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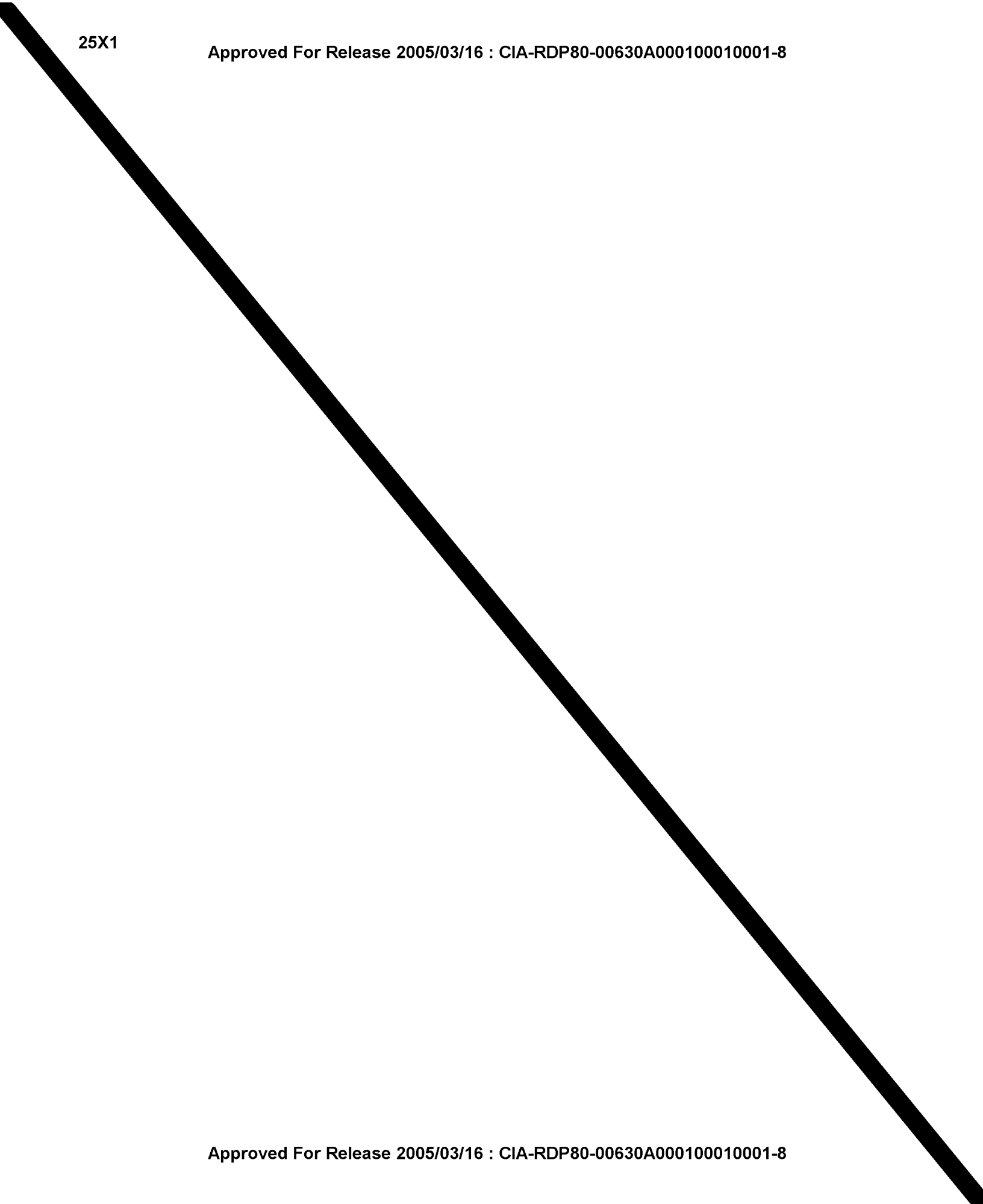

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Options for the policy maker

ANATOMY OF PRM-8

Allan E. Goodman

This article describes the life of a "PRM"—short for Presidential Review Memorandum. To date, the Carter administration has used the PRM process of inter-agency study and debate to design strategies for implementing new foreign policy initiatives. PRM-8 focuses on U.S. initiatives in international economic negotiations with developing countries, especially those which will assure the cooperation of key LDCs on such "new agenda" issues as North-South relations, nuclear proliferation, and human rights. This article reviews the origins of PRM-8, describes how CIA organized to handle a "new agenda" issue, and discusses the implication of the experience for future intelligence support to policy.

