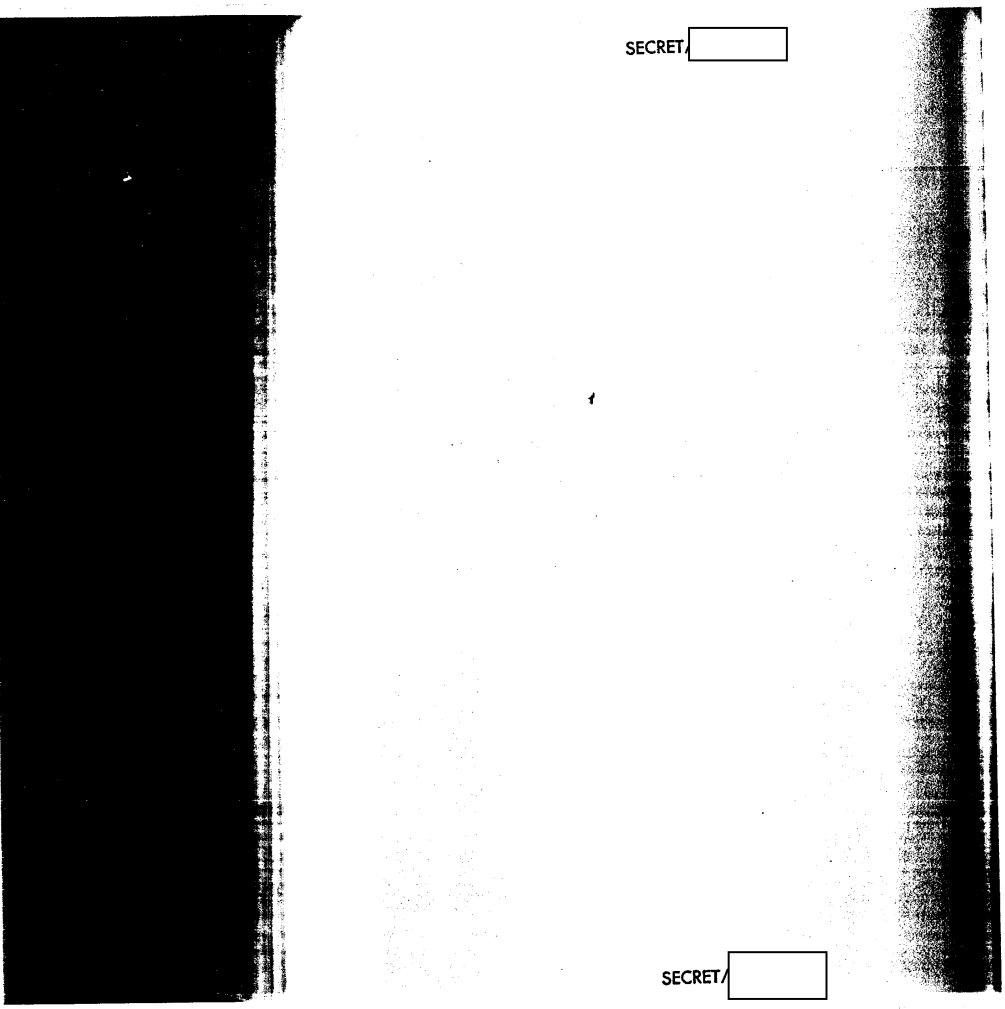
Tripp, Clarence A., Fritz A. Fluckiger and George H. Weinberg. "Effects of Alcohol on the Graphomotor Performances of Normals and Chronic Alcoholics." *Perceptual and Motor Skills,* 1959. 9, 227–236. Southern Universities Press.

Wolfson, Rose. *A Study in Handwriting Analysis* (Submitted in Partial Fulfillment of the Requirements for the Degree of Doctor of Philosophy in the Faculty of Pure Science, Columbia University). Edwards Brothers Inc., Ann Arbor, Mich. 1949.

(An exhaustive bibliography of graphological works in all languages has been compiled by Wintermantel F.: *Bibliographia Graphologica.* Ruhle-Diebener Verlag KG. Stuttgart, 1957.)

Articles and book reviews on the following pages are unclassified and may for convenience be detached from the classified body of the *Studies* if their origin therein is protected.

The editors gratefully acknowledge the assistance of Mr. Walter Pforzheimer, Curator of the CIA Historical Intelligence Collection, in scanning current public literature for intelligence materials, and of Mr. Pforzheimer and many other intelligence officers in preparing reviews for this issue of the *Studies.* Most noteworthy in this respect are the reviews of *Spillet om Norge,* done by Regina Mallamer, and *Quantrill and His Civil War Guerrillas,* done by Robert M. Gelman.



The role intelligence actually plays in the Executive Branch's forging of national security policy is described and appraised by an indubitable authority.

INTELLIGENCE AS FOUNDATION FOR POLICY

Robert Cutler

An integral and in fact basic element in the formation of national security policy is the latest and best intelligence bearing on the substance of the policy to be determined. That statement is not a theoretical truism, but a description of what has by and large actually been practiced in the Executive Branch under the administration of President Eisenhower. It is based on first-hand observation: for periods totaling almost four years I was in continuous touch with the procedures for formulating, adopting, and coordinating the execution of national security policies within the Executive Branch. I assisted the President at 179 meetings of the National Security Council—almost half of all the meetings it held in the first dozen years of its existence. I presided at 504 meetings of the Council's Planning Board (earlier called its Senior Staff). I was a member and for a while Vice Chairman of its Operations Coordinating Board; I participated in meetings of the Council on Foreign Economic Policy; I represented the President on a small group which considered special operations. It is from this experience that the conclusions of this article are drawn.[1]

[1] In 1951, in the early organizational stages of the Psychological Strategy Board, the author served as its Deputy Director and representative at meetings of the NSC Senior Staff, later to become the Planning Board. In early 1953 President Eisenhower asked him to study the organization and functioning of the NSC mechanism and make recommendations to strengthen and vitalize its structure and operating procedures. He then became the President's principal assistant with reference to the operations of the Council. He was moved from the position of Administrative Assistant (January–March 1953) to that of Special Assistant for National Security Affairs, where he served from March 1953 to April 1955 and from January 1957 to July 1958.

NSC Operating Procedures

The function of the National Security Council, as defined by National Security Act, is "to advise the President with respect to the integration of domestic, foreign, and military policies relating to the national security, so as to enable the military services and the other departments and agencies of Government to cooperate more effectively in matters affecting the national security." The Act also gives to the Council the duty of "assessing and appraising the objectives, commitments, and risks of the United States in relation to our actual and potential military power." The Council advises the President both on policy and on plans for its execution, but its primary statutory function thus lies in the *formation* of policy. The role of the Council as a planning body is subordinate to its policy function.

The Council and its subsidiary Planning Board [2] and Operations Coordinating Board [3] constitute an apparatus available to the President to help him reach policy decisions on national security. The National Security Act is sufficiently flexible to allow each President to use this personal aid as best suits his convenience. One President may use the Council mechanism in one way, another in another. The *best* use is made of it when a President uses it in a way that satisfies his personal requirements. It has never been felt necessary to test

[2] The NSC Planning Board, chaired by the President's Special Assistant for National Security Affairs, is composed of officials of the departments and agencies which are represented at the Council table with reference to a policy matter there under consideration. These officials have a rank equivalent to Assistant Secretary or higher. Each is supported by a departmental or agency staff. Each has direct access to his department or agency chief and commands all the resources of his department or agency for the performance of his duties.

[3] The NSC Operations Coordinating Board, of which the President's Special Assistant for Security Operations Coordination is Vice Chairman, is composed of officials of the departments and agencies concerned with the policies referred to the Board by the President for assistance in the coordination of planning. These officials have a rank equivalent to Under Secretary or higher. Each is supported by a small departmental or agency staff. Each has direct access to his department or agency chief and commands all the resources of his department or agency for the performance of his duties.

whether the Congress can constitutionally require by statute that a President consult with specified persons or follow specified procedures in coming to a policy decision in this field.

Under President Eisenhower, the normal procedure for operating the policy-making aspects of the NSC mechanism has involved three main steps. First, the NSC Planning Board formulates recommendations as to national security policy and circulates them to Council members and advisers well in advance of the Council meeting at which they are scheduled to be considered. Then the Council considers and approves or modifies or rejects these recommendations, and submits to the President such as it approves or modifies. Finally, the President approves, modifies, or rejects the Council's recommendations, transmits those policies which he approves to the departments and agencies responsible for planning their execution, and—as a rule where international affairs are concerned—requests the NSC Operations Coordinating Board to assist these departments and agencies in coordinating their respective planning for action under the approved policies.

Thus a policy is first determined by the President, and then the departments and agencies plan how to carry out their responsibilities to the President under it, being assisted in the coordination of this planning by the OCB. It is, of course, fundamental that the planning to execute policy responsibilities be carried out by the respective departments and agencies which are directly charged by the President with such responsibilities. No person or body should intervene, at a lower level, between the President and the department head directly responsible to him.

During the period 1953–1958, with which I am familiar, the great bulk of national security policy determinations were made by the President through the operations of the NSC mechanism just described. Because this method of policy formulation was the usual one, such policies were commonly but erroneously referred to as "NSC policies." Since it is the function of the President to determine policy in all areas under his executive control and responsibility, and national security policy may be formed in any way which he finds convenient and appropriate, the policies so formed, whatever body or individual may submit the recommendations therefor, are the *President's* policies.

There were occasions during this period when national security policy was determined by the President as a result of Cabinet deliberations (though this was a rare occurrence) or by his executive decision based on conferences with one or more of his principal department or agency heads, the Joint Chiefs of Staff, or others within whose special competence some particular subject would naturally fall. There should always be complete flexibility for every President to determine however he elects the matters of high policy which it is his responsibility to decide. Because of the utility and convenience of the NSC mechanism, however, and because the present Chief Executive values the advantages of integrated recommendations and joint deliberations based on them, it has been the more or less standard operating procedure during his tenure to seek to form national security policies through the procedures outlined above.

Factual Intelligence and Estimates

In this article the term "intelligence" is used to embrace both factual intelligence and estimates based thereon. In forming national security policy both are of prime importance.

The gathering of intelligence facts is today a matter of enormous scope and hardly conceivable complexity, bearing no resemblance to the simple if hazardous personal mission of a Mata Hari. There are, indeed, many individuals working in the field of intelligence, in and out of formal government service, who must exhibit personal bravery and rare ingenuity, taking risks beyond the ordinary call of duty. Because all is grist that comes to the intelligence mill, one need not seek to measure the results of these individual efforts against the results of the world-wide scientific and technological operations employed in modern intelligence gathering.

In our continuing confrontation by a power openly dedicated to swallowing all mankind in the maw of Communism, the rapid gathering of germane intelligence on the activities of other nations in every field of endeavor has put the United States into an electronic business that is world-wide, highly scientific, incredibly complicated, and extremely expensive. It is staggering to realize the limitless ramifications of current technological procedures, the almost overwhelming amount of raw material that comes flooding in every hour of the day

and night to be sifted, analyzed, codified, and—most urgent of all—communicated clearly to the decision-makers. For in the last analysis the valid use of intelligence is to build intellectual platforms upon which decisions can be made. It is not gathered to be stored away like a harvest. It must be delivered, succinct and unequivocal, within the shortest time feasible to focal points for use.