Historical Background

Three weeks before the 1973 oil embargo, at the Algiers summit meeting of Non-Aligned Nations, the developing countries called for a special session of the UN General Assembly devoted to the problems of development. This special session was held (April-May 1974) against a backdrop of growing unity and assertiveness on the part of the lesser-developed countries (LDCs) spurred by the prospect of "one, two, . . . many OPECs." The result was the "adoption"—i.e., no formal vote was taken and 200 reservations of record were submitted by industrialized countries—of a "Declaration and Action Programme on the Establishment of a New International Economic Order" (the NIEO) that, in part, called for the participation of LDCs as a bloc in all decisions affecting the international economy.

This act marked the beginning of what is called today the "North-South dialogue" between industrialized and developing countries, over the distribution of both wealth *and political power* in international affairs.

U.S. concern with the NIEO and the increasing assertiveness of the LDCs' UN caucusing group (the "Group of 77" which by 1974 included more than 100 countries) initially stemmed from concern over security and stability of raw materials supplies. But even when it became clear that other "OPEC-style" LDC commodity cartels were unlikely (especially in the midst of a world recession), and that the major OPEC states would not endorse the use of oil as a political weapon outside the Middle East context, the state of North-South relations remained a high priority concern. This was largely due to Secretary Kissinger's belief that the structure of power in international affairs was changing and that, especially in multi-lateral diplomacy, the support and active cooperation of the LDCs was essential to the success of U.S. foreign policy. And throughout the government it was recognized that while individually and collectively LDCs probably did not have the leverage to extract any of their basic demands against the will of the United States, they had polarized a number of key global issues along "North-South" lines.[1]

[1] For details, see *Political Perspectives on Key Global Issues* (RP 77-10055), March 1977, Confidential.

The PRM-8 Process

SCOPE

PRM-8 was assigned on 21 January 1977. It dealt explicitly with North-South relations. Of the first 24 PRMs assigned by the NSC, however, fully 15 dealt at least in part with "southern" matters—e.g., human rights, military base rights in key LDCs, Southern Africa, and nuclear weapons proliferation prospects in such countries as India, Pakistan, Brazil, Argentina—an indication of the importance accorded issues affecting U.S. relations with the LDCs by the new administration. In terms of specific policy preferences, moreover, President Carter made clear that his administration would not endorse aid programs that "taxed poor people in a rich country for the benefit of rich people in poor countries." A key purpose of the PRM-8 exercise, consequently, was to examine proposals aimed at re-orienting aid programs away from serving, in effect, as subsidies for foreign governments and toward attacking the problem of world poverty by improving the livelihood of the poorest people in developing countries.

Another purpose of PRM-8 was to complement administration policy on human rights. Initial reaction to U.S. human rights initiatives by key developing countries stressed, as does the Universal Declaration on Human Rights, that political liberties and economic and social justice go hand in hand. Some LDC spokesmen maintained that it was hypocritical of the Carter administration to press for human rights in the political sphere at the same time that the U.S. was making relatively little effort in responding to equity-inspired demands for a new International Economic Order.

CONSUMERS AND THEIR REACTIONS

PRM-8 was originally intended to impact on the discussions in the Economic Policy Group (the "EPG," consisting of Vice President Mondale, five Cabinet Secretaries, and the heads of five units in the Executive Office of the President) on prospects for the May London Economic Summit.