This prompt delivery is essential both to those who conduct our foreign affairs or direct our defensive military mechanisms and to those who frame our decisions of high policy. The sound concept that the national intelligence effort should be centralized is not inconsistent with a demonstrable need that each of the several departments have its own intelligence arm. The man who may have to dispatch a SAC bomber, an ICBM, a Polaris submarine, or a Pentomic task force has a dual function with regard to intelligence: he has a part in acquiring the latest intelligence for use at central headquarters, all the way up to the President; he also must himself have and use the latest intelligence in carrying out his crucial responsibilities.

It is for these reasons that the National Security Act in 1947 created a Central Intelligence Agency and a Director of Central Intelligence, who at one and the same time is chief officer of the Central Intelligence Agency, Chairman of the United States Intelligence Board, and Foreign Intelligence Adviser to the President and National Security Council. Through the series of NSC Intelligence Directives the President has sought to make the gathering and dissemination of intelligence more rapid and efficient. These Directives put emphasis on the centralization of authority and responsibility in the intelligence field, on making the separate intelligence organizations of the armed services and other departments and agencies contributory to, and not independent of, such central authority, while still allowing them to meet their specialized needs.

The President has shown a constant awareness of the urgency of perfecting the national intelligence effort. He gave close attention to the reports on this effort made by the committee under General James A. Doolittle (October 1954) and by the Hoover Commission's Task Force on Intelligence Activities under General Mark Clark (May 1955). In February 1956

he formally established a President's Board of Consultants on Foreign Intelligence Activities, first chaired by Dr. James R. Killian and now by General John E. Hull. He gave this Board the continuing mission of reviewing the conduct of our foreign intelligence activities and reporting thereon periodically to the Chief Executive.

The operation of the many intelligence arms in the critical field of intelligence gathering and dissemination at all levels involves a truly vast annual expenditure. But in terms of national survival, the prompt delivery of correct intelligence to the President, the ultimate decision-maker, is an undebatable necessity.

Beyond this requirement for current factual intelligence there is an additional requirement for intelligence estimates. These estimates may be addressed to a particular country, area, situation, armament, or function and set forth both the pertinent facts and the likely future actions predicable thereon, or they may seek to arrange logically and with precision the broadest spectrum of intelligence materials into a considered appraisal of what over-all developments may be in future time.

Both types of intelligence estimates can be of the greatest possible help to policy-makers and planners. Their preparation requires expert competence and their coordination calls for objective thinking by those who have the authority to agree or differ on behalf of their organizations. Because of the prophetic nature of any estimate, it is of great consequence that the final text should seek not compromise but clarity. Many of the coordinated national intelligence estimates with which I worked during these four years clearly and fully set forth dissenting views held by competent members of the U.S. Intelligence Board.

Intelligence Orientation for the Makers of High Policy

The prompt circulation of daily bulletins and special and national estimates as basic orientation for those who make the recommendations and decisions on high policy is an obvious necessity. The Planning Board, responsible for doing the spade-work in forming policy, needs to review the special and national estimates in detail, dissecting them and arguing over them until they become familiar material. And Security

Council members need to get them in time to study and weigh them before the subjects to which they relate are taken up at the Council level. Both Planning Board and Council members should be *inseminated* with their contents, as I once told one of the chiefs of British Intelligence. In the Planning Board this insemination has been a feature of its standard operating procedure since 1953, as I will illustrate in a moment. At the Council level the education of the members is carried on in several ways.

In the NSC. The Council members receive daily, weekly, special, and general intelligence publications, and their function requires that they be familiar with this material. In 1953, moreover, in order to insure that Council members are kept fully acquainted with current intelligence, an innovation was introduced at their meetings. Until then, the oral briefing on current intelligence was given each day in the President's office to him alone. Now it became a part of the Council's established procedure to make the first agenda item at each meeting a briefing by the Director of Central Intelligence.

This oral briefing, assisted by the visual presentation of maps and charts on easels behind the Director's seat, reviews the latest important intelligence throughout the world but focuses on the areas which are to be taken up later in the meeting. It normally consumes from fifteen to twenty-five per cent of the meeting time, being frequently interrupted by specific questions from the President and other Council members. These questions often give rise to colloquies and extemporaneous expressions of views which are of consequence to the policy recommendations that are to be discussed. I have always believed this direct confrontation of the Council each week with current and special intelligence to be an important aid to policy consideration and formulation. Yet the British Cabinet and the War Cabinet under Sir Winston Churchill, to the best of my knowledge, carried on their policy deliberations without the benefit of this stimulating and thought-focussing device.

There are other ways in which the Council, as the supervisory body to which the Director of Central Intelligence reports, is kept informed about intelligence problems. The Director submits annually to the Council a summation of the

problems that have faced the intelligence community in the preceding period and the measures and means adopted for dealing with them. The President and Council must also from time to time review and revise the National Security Council Intelligence Directives, which constitute the charter for the operations of the intelligence community.

The revision of one of these detailed and often complicated NSCID's, especially in relation to the functional gathering and rapid dissemination of intelligence, may require months of prior study by a panel of specialists—perhaps scientists, technologists, or communications experts, persons of the highest intellectual and scientific standing—brought together to advise on methods and procedures. Many of the panel studies necessary for the purposes of the experts involve most carefully guarded secrets. Yet it is important that the Council understand, in general terms, how the vast intelligence community of modern days is organized, administered, and operated. The principles which emerge from the findings and recommendations of these highly classified studies are matters for action by the Council, and especially by the President.

In times of particular crisis the function of intelligence is conspicuous in its importance. In such historical crises as Indo-China in 1954, the Chinese off-shore islands in 1954–1955, and Lebanon in 1958—to cite a few at random—the intelligence appraisal of the Director of Central Intelligence, the foreign policy appraisal by the Secretary of State, and the military appraisal by the Joint Chiefs of Staff were indispensable ingredients in the deliberations held before the die was cast and the policy set by the President.

In the Planning Board. The Planning Board necessarily probes deeply into the latest intelligence on each subject that comes before it. A CIA Deputy Director is in regular attendance at the Board table, bringing to its deliberations an informed knowledge of the contents of special and general intelligence estimates. He participates from his point of view in the debate on current matters, and it would be as unthinkable to overlook his views as to overlook those of the representative of the Joint Chiefs of Staff, who is seated at the table as adviser on military issues.

The CIA Deputy Director and the Special Assistant to the President for National Security Affairs seek to coordinate the preparation of intelligence estimates with the forward agenda of the Planning Board. To that end the agenda is tentatively scheduled for a period of two months or more ahead so that the flow of intelligence materials can be arranged to meet the policy-makers' demands. Of course, history sometimes takes a hand, and the scheduled forward agenda has to be suspended for the immediate consideration of a special estimate that has been urgently called for. There can be nothing static or cut-and-dried in scheduling ahead the Planning Board's work-load (and consequently the Council's forward agenda); it is entirely unpredictable how long a time may be consumed in the preparation of particular policy recommendations or what interruptions may be forced by extrinsic happenings. Whatever the order of business, however, one factor is essential: a foundation of the latest and best intelligence to build upon and a constant rechecking of intelligence material as time marches on to the Council deliberation and the Presidential decision.

In the OCB. Turning for a moment from policy formulation to the coordination of plans for carrying out approved policy, we find that in this work of the Operations Coordinating Board current intelligence is again a necessary ingredient. At the weekly meetings of the OCB over which the Under Secretary of State presides, there are in regular attendance senior representatives of Defense, Treasury, Budget, USIA, AEC, and ICA, and the two cognizant Special Assistants to the President. At the informal Wednesday luncheon which always precedes the OCB meeting the Director of Central Intelligence has an opportunity to thrash out problems of a sensitive nature. At the more formal Board meetings which follow he is a full participant. The coordination of planning in the responsible departments and agencies for the execution of a policy which the President has approved requires the same up-to-the-minute intelligence that the making of the policy did.

The Annual Policy Review. The annual Estimate of the World Situation produced by USIB member agencies is awaited each year with the greatest interest—and anxiety—by those in the policy-making apparatus. It is an invaluable production, presenting as it does a distillation of the painstaking

efforts of the entire intelligence community to state as of the year-end the dimensions of the foreign threat to our national security. It is written with scrupulous care, it is well documented, and it sets forth with clear distinction, where differences of opinion occur, the opposing views of the experts who cannot agree with the majority estimate. I conceive this annual basic estimate to be of great consequence—as a stimulant, as a guide, as a frank expression of differing views on matters which may be of highest significance. It is this estimate which constitutes each spring the point of departure for the recurring review of our basic national security policy.

The first step in this review is to schedule the Estimate of the World Situation for discussion at two or three meetings of the NSC Planning Board. At these meetings it is subjected to 7 to 10 hours of controversial discussion in a search for better understanding. Its contents are analyzed and dissected so that attention can be focussed upon its most important conclusions. In some years distinguished consultants from "outside of government," such men as General Gruenther, John J. McCloy, Arthur W. Burns, Karl R. Bendetsen, and Robert R. Bowie, have been invited to these Planning Board meetings. They have been asked, after study and review of the high points in the Estimate, to discuss them with the Planning Board at a meeting of several hours' duration. Then these points, together with the consultants' and the Planning Board's reaction to them, have been brought before the National Security Council at several meetings wholly devoted to their consideration. Short papers presenting the policy issues and their implications are prepared by the Planning Board as a basis for Council discussion at these meetings.

The purpose of the procedure just described is not, of course, to try at the Planning Board or Council level to change or modify any part of the annual Estimate. The purpose is to sharpen understanding of the important aspects of the Estimate and to study and discuss in open meeting the policy implications thereof. Through this procedure the Council members become sharply aware of the high points in the Estimate and the differences in view regarding them, and can join in a give-and-take discussion without feeling bound by the more formal presentation of carefully prepared policy recommendations. Almost as important as the ultimate policy decision

itself is the intellectual controversy which precedes it, the educative and consolidating effect of full and frank discussion, the exposure of views which have not become fully formed in departmental exercise, the emergence of novel and interesting ideas at the highest level.

The way in which this product of the intelligence community serves as a regular precursor to the Planning Board's annual review of basic policy is a cogent illustration of the community's essential role in the shaping of national security decisions.

A Model Case

It may be appropriate, at the close, to describe what in my view is the *ideal* procedure for formulating a national security policy. Let us take as an example not the annual broad policy review which may consume several months, but a national policy on the State of Ruritania.

First, the Ruritania item is scheduled far ahead on the Planning Board agenda, with three to five or more sessions devoted to it. At the first of these sessions the Board will have before it a national intelligence estimate on Ruritania. It will also have before it a factual and analytical statement, prepared by the responsible department or departments or by an interdepartmental committee, on the military, economic, political, and other germane aspects of the Ruritania policy problem. To this compilation of factual data and analysis, whether supplied in separate memoranda or as a staff study, have contributed the vast resources of the informed departments and agencies of government, the brains and experience of the operating personnel who work day after day in the particular area of Ruritania and have learned at first hand the strengths and limitations involved, the very persons who staff the departments and agencies that will be called upon to implement this policy they are working on when and if it receives Presidential approval.