The first draft (known as "Track I"), however, was not satisfactory for several reasons. The most proximate probably was the very short period of time available to propose and study new options. But the most significant reason for dissatisfaction was that "Track I" did not look far enough into the future. This, in turn, stimulated senior NSC staff members to wonder if the full range of U.S. options would come into sharper view when the issues were examined from a political economy perspective and over a longer time frame. Especially after the EPG meeting that discussed the London Summit, the President, according to one NSC staff member, "was itching to see what a range of choices would look like over the next 4 to 8 years. He recognized, of course, that he couldn't spend enough time thinking about the issues involved himself, so he wanted to see what options might be developed by a group of experts that could take the time to project the North-South dialogue into the future. "Hence, the impetus behind PRM-8 "Track II."

"Track II" was designed to analyze the longer-term and essentially non-economic aspects of North-South relations. Particular emphasis was placed on reaching a better understanding of the diplomatic, strategic, humanitarian, and institutional issues raised by the present and projected state of the North-South dialogue and U.S. relations with the key LDCs who shape that dialogue. The exercise was to identify initiatives the United States could make in the North-South dialogue to elicit a constructive, cooperative response from the LDCs not only on key economic issues, but also on such other global issues as human rights, nuclear proliferation, and law of the seas.

To lead the Track II effort, Dr. Brzezinski recruited a distinguished economist, Dr. Roger Hansen, who has once been a Deputy Special Trade Representative and who at the time was a Senior Fellow of the Overseas Development Council. Hansen served as a consultant to the NSC "cluster" of regional specialists on North-South relations and organized and chaired the "Track II" Working Group.

PROCESS

Starting in early April, the Group met every other week for two hours at the White House and included representatives who were also substantive experts at the Assistant or Deputy Assistant Secretary level from the Departments of State, Treasury, and Defense, the Office of Management and Budget, AID, the NSC, and CIA.

Some 18 issue-oriented background papers were prepared and discussed over a three-month period. Both the informal, memo-like nature of most of these papers and the Chairman's stricture that no person speak for his or her agency during the bi-weekly "seminars" made for an atmosphere in which there was a free and frank exchange of views on many bureaucratically sensitive issues. Track II offered, in essence, a chance for its participants to step outside day-to-day decision-making roles and, most important, to consider the *political* as well as the economic trade-offs involved in U.S. policy toward North-South relations

So far,[2] the PRM-8 experience suggests that policy in the Carter administration proceeds from certain axioms—usually cast, as in the case of aid policy, in terms of what the United States will no longer do—and personal predilections of the President. The NSC staff then converts these preferences into terms of reference for inter-agency study and debate. This process produces not an inquiry into what our policy should be, but an identification of the *issues requiring resolution* at the Policy Review Committee (PRC) level[3] before a Presidential Directive can be framed. The debate at PRC meetings is less on options than on the institutional arrangements necessary to implement a new directions in foreign policy and on the trade-offs that such directions may involve. The PRM process—at least to this observer—thus assures that what drives the system of inter-agency study and debate is not just what can be done (i.e., the options) but what should be done to operationalize the President's foreign policy.

"North-South" Relations, Track II, and CIA

Until mid-summer of 1976, intelligence support on North-South relations had been limited to covert collection and reporting of LDC positions at key international economic conferences. Most of the finished intelligence was based on economic analysis and appeared in OER publications (*Economic Intelligence Weekly* and *International Oil Developments*). The Office of Current Intelligence also considered the North-South dialogue largely about economics, not politics, though several excellent analyses of the political divisions within the LDC bloc appeared in 1974 and 1975. The Office of Political Research, the Agency's in-house think tank, did conduct some research on North-South relations as a means of developing new analytical frameworks for the study of ther political dynamics of "small state" leverage.

As an issue clearly requiring *multidisciplinary* (i.e., political as well as economic) intelligence analysis, North-South relations was born with the request of Candidate

[2] "Track III," launched in the fall of 1977 and still on-going, will be analyzed in a future *Studies*. The "Track III" exercise is focused on US policy options for 1978.

[3] The PRC is a creature of the President. He determines when and on what issues the committee should meet and who, among Secretaries Vance and Brown and Dr. Brzezinski, should chair it. The Chairman selected then determines who among the government's most senior officials should attend the meeting.