The intelligence estimate and the departmental material are explained, discussed, and chewed over in one or more meetings of the Planning Board. A senior representative of a responsible department is likely asked to attend at the Board table and be questioned and cross-questioned about the factual information and tentative policy recommendations

submitted by his department. The Board seeks to squeeze out of the material all the juice that it contains.

After these proceedings, a draft policy statement is prepared by the responsible department or by an interdepartmental or special committee. This draft will consist of a set of "general considerations" (drawn from the intelligence estimate and the factual and analytical material as a basis for policy recommendations), a statement of the "general objectives" of the proposed U.S. policy toward Ruritania, a more detailed proposal for "policy guidance" in the several areas of U.S.-Ruritania relations, and appendices covering anticipated financial costs of the proposed policy and comparison of military and economic expenditures and other data for past and future years.

At as many Planning Board meetings as required this draft statement is discussed, torn apart, revised. In the intervals between the meetings revised texts are drafted by the Planning Board assistants for consideration at the next meeting. Finally, from this arduous intellectual process emerges either full agreement on the correctness of the facts, the validity of the recommendations, and the clarity and accuracy of the text, or—as is often the case—sharp differences of opinion on certain major statements or recommendations. In the latter case, the draft policy statement will clearly and succinctly set forth, perhaps in parallel columns, these opposing views.

When the draft policy has been thus shaped, reshaped, corrected, revised, and finally stated, it is circulated to the Council at least ten days before the meeting which is to take up policy on Ruritania. Council members will thus have sufficient time to be briefed on the subject and familiarize themselves with the contents of the draft, and the Joint Chiefs of Staff will have time to express in writing and circulate to Council members their formal military views on the exact text which the Council is to consider.

That is my concept of how the integrating procedure of the NSC mechanism should work when it is working at its best. Some such procedure is the desired goal, a goal often approximated in actual performance. The views of all who have a legitimate interest in the subject are heard, digested, and combined, or in the case of disagreement stated separately.

In a good many instances the views of experts or knowledgeable people from "outside of government" are sought and worked into the fabric at the Planning Board level. The intelligence estimates, the military views, the political views, the economic views, the fiscal views, views on the psychological impact—all are canvassed and integrated before the President is asked to hear the case argued and comes to his decision.

It is certainly true that human beings are fallible and that the instruments which they create are always susceptible of improvement. The mechanism which I have described, and its operation, can and will be improved as time goes on. But the main course of this integrative process seems to me mechanically and operatively sound. And it must be grounded on the firm base of the best and latest intelligence.

A German cryptanalyst presents his own version of the reason Rommel was beaten at the gates of Egypt.

THE LOST KEYS TO EL ALAMEIN [1]

Wilhelm F. Flicke

How slight and unimpressive are often the initial causes which lead to great changes in the course of events; how our picture of great men varies according to what we know about them and the point of view from which we regard them; how easily the fame of great generals grows pale when we know the secret of their successes!

Any history of World War II will doubtless mention one name on the German side with particular respect—Rommel. This name has become a symbol of German generalship. In the deserts of North Africa Rommel and his men won astonishing victories and boldly chased the British to the gates of Alexandria. But his real aim had been to chase them further—out of Alexandria, across the Nile, across the Suez Canal—and suddenly his victorious march stopped. At El Alamein, almost within sight of Alexandria, it was unexpectedly all over.

What had happened? What was the secret of his unexampled victories, and what was the secret of their sudden end? There is no doubt that Rommel was a man of great energy and distinguished military capacity. It would have been hard to find a better general early in 1941 when it became a ques-

[1] Excerpted from an unpublished manuscript, *War Secrets in the Ether*, which tells in popular form the history of the German and other communications intercept services. The author habitually attributes to the intelligence product of these services an exaggerated and often decisive influence on the course of world history. Moreover, writing shortly after the end of the war, he apparently did not have at his disposal the authoritative testimony now available which blames the German failure to take Egypt and Suez primarily on the High Command's unwillingness to give Rommel the numbers of tanks and guns he needed. This account can therefore be presumed to exaggerate the importance to Rommel of the intercepted messages it cites; but that they were of some importance is attested in other sources, notably in Ciano's Diaries.

tion of stopping Wavell in Africa. There is no doubt the British fought stubbornly on the Delta's edge in the summer of 1942. But that is not the whole story.

Cairo Calling Washington

In the fall of 1940 the Italians had crossed the Egyptian frontier and advanced east to Marsa Matruh. There they had been forced to halt. On 9 December 1940 General Wavell started his counteroffensive and by mid-March 1941 had thrown them back to the border of Tripolitania. Meanwhile the German Afrika Korps had been formed and transported to Tripolitania, and General Rommel now assumed command over all German and Italian forces in Italian North Africa.

Rommel went to work with great energy. On 24 March 1941 his Afrika Korps and some fresh Italian divisions attacked the British, who were weakened by three months of combat and an extremely long supply line, and within 18 days drove them out of Cyrenaica. This operation came to a standstill approximately on the Sollum-Djarabub line, and from early April 1941 the front was generally calm. Nothing noteworthy occurred. At least nothing outwardly noteworthy. In reality, something was being prepared quietly which belongs among the most interesting chapters in the history of this war.

An officer whom, for reasons which will become apparent, I shall call General Garrulus was stationed in Cairo as U.S. military attaché. Experience has shown that often when people get a lively interest in a new field of endeavor they merely cause mischief. For Garrulus, in his new post, the significance of the North African theatre was dramatized by Rommel's actions, and the entire Near East seemed about to become the focal point of the war. For an ambitious man Cairo seemed just the right place to be. So Garrulus decided to act. But how can a military attaché act? He writes reports. And how are these reports conveyed nowadays? By radio.

So Garrulus set to and sent one radiogram after another to Washington—reports on the political situation and, above all else, reports on everything connected with the British military preparations and operations. They were enciphered, of course, but the death of any cryptographic system lies in its frequent use. All these radiograms were intercepted by the Germans.

They bore the address MILID WASH or AGWAR WASH and hence were easily recognized. By early July the system had been solved in essence and parts of the messages could be read.[2] They proved to be a mine of important information. Garrulus reported to the War Department in Washington on the reinforcement of the British forces in western Egypt, on their equipment with modern arms, on each transport of war materiel that arrived, on the withdrawal of the Australian 9th Division from Tobruk and its replacement by British and Polish units, and on preparations for an offensive aimed at encircling and annihilating the Axis troops.

All these reports were passed currently to General Rommel. They were not yet complete, to be sure, for the cryptographic system had not been solved in its entirety, but they were adequate to keep him posted. Hence it was no surprise to him when in the grey dawn of 18 November 1941 the

[2] The wartime chief of Italian military intelligence, General Cesare Ame, credits his service with both the initiative and the execution of this operation. The following is translated from his *Guerra Segreta in Italia*, 1940-43, pp. 96 ff:

"In the period immediately preceding the declaration of war against the U.S., the Military Intelligence Service, by means of a happy initiative carried out in the greatest secrecy, succeeded in entering into possession of precious American cryptographic material (codes and deciphering tables in active use).

"During the military action . . . in North Africa the British headquarters each evening forwarded a summary of the principal operations of the day to the American representative in Cairo. The summary included information and situation details of great interest. This summary, enciphered in the American code, was immediately transmitted to Washington.

"Because the American command had committed the grave error of not replacing its codes immediately after war began, as would have been good practice, our service intercepted the dispatches, deciphered them rapidly, and during the same night retransmitted them in our own cipher not only to the Supreme Command but also to the Headquarters of the North Africa troops, thus making it knowledgeable of the most delicate and interesting information on the adversary."

An Italian employee of the U.S. embassy in Rome had in fact stolen the basic code, and German and Italian cryptanalysts were left only the problem of working out successive reencipherments. Some years after the war this employee had the *sang froid* to come back and ask for his old job again.

British offensive under General Sir Alan Cunningham broke loose along the entire front. Rommel had made good preparations and was able to hold his front for a time, but he could not prevent the British from making a break south of Sidi Omar and thus throwing his southern flank off balance. On 19 November the British took Sidi Rezegh and on the same day Churchill proclaimed the impending destruction of the Axis troops in North Africa.

Both sides brought up all the troops they had. Slowly but surely the British drew a ring around the Axis divisions. Nevertheless, despite all tactical successes, the onslaught of the British did not achieve decisive results. Wherever the British started an action, Rommel immediately sent forces to oppose them. He even sent a column behind the British in the direction of Halfaya and cut their line of supply. He always did the right thing at the right time.

Small wonder, for Garrulus was sending one telegram after another to Washington. He ranged all over the battle area, saw and heard everything, knew all preparations, every intention, every movement of the British forces, and he transmitted it all to the United States. The German intercept station copied each message and sent it promptly by teletype to Berlin, where it was deciphered and forwarded by the speediest possible means to Rommel. The whole thing took only a few hours. By now the cryptosystem had been completely solved.

The British were much surprised. Preparations for the offensive had been so thorough that destruction of the Axis troops in its very first phase had been considered certain. Something had not clicked. General Auchinleck, Commander in Chief in the Near East and Wavell's successor, flew from Cairo to Cunningham's headquarters and on 26 November relieved him of his post. A young general of 44 years, Ritchie, was appointed commander of the British Eighth Army. On 8 December Rommel pushed through a weak point in the British encirclement, disengaging his troops without being detected. Before the British recovered from their surprise he had escaped to the westward. On 11 December Churchill stated in the House of Commons that the Libyan campaign had not gone as expected.

In the days that followed, the victorious British occupied several towns and captured some 25,000 men. But meanwhile Rommel had established his shattered units near El Agheila. He had also received dependable information regarding his opponent; Garrulus had seen to that. On 21 January he advanced 16 kilometers into the British line with 3 armored columns. The British were taken by surprise and had to retreat. On the 27th Rommel was north and northeast of Msus. On that day Churchill declared "We are facing a very bold and clever foe, and I may well say a great general!" On the 29th Benghazi was taken. Rommel was promoted to Colonel General. On 10 February operations came to a standstill 100 kilometers west of Tobruk. Rommel was not strong enough to break through the new defensive front of his opponent.

Intercept Procedure

Two great stations had been copying the Garrulus messages since the beginning of the year to make sure that none should be missed, and their intercepts were transmitted with "urgent" precedence by direct wire to Berlin. I should like to illustrate by example the effectiveness of this German operation. The British had carefully planned and prepared an action against Rommel's airfields. They meant to drop parachutists during the night with explosives to destroy the facilities. The action had been so carefully planned that it could not have failed its objective. Garrulus, radiant with joy, reported this to Washington. The message was sent about eight o'clock in the morning by the station in Cairo; it was received in Lauf immediately and transmitted to Berlin. At nine o'clock it was on the cryptanalyst's desk; at ten o'clock it was deciphered; at 10:30 it was in the Führer's Headquarters; and an hour later Rommel had it. He had half a day to warn his airfields. The British project was executed shortly after midnight. The parachutists got a warm reception; the action miscarried. Only at one airfield which disregarded the warning the British met with success.

February, March, and April passed quietly on the front. Rommel knew precisely how matters stood on the British side: their supplies and equipment, their strength, their plans. Both sides were bringing in reinforcements. After the middle of May the British began to spot extensive German movements and counted on an offensive in the near future.

On 26 May Rommel's famous offensive began. German tanks broke through at Bir Hakim and heavy tank battles raged for days near Acroma. Approximately 1,000 tanks and 2,000 to 2,500 self-propelled guns were engaged on the two sides. On 10 June Bir Hakim, the key to the British defense system, was taken. The Axis troops drove through in three columns. Sidi Rezegh was taken, and on the 19th the Egyptian frontier was reached. On the 21st encircled Tobruk was taken, along with 25,000 prisoners. This had been a bold masterstroke.

By 25 June Rommel had occupied Sollum, the Halfaya Pass, and Sidi Omar, and was in front of Sidi Barrani. Garrulus was still radioing his reports and Rommel was receiving precise information every hour. The British were amazed; Rommel seemed to have second sight. No matter what the British undertook he always anticipated it as if the British High Command had been keeping him posted.[3] On 27 June General Ritchie was relieved as commander of the Eighth Army and Auchinleck assumed command in person.

Quickly the British retreated to Marsa Matruh. Here were the fortifications Wavell had laid out when Graziani was at the gates of Egypt. Now Rommel was at the gates of Egypt. In less than four weeks he had chased the British out of all Cyrenaica. Their only hope lay in the Qattara depression which stretches 60 kilometers inland from the coast between Marsa Matruh and Alexandria. The British were resolved to hold the rectangle Alexandria-Port Said-Suez-Cairo. Would they succeed? They were determined to hold Singapore, but had lost it. They were determined to hold the Balkans, but had to withdraw. Now Rommel was near El Alamein, and British domination in the Near East was threatened.

The Propagandists Blow a Source

Then the miracle occurred. No, it was no miracle; it was a tragicomedy. It was as idiotically funny as a passage from a dime novel. It was Saturday, 27 June 1942. I tuned in the Deutschlandsender's six p.m. broadcast. "We are offering a

[3] Ame (*loc. cit.*) says, "On 20 June we had a complete picture of the sharp crisis which gripped the British forces . . . . Demoralized and badly led, they would not have been in a position to oppose Axis troops if these had exploited the favorable conditions offered and had pointed decisively toward the Delta."

drama with scenes from the British or American information bureau," the announcer said. "This is going to be some stuff," I thought, but left the receiver on while I went ahead with some work.

Suddenly I pricked up my ears: the drama had as its subject "Events in North Africa" and was commenting on political and military matters. One of the characters represented the American military attaché in Cairo, and now there followed a discussion of his extensive supply of information and the way he sent it to Washington. I was speechless. To think that the German broadcast was putting on something that countless people were trying to keep secure! The drama was authentic, and only too well played.

On 29 June, 36 hours after this radio drama, the messages from Garrulus to Washington suddenly ceased. The German intercept operators listened and searched in vain. No further MILID or AGWAR message was ever heard.[4] When messages began to flow again, the Americans were using a system which defied all our efforts at solution.

[4] Ame (*loc. cit.*) says only that "from 25 June on the intercepts, although they contained noteworthy considerations and observations, no longer gave a wide vision of the adversary situation." He apparently attributed the falling off of the channel to tightened British security on information passed to the Americans. But Leonard Mosley's *The Cat and the Mice* (London, 1958) carries a quite different account of how this source was lost. Mosley has it (pp. 80–84) that British interrogation of signal officers captured in an early June attack on Rommel's mobile monitoring unit disclosed that one of the unit's tasks was to copy the regular evening message from the U.S. military attaché in Cairo and decipher it, using the code which had been stolen by the Italians. On getting this information the British also monitored these "long, detailed, and extremely pessimistic" messages for ten days, and then let the sender know that they were being intercepted.

It may be supposed, not inconsistently with Flicke's or Ame's story, that Rommel was at this stage doing his own monitoring to shortcut the communications lag. It seems reasonable also that the British were instrumental in stopping the messages, but Mosley's version of the method used is even less credible than Flicke's tale:

> "'And now tell me, General [Garrulus], what do you think of the Ambassador's wife?'
>
> 'She's a honey,' said the general. 'Beautiful, too.'
>
> 'Then why,' asked his hostess, 'did you tell Washington last night that she looked like a horse?'"

Rommel, on the Egyptian threshold, remained without information. The British regrouped their forces; he knew nothing about it. They introduced new units; he was not told. New weapons were unloaded in Alexandria and Port Said; Rommel did not find out about them. The great general now had to rely upon himself and his reconnaissance at the front.

On 3 July Rommel tried a strong thrust to the south. It failed. The next day, using all available troops, he mounted a major attack near El Alamein. After heavy fighting and initial successes he had to withdraw. Since 26 May the British Eighth Army had lost 75,000 men, plus 1,100 tanks and 450 planes. It was in bad shape, but now it held.

Both sides dug in, and began to build up reinforcements. Decisions of great historical moment seemed to be impending. Mussolini betook himself to the Egyptian front in order to be present at the entry into Cairo. Churchill visited Cairo on his way back from Moscow. Lieutenant General Montgomery was made commander of the British Eighth Army, and General Alexander the successor to Auchinleck. Rommel was appointed General Field Marshall. All eyes were on him.

Rommel finally decided to attack. In the morning hours of 31 August he advanced against the southern flank of the British position at El Alamein but immediately encountered strong resistance. He threw in all his tanks and used his old trick of having trucks drive around in the rear to kick up a dust and simulate another strong tank force advancing. There was hard fighting, but after two days Rommel had to withdraw. He had 12 divisions and at least 600 tanks, but he had no Garrulus telegrams. His operations came to a standstill, soon to turn into retreat. The dream of a campaign through Asia Minor was at an end. Mussolini returned to Italy. The period of Rommel's great victories was over.

The capabilities of terrain intelligence rethought for promptness and precision in the age of missiles.

TERRAIN INTELLIGENCE FOR THE PENTOMIC ARMY*

Clifton A. Blackburn, Jr.

Over the Mulde River, behind the Iron Curtain in East Germany, there is a highway bridge. This bridge has a load classification of 50 tons. The national highway it carries has a concrete surface 26 feet wide. The approaches to the bridge are unusually steep (11% grade) and the roadway across it is unusually narrow (12 feet). The bridge has 3 spans and 2 piers. The piers are made of stone and contain demolition chambers. The spans are approximately 62 feet long, and the center span clears the surface of the water by 16 feet at normal high water, which occurs in May.

About 25 miles north of this bridge the national highway passes through a forest. About 600 acres in extent, the forest is composed of old beech and oak trees. The trees are in full leaf by about the middle of May and lose their leaves about the middle of November. During the foliation period, more than 90% of the ground within the forest is completely concealed from aerial observation. The ground is covered with forest litter but there is no underbrush. The larger trees in the forest have trunks ranging from about 16 to 25 inches in diameter at shoulder height and are spaced about 12 to 15 feet apart.

How do we know all this about a relatively obscure bridge and forest behind the Iron Curtain? A former German Army engineer interrogated at a refugee camp in 1955 reported that the bridge had demolition chambers. A photograph taken by a barge operator in 1949 was found to show these chambers,

* Based on two articles which have been copyrighted by the Society of American Military Engineers and printed in the July–August 1958 and November–December 1959 issues of *The Military Engineer*. They are used thus by permission.

as well as the number of spans and the steep grade of the approach to the bridge. A German waterway publication provided the clearance figure, the time of high water, and the clearance between the central piers. The barge operator's photograph showed the spans to be of equal length and the piers to be made of stone. An aerial photograph taken in 1951 showed the width of the roadway and its surface material.

A large-scale German topographic map, revised in 1939, located the forest and provided an accurate idea of its size. Three refugees from separate villages on the outskirts of the forest reported on separate occasions in 1950, 1951, and 1956 that the forest was composed of beech and oak trees. They also gave estimates of the trunk diameters and foliation periods that were in general agreement. A 1955 aerial photograph showed that only small changes had occurred in the forest's acreage. This photograph, taken in June, also showed the extent of the canopy and partially confirmed the species of its trees. A ground photograph from a pre-war tourist guide corroborated and refined the refugee information as to trunk diameters, showed trunk spacing, and showed the forest floor to be clear of underbrush. The lack of underbrush was confirmed by one of the refugees who had hidden there in his escape to the West in 1956.

Now add to this bridge and this forest all the other natural and man-made features of the East German countryside—rivers, roads, towns, hedgerows, soils, railroads, and landforms, to name only a few. Then multiply East Germany by all the other countries of the world to get some idea of the hundreds upon hundreds of thousands of items of data which must be identified, evaluated, and organized to make up the dossiers of long-range terrain intelligence. In these dossiers are stored the preconditions of the battles of the future. For battles are not fought in a vacuum but on a jungle-covered Guadalcanal, on a barren Heartbreak Ridge, or in flooded Pripet Marshes. They are fought along a Rhine flowing through fertile farmland, around minute Saharan oases, on a tiny Iwo Jima, or on the subcontinents of a Festung Europa. It is these rivers and ridges, forests and floods, islands and oases, swamps and sand dunes that are the subject matter of terrain intelligence.

Terrain and the Space Age

The new and cataclysmic spectre of a decisive two-day strategic air battle or two-hour missile war has not exorcised the old implacable military need for terrain intelligence; on the contrary. The air age and even the space age will not divorce future military action from the ground. Lieutenant General James M. Gavin, the man so intimately associated with the age of missiles even in the popular mind, has written unequivocally:

> The frontiers of the free world must . . . be firmly defended on the ground. For this is where freedom begins. It begins where men will stand and fight. It begins today along the 38th Parallel in Korea and the 17th Parallel in Indochina and at the Brandenburger Gate in Berlin.
>
> Finally . . . one thing stands out quite clearly: the control of land areas will be decisive in this period and through control of land areas we will provide the reassuring confidence in its own survival that the Western world needs. And from control of the land areas we will be in a position, if the need arises, and I believe it most certainly will, to command space.[1]

The task of the terrain intelligence producer, never an easy one, becomes yet more demanding in this age. Changes are taking place in the organization, equipment, and tactics of his old customer, the U.S. Army. Indeed, these changes are replacing his old customer with a new one, a Pentomic Army of vast mobility, ready to place powerful forces anywhere in the world in a minimum of time. The new customer is a modern and streamlined striking force with nuclear capacity to engage in a general war or win a small war quickly.

This enormous strategic and tactical mobility demands greater amounts of terrain intelligence and simultaneously gives the producer less time to prepare it. A striking force may leave today for the Middle East or tomorrow for central Europe or the next day for Africa or the islands of Indonesia. When this force reaches the battle area its battlefield mobility will make it a voracious consumer of terrain intelligence; and this intelligence has to be supplied before it sets out on its mission.

As things stand today, however, it could *not* be so supplied. If an airborne Pentomic division were alerted today to leave

[1] "Why Missiles," in *Army*, November 1957.

tomorrow on a "no drill" strike mission, it could not take with it adequate operational terrain intelligence on its objective. An airborne division is not itself capable of collecting, evaluating, and storing terrain information or of producing adequate terrain intelligence on a world-wide basis—or even on a selective basis—for operational planning.