Jimmy Carter for a briefing in early July 1976. What was surprising at the time was not that Mr. Carter had asked for the briefing but that, like PRM-8 itself, it was one of the first he requested. He did so at the same time that he asked for briefings about SALT, the Middle East, and other high-priority (and more traditional) concerns. The inter-office (OER, OCI, OPR) Task Group created to prepare that briefing later facilitated support for PRM-8 Track II. The Task Group, under the chairmanship of the Director, OER, served the vital functions of bringing together nearly all those working on aspects of North-South relations and of legitimizing the subject for future priority research and political analysis.

Due to the press of the campaign, the briefing on North-South relations (along with several others) was never given. But the task group never formally disbanded; if anything, by the fall of 1976 its membership had expanded, promoting continued communication across office lines.

Other developments also contributed to the growth of North-South relations as a subject for political analysis within CIA. Probably most important—next to the concern of the new administration itself—was the decision to incorporate into the Office of Regional and Political Analysis (created in December 1976) an "International Issues Division" (IID). IID was asked to continue the research on leverage done by the International Functional Staff (IFS) of OPR. This decision assured continuity in terms of both personnel and on-going analyses of key political aspects of the North-South dialogue.

The momentum of the North-South dialogue itself was another major factor in stimulating political analyses on North-South relations. More than half a dozen international conferences and negotiations between September 1976 and April 1977 were politicized by LDC demands for an NIEO. These events, coupled to feedback from policy makers on earlier analyses, generated (between August 1976 and the launching of PRM-8 Track II) more than 30 requests from policy makers for follow-on studies designed to illuminate the political/diplomatic aspects of North-South relations.

CIA was called upon to provide three types of papers to the PRM-8 exercise. One paper, *Political Perspectives on Key Global Issues*, focused on examining the impact of selected global issues (energy dependence, LDC demands for an NIEO, food and population, terrorism, and nuclear proliferation) on general trends in international relations as well as on specific U.S. interests. In response to the discussion of this report, CIA was asked to prepare a second paper for one of the three sessions of the Track II Working Group devoted to major strategic options for the United States in North-South relations. A third paper, prepared in OER, provided the Chairman of the Working Group some new data on what, by 1980, key developing countries would probably achieve with their modernization drives.

In retrospect, the paper that proved most useful to the PRM process, *Key Global Issues*, provided what unidimensional studies of North-South relations most notably lacked; namely a review of the *other* problems and issues affected by the North-South dialogue. In general, papers focusing on such linkages appear to be of great value to policy makers because they cannot easily study all dimensions of the foreign policy environment, given their personal time constraints and the preoccupation of their institutional analytical resources with what we would call current intelligence.

The simple explanation for the apparent lack of competition with CIA for multidisciplinary, projective analysis—and one usually preferred by academic writers on foreign policy—is that policy makers tend to be too caught up in crisis management (international or bureaucratic) to formulate the questions that would

illuminate the linkages between the issues with which they deal. Nothing could be farther from the truth in the case of the issues involved in PRM-8. At the very first meeting of the Track II Working Group, the policy makers developed just such a list of key questions that had more or less been constantly on their minds. At least to this observer, what the policy makers lacked were the research and analysis resources that could have charted out the linkages among the issues of concern. In-house research organs were literally choked with daily requests for background on current issues. Projective analyses, especially ones that cut across functional areas of responsibilities and academic disciplines, proved to be in short supply in the line foreign policy agencies.

Implications for Intelligence

PRM-8 was submitted to the President on 17 July 1977, and the options outlined discussed at several subsequent PRC meetings. In part, the Track II document called for the establishment of a permanent, interagency group to organize and monitor the implementation of U.S. policy in North-South relations. Such a group was created and has become—along with the PRC itself—a valuable focal point for coordinating the collection, analysis, and dissemination of intelligence information and for the planning of intelligence community research on North-South relations.

At the most immediate level, the Track II experience demonstrated the benefits (derived through feedback) of a close working relationship to the policy review process. Track II was a fertile ground for uncovering new subjects for intelligence analysis and for identifying new consumers whose responsibilities cut across both regional and functional lines.