The *capability* does exist elsewhere. It exists within an already established and operating group of terrain intelligence producers in the U.S. Army Corps of Engineers. There is no reason, from the standpoint of capability, that this group could not begin today to support the Pentomic Army with operational terrain intelligence on individual, carefully selected potential trouble spots of the world. A package could be put into the hands of the planners before trouble starts and into the hands of the strike force as it leaves for the battle area—a package of basic terrain intelligence that needs only the veneer of weather data and enemy disposition and capabilities to make it a complete operational planning document.

Why Not Now?

Before he can provide this support, the terrain intelligence producer must turn from encyclopedist to eclectic. His ideal goal is to know the whole world as intimately as his own back yard; but he cannot plot for the Pentomic Army commander all the anthills and dandelions in all the earth's back yards. He must select with foresight, with care, and above all on good advice, first, the areas where operations may occur, and second, the kinds of terrain intelligence likely to be needed.

For guidance on the *where*'s he can consult the considered judgment of the whole intelligence community about potential trouble spots in the world of 1959, 1960, or 1961. Not the spots where diplomats will be arrayed in battle or those where economic conditions will gradually increase the influence of Communism, but those that might reasonably become the objectives of a Pentomic striking force landing for a shooting war—trouble spots like the 17th parallel in Indochina in 1954, the 38th parallel in Korea in 1950, the western border of Poland in 1939. The guidance he gets may not be uniform and

cannot of course be sure, but it can provide a sufficient basis for selecting the priority areas for terrain intelligence.

Deciding *what* terrain intelligence to produce on each of the priority areas is a matter of knowing the consumer's requirements. A superior product can be designed by tailoring the supplier's capabilities to the user's needs. Let the user and the producer get together at the working level and find out what the one needs and what the other can do. But even without this intimate guidance, the producer can formulate some general ideas about what he can do to help.

For one thing, an airborne striking force must get back to the ground to accomplish its mission. With existing capabilities, the battle group commander can be furnished far in advance a clear idea of the limitations imposed by forests, slopes, and soils upon successful landing of a battle-ready force.

In operations after landing, whole Corps may have to cross a river in a single night, making multiple stream crossings on a very wide front. The commander can have in his possession, before he even leaves for the battle area, intelligence on the river's banks, velocities, widths, and other features that will affect his use or placement of amphibious personnel carriers, light tactical bridges, and air-mobile assault bridges.

The Pentomic Army commander will be firing atomic missiles, but not every part of the area will be suitable for emplacement of missile launchers. There is no reason why he should not know in advance the location, physical advantages and disadvantages, and access possibilities of all the potential missile launching sites within his battle area.

To provide the Pentomic Army with long-range intelligence such as this, a new and specially designed product will be required. It must be a lean and efficient package, yet containing all the basic terrain intelligence a commander needs for the early phases of his operation. There should be no broad and meaningless generalizations. There should be no extraneous matter and no omissions, because the user will have had a voice in its planning and it will have been designed with his specific needs in mind. The tank commander will not be burdened with information on airdrop sites, but he will know where the bogs are that can swallow up his tanks. The airborne commander will not be furnished a survey of urban re-

construction possibilities, but he will know which bridges will accommodate his Honest John missile launcher and which will not. The package must not include unneeded trappings, but it should permit few if any terrain surprises for the commander of the striking force.

For many years, long-range terrain intelligence efforts have been expended on bulky, small-scale,[2] generalized, strategic-level studies designed with no clearly identifiable user in mind. The time is long since ripe for redirecting these efforts to produce streamlined, large- or medium-scale, detailed, operational-level intelligence packages specifically designed for a Pentomic Army ready to leave tomorrow to fight anything from a minor police action to a world-wide nuclear war.

The need clearly exists. The capability to answer it exists. The "tooling up" has begun within the Corps of Engineers, and prototypes are being circulated for user reaction. It is a laborious process, but next year's model must show that the long-range terrain intelligence producer has begun to assemble a modern package.

[2] *I.e.*, scaled down at high ratio.

History of special intelligence operations with the Sixth Army in New Guinea and the Philippines.

THE ALAMO SCOUTS

Eustace E. Nabbie

Colonel Allison Ind's recent book, *Allied Intelligence Bureau*,[1] which described a number of the unorthodox reconnaissance and raider activities carried out in the World War II South West Pacific Area, failed to mention a small intrepid group of men called "Alamo Scouts" who performed for the U.S. Sixth Army services similar to those rendered by OSS detachments in other overseas commands. It is the purpose of this article to bridge a gap thus left in the intelligence history of that Area and time.

Origin and Training

General Walter Krueger, whose Sixth Army was then called simply the "Alamo Force" in deference to Australian General Blamey's seniority under MacArthur, was personally the originator of this group of Scouts bearing the name of the famous Texas shrine. It is my belief that his main aim in creating them was to insure that in his area of responsibility there would be no fiasco like that of Kiska island in the Aleutians, which, it will be recalled, U.S. Navy and Army air forces bombarded for more than 20 days in ignorance of the fact that the Japanese troops had already been withdrawn, and which was then taken by an assault landing with self-inflicted casualties. The Scouts' principal mission was therefore reconnaissance behind enemy lines, an activity which in this Area meant torture and death for any of them that were captured. They were volunteers, hand-picked for their intelligence, spirit, and physical stamina.

The first volunteers "for an unusual mission" did not know exactly what they would be called upon to do; it was only as the exploits of the Scouts became more generally known that

[1] New York: David Mackay, 1958. Reviewed in *Studies*, Vol. III, No. 1.

secrecy was lifted from the nature of the work. It was specified, however, in General Krueger's order of 28 November 1943 setting forth a charter for the Scouts:

> 1. The Alamo Scouts Training Center (ASTC) is hereby established under the supervision of Headquarters Alamo Force at the earliest practicable date prior to 1 January 1944, and at a location in the vicinity of the present Headquarters [Goodenough Island, off the southeastern tip of New Guinea].
>
> 2. The training center will train selected volunteers in reconnaissance and raider work. The course will cover a six-week period. Specially selected graduates will be grouped into teams at the disposal of the Commanding General, Alamo Force, and will be designated "Alamo Scouts"; the remainder will be returned to their respective commands for similar use by their commanders.
>
> 3. Commanders of combat units will be called upon from time to time to furnish personnel for the above training. Personnel so selected must possess the highest qualifications as to courage, stamina, intelligence and adaptability.

The instructors for this Training Center were to be drawn from the Army members of an all-service organization known as the Amphibious Scouts, to which I happened to have been assigned. This group, originally formed in the Solomons by the Navy, had moved to Fergusson Island, south and east of Goodenough, on a beautiful bay well protected from the seasonal wind. There it had a training site which served also as a base for PT boats making the run to New Britain Island.

Early in December, Lt. Col. Frederick Bradshaw, Deputy G–2 of the Sixth Army, who was to become the first commanding officer of the ASTC, and I learned through grapevine channels that the Navy unit was being disbanded. We immediately made arrangements to move into the established camp and take over its rather crude facilities in being. With native work teams and assistance from the U.S. Army Engineers we then pushed back the jungle and built better facilities. By about 1 January 1944 we were ready to receive the first class of potential Scouts.

Members of the first class came from the 158th Regiment (the Bushmasters), formerly stationed in Panama and adept at jungle fighting, and from the 32nd Infantry Division, veterans of Buna and Gona in New Guinea. Succeeding classes were drawn from the dismounted 1st Cavalry Division, the 33rd Division, and the 41st Division. The instructor force was

augmented by graduates from the first class, and several Australian army officers were attached to the Center at one time or another to train the Scouts in jungle fighting and survival. U.S. Marine or Army Air Corps officers were sometimes added to a team if its mission called for specialized personnel not available in the Training Center.

Eyes for Island-Hopping

The Scouts' first reconnaissance mission was carried out by Lt. John R. C. McGowan and five men on 27 February 1944. The team was put ashore by Catalina and rubber boat on the southeast tip of Los Negros island in the Admiralty group. Air reconnaissance during the previous two weeks had detected no activity on the island, and the Army Air Corps had concluded that the Japanese had been evacuated. McGowan's team nevertheless found Japanese troops there and were able, unobserved, to ascertain that they were healthy and apparently well fed. The Scouts returned safely to the point where their rubber landing boat had been cached and were picked up by the "Cat" at daybreak the following morning. McGowan was taken by PT boat from the Catalina base to the task force commander, who, on the strength of his report, ordered reinforcements for the "reconnaissance in force" of the island being conducted by the dismounted 1st Cavalry Division. On the morning of 29 February a successful troop landing was made on the northeast coast of Los Negros.

This operation established a pattern that came to be almost routine. Before each landing of U.S. and allied troops, sometimes as early as D-day minus 14, an Alamo Scout team would be put ashore by PT, Catalina, Mariner, or submarine. After Los Negros came Madang and Wewak on the coast of New Guinea. Then when Hollandia (where an Australian team sent in by Theater Headquarters was betrayed by unfriendly natives and killed by the Japanese) had been taken, Sarmi, Biak, Noemfoor, Sansapor, and Japan Island followed in quick succession. In advance of each of these actions an Alamo Scout team made a pre-landing reconnaissance or conducted line-crossing operations to establish the strength and disposition of the enemy forces, and its reports enabled the Army G–3 to complete his plans for the assault. In one case,

at Sansapor on the north coast of New Guinea, the planned pre-landing bombardment and aerial strikes were called off because so few Japanese were found in the area.

As the Sixth Army moved northward the ASTC moved with it, setting up nearby headquarters and keeping in close personal touch with the Army G–2. For the later New Guinea operations the Center was located at Mange Point, south of Finschafen. In the Philippines, while the Sixth Army was near the beach on Leyte the Center was in Abuyog. On Luzon it followed the Sixth Army down the Lingayan Plain toward Manila, arriving finally at Subic Bay about 1 March 1945, where it set up shop on the east side of the bay four or five miles south of Olongopau. It was here that teams were trained and held until time for their operational briefing by Sixth Army G–2 officers at San Fernando, Pampanga.

The Philippine Guerrillas

During the Luzon campaign the work of the Alamo Scouts was broadened and diversified into two general types, first, the collection of information from guerrilla and civilian sources and by personal reconnaissance, and second, the organization of guerrilla activities. The Philippine guerrillas, nurtured and developed since 1942, had already for some time been in radio contact with General MacArthur's Philippine Regional Section. Now those in areas assigned to the Sixth Army were turned over to General Krueger, and the Sixth Army G–2 controlled all contact with them and the direction of their activities. For this purpose a Special Intelligence subsection of G–2 manned by Alamo Scout officers was established.

Alamo Scout teams thus made the initial personal contact with guerrilla units and remained the instrument for organizing their actions in support of the regular forces. The guerrilla effort had been inadequately coordinated, various political frictions hampered teamwork, and some units had no recognized leader. The Scout teams became coordinating agencies, mediating quarrels, appealing for unity of effort, expelling chronic agitators. Where leadership was lacking or disputed, Scout officers assumed command.

From the outset, a troublesome obstacle to the organization of efficient guerrilla operations was the undefined status of the many autonomous guerrilla units with respect to central authority. Since little was known concerning the composition and activities of many of these units, there being no overall command as in Mindanao or the Visayas, several months passed during which scores of Filipino fighting groups were neither fish nor fowl, neither bandits nor allies. The confusion and resultant dissatisfaction among cooperating groups were resolved by a decision to recognize bona fide units as components of the Philippine Army and give their officers and men formal status and proper pay.

This decision gave to us in the Special Intelligence subsection the lever we needed to extend control, through Scout teams in the field, to those guerrilla leaders who had not acknowledged our authority. Some of them, as might be expected, attempted to play off General MacArthur's Theater Headquarters against the Sixth Army, but with little success. Effective liaison was established between the two echelons, and guerrilla leaders attempting this gambit were soon put in their place.

The policy of official recognition also brought us problems. No sooner had it been announced than a flood of claims for pay and status threatened to inundate the Special Intelligence section. Many of these were clearly spurious, and procedures had to be set up to determine the legitimacy of each claim. American units employing guerrillas submitted rosters to the Sixth Army G–1, who referred them to the Special Intelligence section for verification. Upon verification and after formal approval by United States Army Force, Far East, lists of recognized units were published.

For radio communication with the guerrillas on Leyte and Luzon, a Filipino Message Center was set up adjacent to the U.S. Army Message Center, staffed with members of the U.S. Filipino Regiment and with former local employees of the Philippine Government's Bureau of Posts and Roads. These latter, given a minimum of training, made ideal communicators: every Philippine postmaster of pre-war days had to be able to operate a telegraph key. Many of the guerrillas with whom they were in contact were also former postal employees

trained in radio communications. The more than 70 guerrilla radios with which General MacArthur's Headquarters was in contact at the time of the Luzon landings were put gradually under the control of this Filipino Message Center and their messages fed into Army channels via Sixth Army G–2.

As the situation on Luzon became more stable the guerrilla network came to be a sort of general-utility coded telegraph service. The newly established Philippine Government was in dire need of some of its experienced officials still hiding out in the hills and jungle. It would telephone the Headquarters at San Fernando, and we would send its messages to the outlying provinces directing such-and-such persons to report to Manila. Finally, as the war ended, I arranged with the Director of Posts and Roads for the transfer of the whole network to the Philippine Government.

A Tidy Record

General Krueger's experiment with the Alamo Scouts was designed to give Army Headquarters what every division and lower command already had—an organized reconnaissance agency. Its purpose was to obtain strategic and tactical information primarily for the Army G–2, but at the same time for units being employed or about to be employed in combat. It accomplished this and more.

That the idea was sound and that this new application of standard principles was practical and valuable is attested by the results of more than 60 missions. The commanders who were beneficiary of these missions recognized that information provided by the Alamo Scouts saved lives, changed plans of attack, and led to the destruction of enemy positions and enemy shipping. Scouts made two successful prisoner-rescue raids, and they brought in 60 Japanese prisoners for questioning.

The experiment was a success; and remarkably, thanks to thorough planning, careful selection of personnel, conscientious training, and luck, its cost in lives was zero. On all these missions not a single Alamo Scout was killed.

INTELLIGENCE IN RECENT PUBLIC LITERATURE

MILITARY INTELLIGENCE IN WORLD WAR II

SPILLET OM NORGE (The Gamble for Norway). By *Sverre Hartmann*. (Oslo: Ernst G. Mortensens Forlag. 1958. Pp. 244. In Norwegian).

This account of Hitler's gamble in ordering that the invasion of Denmark and Norway be mounted on less than three months' notice and without any real military intelligence groundwork is a byproduct of the author's research for a broader scholarly work on the Scandinavian entry into World War II. In the course of investigating the reasons Denmark and Norway were drawn into the war, his publisher explains, Mr. Hartmann assembled much material on the military preparations made by the German staffs. He also held detailed talks with General Erich Buschenhagen, von Falkenhorst's former Chief of Staff, with Lt. Colonel Erich Pruck, former head of Abwehrstelle Norwegen, and with Lt. Colonel Berthold Benecke, former director of Kriegsorganisation Norwegen and then head of Abwehrstelle Norwegen's intelligence section. The book seems, on internal evidence, to be based chiefly on these interviews.

Although Germany carried on extensive espionage in many countries before World War II, Norway was considered, like Switzerland, Portugal and Sweden, a base for intelligence and counterespionage work against third countries and not a major intelligence target itself:

> The German Legation in Oslo kept Berlin informed on Norwegian affairs only through overt sources, primarily by following the Norwegian press and sending in representative clippings of articles, interviews and official notices. The documents from the German Foreign Ministry show that they were able to obtain a remarkably good insight into the situation through studying the newspapers. These were often extremely frank, and in many fields it was quite unnecessary to set up any particular intelligence operations on political and military affairs.

Until the turn of the year 1939/40 there had been no work whatever by the German General Staff on even a routine hypothetical plan for the invasion of Norway.

> The German Navy drew up a few study plans in October 1939. That was all. The conquest of Norway was largely improvised. Another time, if there should be another time, the preparations would certainly be far more solid and systematic. In 1940 the invasion succeeded in spite of the improvisation, because the country was militarily unprepared.

The first third of *Spillet om Norge*, apparently based chiefly on Colonel Benecke's reminiscences, is a rather disorganized set of notes and anecdotes about German intelligence operations in Norway against England and the USSR from 1937 through 1939, touching upon personalities, cover arrangements, communications methods, interservice and personal rivalries, and so forth. In its mid-section the book switches to the memories of General Buschenhagen, and the story comes alive. It tells of the frantic scramble to mount the invasion ahead of expected British/French occupation. One of the greatest problems, of course, was maintaining secrecy up to the moment of attack. The elaborate precautions worked out and the air of general snafu which prevailed are illustrated in examples that would be hilariously funny if the reader could forget that the operation succeeded because the Allies were even less well prepared.

A typical story is that of the guidebooks. The best collection of reference material available to von Falkenhorst's staff was the Baedeker guide on Norway. With elaborate security precautions the staff therefore bought a small number of copies, not more than one in any single town or single section of a large city: a sudden demand for the book in Germany might come to the attention of Allied agents. As a blind, rumors were circulated that the invasion of other areas was impending. Thus when a battalion of mountain troops began intensive training in the Berlin Fronau area, their commanding officer was told that they were to be sent to Scotland, but that this must under no circumstances be divulged to anyone. When the whole battalion swarmed into the bookshops and bought up every Norwegian Baedeker in the area, von Falkenhorst's staff learned to its collective horror that

the battalion leader, in order to safeguard the plan for invading Scotland, had prudently misinformed a few of his closest colleagues, in strictest secrecy, that they were training for an attack on Norway.

Written for a popular audience, the book is nevertheless a useful contribution to the literature on the early phase of World War II. Its anecdotal form and lack of chronological continuity are somewhat frustrating to the serious reader, but it does add up to a fairly clear picture of German intelligence operations (with occasional comment on psychological warfare and false-intelligence operations) in Norway and of the intelligence and security problems encountered in the hasty mounting of the invasion.

SECOND BUREAU. By *Philip John Stead.* (London: Evans Brothers Limited. 1959. Pp. 212. 18/–.)

Much has been written about three aspects of intelligence activities in France during World War II—the work of the Free French intelligence service; the activities of the French Resistance, with its intelligence overtones; and the operations of the French Section of the British Special Operations Executive, which infiltrated agents back into France to work with the Resistance. *Second Bureau* takes up yet a fourth aspect, the wartime history of the regular French military intelligence service, comprising the Deuxième Bureau and its supporting organizations for clandestine collection and counter-espionage. Its British author has written several books on specialized French themes, notably the biography of the great detective *Vidocq* and a history of *The Police of Paris.*

While *Second Bureau* is the first comprehensive book in English on this topic, a number of works published in French provided not disinterested sources on which the author could draw.[1] He also talked with several senior officers of the serv-

[1] In particular, one should note *Le Deuxième Bureau au Travail* by General Gauché (Paris: Amiot-Dumont, 1953), *Chemins Secrets* by Colonel Georges Groussard (Paris: Bader-Dufour, 1948), and the three volumes published under the collective title *Mes Camarades Sont Morts* by Pierre Nord (Colonel Brouillard) (Librairie des Champs-Élysées, 1947–1949). Stead also had access to the *Bulletin de l'Amicale des Anciens Membres des Services de Sécurité Militaire et des Réseaux T. R.*

ice, among them Colonel Paul Paillole, General Louis Rivet, and Colonel Georges Groussard. His thus apparent reliance on sources whose reputations are professionally at stake gives his book an extreme bias in assessing the value of the contribution made by the French military intelligence services in the war, and it must in this sense be received with caution. This warning can be given without in any way deprecating the skill and devotion of the officers of the regular French military establishment who carried on its intelligence activities under incredibly difficult conditions, both in Metropolitan France and in North Africa.

After examining the reports of the Deuxième Bureau dating from immediately before the French declaration of war up to the fall of France and concluding that "the failure of 1940 was not a failure of Intelligence," Mr. Stead begins his most interesting account of the tremendous difficulty of maintaining any French military intelligence at all after the imposed armistice. Although the service preserved many of its assets and held them together in unoccupied France, it had for the most part to function in double clandestinity, kept secret not only from the Germans but also from the Vichy government. This was particularly true with respect to counterespionage and its attempts to eliminate and neutralize German agents in the face of continuous German pressure on Vichy. Then in 1942, at the time of the North African landings, the service's main assets in files and leadership had to be transferred to North Africa, where they were committed to General Giraud, with his strong anti-Gaullist propensity. Stead is all on the side of the military "professionals" when he writes of their ultimate merger with the "amateurs" under Jacques Soustelle.

This book's treatment of problems of organization and keeping an intelligence service afloat in times of bitter adversity, its account of operational difficulties such as that of maintaining communications, and its description of particular operational successes in France and North Africa are recommended as valuable reading, but they should be read with a full appreciation of the author's bias.

THE SECRET INVADERS. By *Bill Strutton* and *Michael Pearson*. (London: Hodder and Stroughton. 1958. Pp. 287. 16/–.) In paperback abridgement as THE BEACHHEAD SPIES (New York: Ace Books. 1958. Pp. 191).

Story of the British Combined Operations Pilotage Parties which collected intelligence for World War II invasions by sea, sending swimmers in to observe and report on beach gradients and composition, shoals, land contours, and defenses. Written from the perspective of Lt. Commander Nigel Willmott, who organized the project, carried out its first reconnaissance on the island of Rhodes, and finally participated in the intelligence scrutiny of the Normandy beaches.

THE SECRET CAPTURE. By *S. W. Roskill*. (London: Collins. 1959. Pp. 156. 16/–.)

A documentary account of the May 1941 voyage of North Atlantic convoy OB 318 westbound from England, centering on its escort's capture of the German submarine U 110. Rebuts the "first" claim of USN Rear Admiral D. V. Gallery in his *We Captured a U-boat* and stresses the intelligence value of the U 110's documents and instruments taken intact. Painstaking detail makes the story a vivid and authentic vignette from the Battle of the Atlantic; its intelligence interest lies only in the Admiralty's feat of keeping the capture secret both from the Germans and from all but a few British officers.

THE SPRINGING TIGER. By *Hugh Toye*. (London: Cassell. 1959. Pp. 238. 25/–.)