At the more general level, the PRM-8 experience highlighted the degree to which the intelligence community has been presented with a rather new set of subjects for *political* analysis—including not only North-South issues, but issues and problems in the fields of energy, nuclear proliferation, human rights, food and population. On many of these issues the policy-maker is unable (often due to the complexity of the linkages between these issues and problems) to serve effectively as his or her own "analyst."

In a previous issue of this journal, moreover, a report from the Center for the Study of Intelligence on "CIA Intelligence Support for Foreign and National Security Policy Making"[4] concluded, in part, that "analysis of unfamiliar or particularly complex material . . . is coveted by policy-makers." PRM-8, and the half-dozen other PRMs whose subjects are the political/diplomatic implications of economic, technological, and scientific problems, offer just this kind of opportunity for political analysis. As such, the experience confirms the judgment of the study mentioned above, and suggests that the capability to do multi-dimensional analytical work elsewhere has not expanded nearly at the rate that issues requiring it have arisen in U.S. foreign policy.

[4] *Studies, XX/1,* Spring 1976

An untapped collection possibility

PARAPSYCHOLOGY IN INTELLIGENCE: A PERSONAL REVIEW AND CONCLUSIONS

Dr. Kenneth A. Kress

The Central Intelligence Agency has investigated the controversial phenomenon called parapsychology as it relates to intelligence collection. The author was involved with many aspects of the last such investigations. This paper summarizes selected highlights of the experiences of the author and others. The intent is not historical completeness. Files are available for those interested in details. Instead the intent is to record some certainly interesting and possibly useful data and opinions. This record is likely to be of future benefit to those who will be required to evaluate intelligence-related aspects of parapsychology.

The Agency took the initiative by sponsoring serious parapsychological research, but circumstances, biases, and fear of ridicule prevented CIA from completing a scientific investigation of parapsychology and its relevance to national security. During this research period, CIA was buffeted with investigations concerning illegalities and improprieties of all sorts. This situation, perhaps properly so, raised the sensitivity of CIA's involvement in unusual activities. The " Proxmire Effect," where the fear that certain Government research contracts would be claimed to be ill-founded and held up for scorn, was another factor precluding CIA from sensitive areas of research. Also, there tend to be two types of reactions to parapsychology: positive or negative, with little in between. Parapsychological data, almost by definition, are elusive and unexplained. Add a history replete with proven frauds and many people instantly reject the subject saying, in effect, "I would not believe this stuff even if it were true." Others, who mostly have had personal "conversion" experiences, tend to be equally convinced that one unexplained success establishes a phenomenon. These prejudices make it difficult to evaluate parapsychology carefully and scientifically.

Tantalizing but incomplete data have been generated by CIA-sponsored research. These data show, among other things, that on occasion unexplained results of genuine intelligence significance occur. This is not to say that parapsychology is a proven intelligence tool; it is to say that the evaluation is not yet complete and more research is needed.

Attention is confined to psychokinetics and remote viewing. Psychokinetics is the purported ability of a person to interact with a machine or other object by unexplained means. Remote viewing is akin to clairvoyance in that a person claims to sense information about a site or person removed from a known sensory link.

Anecdotal reports of extrasensory perception (ESP) capabilities have reached U.S. national security agencies at least since World War II, when Hitler was said to rely on astrologers and seers. Suggestions for military applications of ESP continued to be received after World War II. For example, in 1952 the Department of Defense was lectured on the possible usefulness of extrasensory perception in psychological warfare.[1] Over the years, reports continued to accumulate. In 1961, the reports

[1] A. Puharich, "On the Possible Usefulness of Extrasensory Perception in Psychological Warfare" delivered to a 1952 Pentagon conference, *The Washington Post*, August 7, 1977.

induced one of the earliest U. S. Government parapsychology investigations when the chief of CIA's Office of Technical Service (then the Technical Services Division) became interested in the claims of ESP. Technical project officers soon contacted Stephen I. Abrams, the Director of the Parapsychological Laboratory, Oxford University, England. Under the auspices of Project ULTRA, Abrams prepared a review article which claimed ESP was demonstrated but not understood or controllable.[2] The report was read with interest but produced no further action for another decade.