Subhas Chandra Bose bore watching in World War II, and his story is still of interest, featuring an unhinged extreme of Asian nationalism, mistaken about practically everything. This study of the Azad Hind leader and his Indian National Army, apparently the result of Mr. Toye's pursuit as an historian of a subject which was once his concern as a British intelligence officer, is faithful to the facts; but the author lacks the poetic gift for treating madness.

The Indian National Army, which Bose built up and supported in Southeast Asia with a furious activity—political, diplomatic, and economic—was an extraordinary instrument, in fact an ideal instrument, for intelligence operations of all sorts, if not for the direct combat which Bose of course preferred it undertake. It is therefore noteworthy that this instrument accomplished very little of significance for the Japanese or for itself during the course of the war. In the field of propaganda, where Bose's opportunities seemed as unlimited as his ambitions, he could not break the British policy of silence, a response which he found bitterly exasperating. In espionage and subversion he had two minor successes, the defection of a British Indian outpost and the establishment of communications with a party of spies landed in India by submarine.

These little triumphs so exalted Bose that his visions began to blind the Japanese as well, and they withdrew their earlier objections to his control of the spy schools and networks for India. The great moment for the Azad Hind came with the invasion of India, wherein INA irregulars attached to the Japanese divisions were to unlock the floodgates of imprisoned nationalism. Bose was so involved in enthusiastic preparations for the administration of liberated India that he did not recognize the failure of the invasion until after the disaster was complete.

WORLD WITHIN. By *Tom Harrisson.* (London: Cresset. 1959. Pp. 349. 30/–.)

This is an authentic story of the virtual reoccupation in 1944 and 1945 of the interior wilderness of Borneo: a small group of paramilitary officers of the Australian SRD (Z Special) parachuted into the inaccessible uplands won the support of the overwhelming mass of the natives without revealing their activities to the coastbound Japanese until after the Allied landings at Brunei Bay, Tarakan, and Balikpapan. The author, an anthropologist who had tardily become an officer of the British SOE and been seconded to Z Special for this purpose, was the first of the group to drop among the headhunters and the one who directed its most important operations.

The account of these unique events, fabulous as it is, carries no area or tradecraft lessons for the intelligence officer of today, who will never have occasion to master the intricacies of polite behavior in the communal longhouse or devise tactics appropriate to a platoon of poison-dart blowpipers. Even in 1944 there was no other place in the world like Borneo, and today that Borneo is gone. What is of permanent value, for the intelligence officer as well as all others concerned with establishing viable relations with unfamiliar segments of mankind, is the example of the author's appreciative understanding of outlandish peoples, his penetration through the superficialities of their cultures to their underlying humanity, his affection for their individuals as men.

The first third of *World Within* describes from intimate association the pre-1944 life and people of the Kelabit longhouse at Bario on the Plain of Bah. This description, an anthropological masterpiece, is free of the stilted jargon and pat generalizations which characterize much anthropological writing. It is also free of the infection which in some measure mars the rest of the book (like many in which authors relive the impudence and glory of their exploits in unorthodox warfare)—ill-concealed self-satisfaction and a compulsion to allot praise and blame to former colleagues and superiors, settling old scores by appeal to posterity.

The reader of this third, before Mr. Harrisson gets involved in his personal and operational biography, will learn how an

economy with no gold and little goods accumulation can be rich, how a society with no calendar and little formal system can be efficient, how a culture streaked with superstition can nevertheless cleave to fundamental values. Further, he will be led subtly to the author's implied conclusion that once you live with them you find the samenesses among men, whether wild men of Borneo or British aristocracy, more important than the curious differences which our impersonal studies are likely so to highlight that we cannot see behind them.

KNIGHTS OF THE FLOATING SILK. By *George Langelaan.* (London: Hutchinson & Co., Ltd. 1959. Pp. 320. 21/–.)

The early days of World War II found George Langelaan a corporal in the British Field Security police, and these memoirs of his work as an intelligence agent begin with his unit's activities in unmasking German agents among the refugees who clogged the Belgian highways ahead of the retreating Allied armies. Back in England after Dunkirk, his familiarity with France and mastery of the language—he was born in Paris and had a good deal of French schooling—made him a natural selection for intelligence assignment as secret agent in France. His book touches lightly on his agent training, a subject which has been better covered elsewhere.

The episodes he relates from his activities in France carry a number of object lessons in security—the unreliability of plastic surgery in keeping your voice unrecognized over the telephone, the need to have a ration card forged well enough to pass scrutiny when submitted for exchange, the danger of keeping a British Red Cross flag pinned under your vest lapel. They also describe some painful and painstaking techniques for escape from detention, telling how an agent confined in a Vichy prison drank soapy water day after day until he was vomiting blood in order to obtain transfer to a hospital, then after being operated on for ulcer escaped and dragged himself across the Pyrenees, and how the author himself was helped by the French Resistance to escape with several others from a prison camp. After he returned to England, Langelaan was posted to Algiers, but his short chapter on intelligence and psychological warfare there, notable for his

admiration of C. D. Jackson and newspapermen as practitioners of the psychological warfare art, has very little depth.

Several chapters are devoted to British security and counterespionage activities during the war, telling for example how a German agent sent to England to learn about the state of British defenses was allowed to sight concentrations of aircraft and naval ships repeatedly moved up along his route. The help of everyday people in trapping spies in Britain is entertainingly described, as well as the careful, detailed work put into developing several counterespionage cases which turned out to be false.

It is to be regretted that several of the chapters on counterespionage cases have been left out of *The Masks of War*,[2] the American edition of *Knights of the Floating Silk*. The British version faithfully follows its French original, published in 1950 under the title *Un Nommé Langdon*,[3] except for the elimination of a few pages at the end.

HISTOIRE DE LA LIBÉRATION DE LA FRANCE. By *Robert Aron*. (Paris: Fayard. 1959. Pp. 779.)

This excellent book is not a history of military or resistance operations, but of the confrontation and counterplay of political forces exerted between D-day and VE-day to determine what sort of country *France libérée* would be. From the viewpoint of intelligence operations, however, its account of the abortive rising in the Vercors in June–July 1944 does make manifest the capabilities and limitations of a resistance movement. It perceptively portrays the divergent motives of the actors—the allied high command, de Gaulle, the FFI, the Communists—which help to explain, perhaps even to justify, this tragedy.

SISTERS OF DELILAH. By *E. H. Cookridge*. (London: Oldbourne Press. 1959. Pp. 224. 16/–.)

This collection of short accounts (some true and some in whole or part imagined) of female spies of the past quarter-

[2] Garden City, New York: Doubleday and Company, Inc., 1959. $3.95.
[3] Paris: Robert Laffont. 420 frs.

century auspiciously claims that its "facts will show better than any theory how and why women spy." The "why," the author states, is "the supreme satisfaction of exerting power over men through physical attraction"; but the twelve major and innumerable minor examples he cites do not sustain this titillating thesis. The twelve must be taken one at a time; that is about as far as the "facts" permit Samson's brothers to generalize if they would avoid his fate.

Nine of Cookridge's heroines have been described before in greater or less detail by other writers, notably by Kurt Singer.[4] Two of his ladies appear to be unique products of his own experience in English newspaper and intelligence service work—Marikka Revay, Lisbon *spitzelin* and specialist in the entrapment of British seamen as of 1941, and "Anita," alias Anna Vavrinova Ignatiev, allegedly a crude MVD operative in a Levantine fly-trap. On another, Josephine Baker, whose World War II intelligence work had previously been acknowledged, Cookridge has added operational details, attributing them to her French case officer.

Following Singer, Cookridge accredits the story of Banda Wilhelmina Van Deeren, allegedly the illegitimate Javanese offspring of World War I agent Gertrud Margarete Zelle MacLeod—Mata Hari. Banda, a CIA (Cookridge has Central Intelligence *Office*) agent pursued by her mother's nemesis, is claimed to have been executed in December 1950 by the Chinese Communists in North Korea. The elements which make this illegitimate mother-daughter story a natural for press

[4] In *The World's Greatest Women Spies* (London, 1951) and *Spies over Asia* (London, 1956) Singer reviews the following cases: Lydia von Stahl, Soviet agent in Paris in the mid-thirties, German double agent, and possibly a Soviet redouble after the war; Malvina von Bluecher, alias Mrs. Valvalie Dickenson, agent of Canaris under doll-vendor cover in New York City; Ruth von Kuehn, joint German-Japanese agent in Honolulu from 1935 to 1941; Mathilde Carré alias the Cat, née Micheline Ballard; Baroness Anna Wolkoff, incredibly mis- or *un*managed Sicherheitsdienst agent in London in 1939–40 who subverted the chief of the U.S. Embassy's cipher office, Tyler Kent; and Banda Wilhelmina Van Deeren, alleged illegitimate daughter of Mata Hari. The cases of Jenny Hoffman, German operative in New York in 1938, and Baroness von Falkenhayn and Renate von Natzner, who lost their heads for a Polish intelligence service man in 1935 in Berlin, have been described by other writers.

agents will undoubtedly enshrine it in the literature of the spy-writers for so long as they credulously borrow from each other. There is of course no trace whatever of a CIA agent of Banda's name, description, or career.

IN THE AMERICAN CIVIL WAR

SECRET MISSIONS OF THE CIVIL WAR. By *Philip Van Doren Stern.* (New York: Rand McNally. 1959. Pp. 320. $5.)

Mr. Stern's wide research into the background of the Civil War and the assassination of President Lincoln focussed his attention on the wealth of material he describes as "the conspiratorial aspects" of the conflict. These range, in present-day terms, from clandestine acquisition of intelligence through counterespionage to maritime operations, political action, and psychological warfare. They include, almost as an ironic forecast, a bit about the bureaucratic struggles for domination of the Northern secret service from Allan Pinkerton's appearance on the scene through Lafayette C. Baker's rise to power. Baker's own work, *History of the United States Secret Service,* is described as "filled with much valuable material but marred by the sensationalism, charlatanism and shameless mendacity that characterized the man himself."

What the author-anthologist has done is to sift from the mass of material available (some of it finally released as late as 1953 by the National Archives) the better-written dramatic stories of espionage, plotted sabotage, and heroic endeavors on behalf of both South and North. He has also excellently interpolated his own concepts of the relationships of these to the chronology and fortunes of the war. The acquisition and transmission of intelligence where it counted; the South's devising and trying to carry out such schemes as the Copperhead plot, plots in Canada, and the firing of New York City; its many maritime ventures for economic survival, with its bold ships such as the Sumter, the Fingal, and the Shenandoah, successor to the Alabama, and its Torpedo Service; the stories of female spies—all these personal accounts of developments in the area of espionage and unconventional warfare foreshadow much that has been done in subsequent wars by the United States and, for that matter, a number of other nations.

The book includes a brief but informative postscript, or appendix, on codes and ciphers of the Civil War. The author

credits Major Albert J. Meyer (who at the beginning of the war constituted the entire U.S. Signal Corps) with much of the North's beginning in this field and, with a characteristically human bit of historic illumination, notes that one of Meyer's best students was J. E. B. Stuart, who went over to the Confederates.

It is true that in some form or other the material in *Secret Missions of the Civil War* can be found elsewhere, but Stern has created a helpful, entertaining, and instructive product in bringing it together and weaving in his own brief but meaningful interpretations.

QUANTRILL AND HIS CIVIL WAR GUERRILLAS. By *Carl W. Breihan.* (Denver: Sage Books. 1959. Pp. 174. $3.50.)