Two laser physicists, Dr. Russell Targ and Dr. Harold E. Puthoff, re-awakened CIA research in parapsychology. Targ had been avocationally interested in parapsychology for most of his adult life. As an experimentalist, he was interested in scientific observations of parapsychology. Puthoff became interested in the field in the early 1970s. He was a theoretician who was exploring new fields of research after extensive work in quantum electronics.

In April of 1972, Targ met with CIA personnel from the Office of Scientific Intelligence (OSI) and discussed the subject of paranormal abilities. Targ revealed that he had contacts with people who purported to have seen and documented some Soviet investigations of psychokinesis. Films of Soviets moving inanimate objects by "mental powers" were made available to analysts from OSI. They, in turn, contacted personnel from the Office of Research and Development (ORD) and OTS. An ORD Project Officer then visited Targ who had recently joined the Stanford Research Institute (SRI). Targ proposed that some psychokinetic verification investigations could be done at SRI in conjunction with Puthoff.

These proposals were quickly followed by a laboratory demonstration. A man was found by Targ and Puthoff who apparently had psychokinetic abilities. He was taken on a surprise visit to a superconducting shielded magnetometer being used in quark (high energy particle) experiments by Dr. A. Hebbard of Stanford University Physics Department. The quark experiment required that the magnetometer be as well shielded as technology would allow. Nevertheless, when the subject placed his attention on the interior of the magnetometer, the output signal was visibly disturbed, indicating a change in the internal magnetic field. Several other correlations of his mental efforts with signal variations were observed. These variations were never seen before or after the visit. The event was summarized and transmitted to the Agency in the form of a letter to an OSI analyst[3] and as discussions with OTS and ORD officers.

The Office of Technical Services took the first action. With the approval of the same manager who supported the ESP studies a decade previously, an OTS project officer contracted for a demonstration with the previously described subject at SRI. For a cost of $874, one OTS and one ORD representative worked with Targ and Puthoff and the previously mentioned man for a few days in August, 1972. During this demonstration, the subject was asked to describe objects hidden out of sight by the CIA personnel. The subject did well. The descriptions were so startlingly accurate that the OTS and ORD representatives suggested that the work be continued and expanded. The same Director of OTS reviewed the data, approved another $2,500 work order, and encouraged the development of a more complete research plan.

By October, 1972, I was the Project Officer. I was chosen because of my physics background to work with the physicists from SRI. The Office of Technical Service funded a $50,000 expanded effort in parapsychology.[4] The expanded investigation

[2] S. I. Abrams, "Extrasensory Perception", Draft report, 14 December 1965.

[3] H. E. Puthoff; Stanford Research Institute; Letter to K. Green/OSI, June 27, 1972.

[4] Office of Technical Service Contract 8473, 1 October 1972 (CONFIDENTIAL).

included tests of several abilities of both the original subject and a new one. Curious data began to appear; the paranormal abilities seemed individualistic. For example, one subject, by mental effort, apparently caused an increase in the temperature measured by a thermistor; the action could not be duplicated by the second subject. The second subject was able to reproduce, with impressive accuracy, information sealed inside envelopes. Under identical conditions, the first subject could reproduce nothing. Perhaps even more disturbing, repeating the same experiment with the same subject did not yield consistent results. I began to have serious feelings of being involved with a fraud.

Approximately halfway through this project, the SRI contractors were invited to review their results. After careful consideration of the security and sensitivity factors, the results were shared and discussed with selected Agency personnel during that and subsequent meetings. In February, 1973, the most recent data were reviewed; thereafter, several ORD officers showed definite interest in contributing their own expertise and office funding.

The possibility of a joint OTS/ORD program continued to develop. The Office of Research and Development sent new Project Officers to SRI during February, 1973, and the reports which were brought back convinced ORD to become involved. Interest was translated into action when ORD requested an increase in the scope of the effort and transferred funds to OTS.[5] About this time, a third sensitive subject, Pat Price, became available at SRI, and the remote viewing experiments in which a subject describes his impressions of remote objects or locations began in earnest. The possibility that such useful abilities were real motivated all concerned to move ahead quickly.

The contract required additional management review before it could be continued or its scope increased. The initial review went from OTS and ORD to Mr. William Colby, then the DDO. On 24 April, Mr. Colby decided that the Executive Management Committee should pass judgment on this potentially sensitive project. By the middle of May, 1973, the approval request went through the Management Committee. An approval memorandum was written for the signature of the DCI, then Dr. James Schlesinger.[6] Mr. Colby took the memorandum to the DCI a few days later. I was soon told not to increase the scope of the project and not to anticipate any follow-on in this area. The project was too sensitive and potentially embarrassing. It should be tabled. It is interesting to note that OTS was then being investigated for involvement in the Watergate affair, and that in May, 1973, the DCI issued a memorandum to all CIA employees requesting the reporting of any activities that may have been illegal and improper. As Project Officer, clearly my sense of timing had not been guided by useful paranormal abilities!

During the summer of 1973, SRI continued working informally with an OSI officer on a remote viewing experiment which eventually stimulated more CIA-sponsored investigations of parapsychology. The target was a vacation property in the eastern United States. The experiment began with the passing of nothing more than the geographic coordinates of the vacation property to the SRI physicists who, in turn, passed them to the two subject, one of whom was Pat Price. No maps were permitted, and the subjects were asked to give an immediate response of what they remotely viewed at these coordinates. The subject came back with descriptions which were apparent misses. They both talked about a military-like facility. Nevertheless, a

[5] C/TSD; Memorandum for Assistant Deputy Director for Operations; Subject: Request for Approval of Contract; 20 April 1973 (SECRET).

[6] W. E. Colby; DDO; Memorandum for Director of Central Intelligence; Subject: Request for Approval of Contract; 4 May 1973 (SECRET).

striking correlation of the two independent descriptions was noted. The correlation caused the OSI officer to drive to the site and investigate in more detail.

To the surprise of the OSI officer, he soon discovered a sensitive government installation a few miles from the vacation property. This discovery led to a request to have Price provide information concerning the interior workings of this particular site. All the data produced by the two subjects were reviewed in CIA and the Agency concerned.

The evaluation was, as usual, mixed.[7] Pat Price, who had no military or intelligence background, provided a list of project titles associated with current and past activities including one of extreme sensitivity. Also, the codename of the site was provided. Other information concerning the physical layout of the site was accurate. Some information, such as the names of the people at the site, proved incorrect.

These experiments took several months to be analyzed and reviewed within the Agency. Now Mr. Colby was DCI, and the new directors of OTS and ORD were favorably impressed by the data. In the fall of 1973, a Statement of Work was outlined, and SRI was asked to propose another program. A jointly funded ORD and OTS program was begun in February, 1974.[8] The author again was the Project Officer. The project proceeded on the premise that the phenomena existed; the objective was to develop and utilize them.

The ORD funds were devoted to basic studies such as the identification of measurable physiological or psychological characteristics of psychic individuals, and the establishment of experimental protocols for validating paranormal abilities. The OTS funds were to evaluate the operational utility of psychic subjects without regard to the detailed understanding of paranormal functioning. If the paranormal functioning was sufficiently reproducible, we were confident applications would be found.

Before many months had passed, difficulties developed in the project. Our tasking in the basic research area proved to be more extensive than time and funds would allow. The contractors wanted to compromise by doing all of the tasks with less completeness. The ORD scientists insisted that with such a controversial topic, fewer but more rigorous results would be of more value. The rigor of the research became a serious issue between the ORD project officers and SRI, with myself generally taking a position between the righteousness of the contractor and indignation of the researchers. Several meetings occurred over that issue.

As an example of the kinds of disputes which developed over the basic research, consider the evaluation of the significance of data from the "ESP teaching machine" experiments. This machine was a four-state electronic random number generator used to test for paranormal abilities. SRI claimed the machine randomly cycled through four states, and the subject indicates the current machine state by pressing a button. The state of the machine and the subject's choice were recorded for later analysis. A subject "guessing" should, on the average, be correct 25 percent of the time. SRI had a subject who averaged a statistically very significant 29 percent for more than 2,500 trials.