A depraved, misanthropic exhibitionist using the guise of the Civil War to glut himself on brigandage, retribution, and murder, William Clarke Quantrill was an extremely able and consistently successful guerrilla leader. Of a high degree of intelligence and originality, he conceived of a guerrilla ethic compounded of light and darkness, of God and the devil, and he combined in his own nature dual sets of attributes—courage, daring, imagination, and loyalty alongside vindictiveness, brutality, and complete amorality.

Early in the conflict Quantrill developed a concept of total war and *Schrecklichkeit* which he outlined to the Confederate Secretary of War, James A. Seddon, when they met in Richmond in the fall of 1861: "I would cover the armies of the Confederacy all over with blood! . . . I would break up foreign enlistments by indiscriminate massacre. . . . There would be no prisoners. . . . Kansas should be laid waste at once! . . . Hated and made blacker than a dozen devils, I add to my hoofs the swiftness of the horse and to my horns the terror of a savage following."

In his guerrilla depredations his deeds supported these words. According to General Tom Hindman, at one time Quantrill's superior and commander of the Confederate Trans-Mississippi Department, Quantrill destroyed wagon trains and transports, tore up railways, broke telegraph lines, captured towns, and compelled the Union to keep active in Missouri a

large force that might have been employed elsewhere. More than 60,000 Federal troops were thus tied up fighting an enemy that never exceeded 3,000 to 4,000 men. Several thousand of the Union troops engaged against the guerrillas were killed outright; other thousands were put permanently *hors de combat* with physical wounds or battle fatigue in the engagements against Quantrill and his chief lieutenants, William C. "Bloody Bill" Anderson and George Todd.[5] In addition to the damage they inflicted on military objectives, Quantrill and his men murdered thousands of civilians, many in cold blood, destroyed millions of dollars worth of private property, and leveled settlements in Kansas ranging from hamlets like Olathe and Shawneetown to towns as large as Lawrence, with a population of 1,200.

Quantrill's tactics provide a lesson in guerrilla warfare. Operating out of territory generally sympathetic, mounted on the best horses available in the area, and armed with the advanced Colt revolving pistol,[6] Quantrill's men were invincible when they employed hit-and-run techniques. A prearranged signal would assemble the guerrillas from the countryside; they would rendezvous, strike, and scatter back into the countryside, taking up farming tools or going into hiding. The only important guerrilla defeats occurred when the guerrillas attempted to storm fortified stone or brick buildings in towns—when they violated Quantrill's creed of fighting only when he had the advantage and even then running if things became too hot. Another important tactic utilized by the western guerrillas in the later years of the war was the wearing of complete Federal blue uniforms at all times, confusing the enemy and sometimes deceiving him into costly confidence.

[5] After the winter of 1863/64 Anderson and Todd led bands of guerrillas independent of Quantrill.

[6] The guerrillas customarily carried in their belts and on their saddles from two to eight 5- and 6-shot pistols and a Sharps carbine, which together gave them a tremendous volume of firepower. In the early years of the war the Yankee cavalry on the Kansas-Missouri border was armed only with single-shot muzzle-loading carbines or muskets and sabers.

Quantrill's treatment of the civilian population where he operated also provides a stern model for guerrilla troops. A civilian population will generally divide into three segments—a small group friendly to the guerrillas, another small group friendly to the invaders, and a great, lethargic mass neutral and passive, seeking merely to be left alone. Quantrill did not recognize this third category. If anyone were not actively for him, he was against him and would be treated as a complete enemy. Intimidation thus brought many neutrals reluctantly to Quantrill's side. Or some particularly vicious act of Quantrill's would arouse the Federals to violent counteraction, frequently against the neutral masses, which with the help of clever propaganda would turn them loathingly to Quantrill as the lesser of two evils.

The question often arises as to whether a depraved, amoral bandit such as Quantrill hurts or helps the cause with which he sides. Certainly it is an aid to propaganda for one's guerrillas to be dashing men of principle such as John Singleton Mosby or John Hunt Morgan. But against this must be weighed the tremendous military advantage gained by having a Quantrill, an Anderson, or even a Jesse James as an ally. Quantrill's military contribution to the Confederacy was of inestimable value in spite of the moral burden of his black name and dark deeds.

Mr. Breihan's book does not do justice to the fascination of its subject. The author uses the style of popular pulp writers, stressing and repeating the lurid details of murder and rapine and overwriting to the point of absurdity. He frequently disagrees with another recent book on Quantrill, Richard S. Brownlee's *Gray Ghosts of the Confederacy*,[7] denying for example that Jefferson Davis gave Quantrill a commission, as Brownlee says, and speaking of George Todd as a man of patriotic conviction, whereas Brownlee calls him "a murderous killer." In assessing the value of the rival interpretations one is influenced by the fact that Breihan's *Quantrill* has no documentation, no bibliography, and no index, whereas Brownlee's *Gray Ghosts* is completely documented and has a fine bibliography and a detailed index.

[7] Baton Rouge: Louisiana State University Press. 1958.

THE SECRET SERVICE OF THE CONFEDERATE STATES IN EUROPE. By *James Dunwody Bulloch*. (New York: Thomas Yoseloff. 1959. Vol. I. pp. 460; Vol. II, pp. 459. $15.) Reprint of original publication by G P. Putnam's Sons. (New York. 1884.)

This is a detailed account of the author's years spent in Europe purchasing the ships that became Confederate blockade runners during the Civil War. In addition to the ships, he obtained the arms for them and arranged to evade British law by having them mounted at neutral ports. After the defeat of the Confederacy he was exiled from the United States. An unreconstructed rebel, Bullock was very bitter about the defeat and over the implication that his operations had been of a reprehensible nature, and his book was written as a defense of these activities.

From the intelligence point of view these volumes are an admirably circumstantial description of the technique used by an undercover purchasing agent who gave remarkable assistance in the Confederate prosecution of the war. Although such an activity was considerably simpler in those days than it is today, they remain in this sense exceedingly valuable.

EVASIONS AND ESCAPES [8]

THE TUNNELLERS OF SANDBORSTAL. By Lt. Cmdr. *John Chrisp.* (London: Robert Hale. 1959. Pp. 172. 15/–.)

Cmdr. Chrisp was one of the British officers who could not be evacuated from Crete in May 1941, and his attempt to evade German capture and make a get-away with a few companions in a small boat ended in failure. Taken prisoner of war, he and about two dozen others were marched some hundred miles to their first holding area on the north shore of Crete, a camp inadequately guarded and poorly fenced, with a friendly population outside. Looking back on this period, Chrisp recalls the escape opportunities that were squandered. Had he and his companions been seasoned prisoners, many of them could have escaped, but no attempts were made: the first phase of reaction to capture had set in, and their will to escape had given way to apathy and resignation. Then as the prisoners were transported through Greece most of them were still mentally unprepared, and several more opportunities were wasted by all but two commando officers. The moral is one which instructors in evasion and escape have tried to teach—that the best opportunities often arise in the earliest periods of capture, before the captive is lodged in his permanent prison. The psychological let-down on first capture can be forestalled by proper training.

Brought to the German POW camp of Sandborstal near the Baltic, Chrisp found the usual POW escape committee active, but notes in retrospect that most prisoners of war become so obsessed with the all-important problem of getting out of the camp that they give too little thought to the difficulties of the further journey home. After months of planning and digging Chrisp and a group of fellow-prisoners managed to tunnel their way out in the spring of 1942. All were recaptured through indiscretion or when their luck failed, Chrisp a hundred miles away on the Weser, and one officer within a hundred yards of the Kiel Canal. Later Chrisp and two other

[8] On this subject see also the review of *Knights of the Floating Silk* on page 101 of this issue.

officers smuggled themselves into a baggage truck and were driven out of the main gate, but were then discovered and returned to camp. Now considered dangerous escapees, they were transferred to the toughest prison of all, Colditz Castle. There Chrisp worked with the escape committee and aided in several escape attempts before the war ran out.

BID THE SOLDIERS SHOOT. By *John Lodwick.* (London: William Heinemann. 1958. Pp. 296. $4.50.)

A sophisticated and glittering autobiography of World War II adventure in the French Foreign Legion and British sabotage forces, featuring a dozen incarcerations and a number of escapes from confinement, some of them ingenious.

MISCELLANY

COMMANDER BURT OF SCOTLAND YARD. By himself (*Leonard Burt*). (London: William Heinemann. 1959. Pp. 246. 18/–.)

These episodes from the author's career include several of peripheral intelligence interest—the repatriation, interrogation, and character analysis of the wartime traitors William Joyce and John Amery; the interrogation and character analysis of the atom spies Alan Nunn May and Klaus Fuchs; some not very impressive operations against frogmen saboteurs at Gibraltar; and the security measures for the Khrushchev-Bulganin visit to England, with personal recollections of a human General Serov. There are also some sensible tips on the art of interrogation, not well illustrated, however, in the excerpts from interrogations actually quoted.

"Rodionov: A Case-Study in Wartime Redefection." By *Alexander Dallin* and *Ralph S. Mavrogordato.* In The American Slavic and East European Review, Volume XVIII, Number 1, February 1959, pp. 25–33. (New York: Columbia University Press [for The American Association of Slavic Studies, Inc.])

Vladimir Rodionov was a Red Army lieutenant colonel captured by the Germans in the summer of 1941. Under the battle name Gil' he headed a SS-sponsored unit, Druzhina I, in front line and German anti-partisan operations in 1942 and early 1943. In August 1943 he and his entire group suddenly rejoined the Soviets. Thereafter this unit fought its former German sponsors with conspicuous success. Apparently Rodionov himself was killed in April 1944.

From fragmentary German documentary sources and other material the authors piece together these activities and attempt to analyze the motivational complexities of Rodionov's double defection. The available documentation is not sufficient to establish the hypothesis that Rodionov may have been

from the beginning a Soviet provocation agent, although there is a strong presumption that this was the case.

"The Top-Secret Label." By *J. Yudin.* (Moscow: *New Times,* No. 16. April 1959. Pp. 10–13.)

Yudin uses H. H. Ransom's *Central Intelligence and National Security* and other recently published material to demonstrate in typical fashion that the intelligence community, which "has brought all branches of government into its worldwide web of intrigue and subversion," plays a crucial part in formulating the U.S. national policy of "cold war and constant threat to peace."

SUPPLEMENT TO CUMULATIVE INDEX to Publications of the House Committee on Un-American Activities; 1955 and 1956 (84th Congress). (December 1958. Pp. 334.)

Adds to the *Cumulative Index,* which covered the Committee's publications from 1938 to 1954, the references for the years 1955 and 1956. They are listed in three categories—individuals, publications, and organizations.

NEW PAPERBACKS

A Man Escaped, by Andre Devigny. (New York: Berkley Publishing Corp., 1959. Pp. 222. 50 cents.) One of the better books on escape.

The Coast Watchers, by Commander Eric A. Feldt. (New York: Ballantine Books, 1959. Pp. 240. 50 cents.) Copies of the original 1946 edition are scarce.

10,000 Eyes, by Richard Collier. (New York: Pyramid Books, August 1959. Pp. 320. 50 cents.) Probably the best book on intelligence activities of the French Resistance.