I requested a review of the experiment and analysis, and two ORD officers quickly and skeptically responded. They first argued that the ESP machine was

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[7] K. Green; LSD/OSI; Memorandum for the Record; Subject: Verification of Remote Viewing Experiments at Stanford Research Institute; 9 November 1973. (SECRET)

[8] Office of Technical Service Contract, FAN 4125-4099 Office of Research and Development Contract, FAN 4162-8103; 1 February 1974 (CONFIDENTIAL).

possibly not random. They further argued the subjects probably learned the nonrandom machine patterns and thereby produced high scores.[9] During this review, it was noted that whether the machine was random or not, the data taken during the experiment could be analyzed to determine actual machine statistics. The machine randomness was then unimportant, because the subject's performance could then be compared with actual machine performance.[10] The ORD Project Officers, however, did not believe it would be worth the effort to do the extra analysis of the actual data.

I disagreed. I had the Office of Joint Computer Services redo the data analysis. The conclusion was that during the experiment "no evidence of nonrandomness was discovered" and there was "no solid reason *how* he was able to be so successful."[11] I further ordered the subject retested. He averaged more than 28 percent during another 2,500 trials. This information was given in written and oral form to the ORD Project Officers, who maintained there must be yet another flaw in the experiment or analysis, but it was not worth finding. Because of more pressing demands, the issue could not be pursued to a more definite conclusion.

Concurrent with this deteriorating state of affairs, new Directors of ORD and OTS were named again. Since neither Director had any background or experience in paranormal research, the new Director of ORD reviewed the parapsychology project and had reservations. I requested a meeting in which he said he could not accept this reality of paranormal functioning, but he understood his bias. He said that inasmuch as he could not make an objective decision in this field, he could simply follow the advice of his staff. The ORD Project Officers were feeling their own frustrations and uncertainties concerning the work and now had to face this unusual kind of skepticism of their new Director. The skepticism about the believability of the phenomenon and quality of the basic research adversely affected the opinions of many people in OTS. Support for the project was vanishing rapidly.

As these pressures mounted, the first intelligence collection operation using parapsychology was attempted. The taget was the Semipalatinsk *U*nidentified *R*esearch and *D*evelopment *F*acility-3 (URDF-3, formerly known as PNUTS). The experimental collection would use our best subject, Pat Price. From experience it was obvious that Price produced bad data as well as good. Borrowing from classical communication theory concepts, this "noisy channel" of information could nevertheless be useful if it were characterized. An elaborate protocol was designed which would accomplish two characterization measurements. First, we needed assurance the channel was collecting useful data. I reviewed the photos of URDF-3 and chose two features which, if Price described them, would show the channel at least partially working. Referring to Figure 1a, these features were the tall crane and the four structures resembling oil well derricks. It was agreed that if Price described these structures, I would be prepared to have him sign a secrecy agreement, making him witting, and collect more relevant intelligence details. Secondly, after a working channel was thus established, a signal-to-noise or quality characterization was required. This would be done by periodic tests of the channel—that is, periodically Price would be asked to describe features of URDF-3 which were known. The accuracy of these descriptions would be used to estimate the quality of the data we had no obvious way of verifying.

[9] L. W. Rook; LSR/ORD; Memorandum for OTS/CB; Subject: Evidence for Non-Randomness of Four-State Electronic Random Stimulus Generator; 12 June 1975 (CONFIDENTIAL).

[10] S. L. Cianci; LSR/ORD; Memorandum for OTS/CB; Subject: Response to Requested Critique, SRI Random Stimulus Generator Results; 12 June 1975 (CONFIDENTIAL).

[11] G. Burow; OJCS/AD/BD; Memorandum for Dr. Kress; Subject: Analysis of the Subject-Machine Relationship; 8 October 1975 (CONFIDENTIAL).

The experiment began with my branch chief and me briefing Targ and Puthoff in a motel. Later, at SRI, Price was briefed by Targ and Puthoff. Since Targ and Puthoff presumably knew nothing about URDF-3, this protocol guarded against cueing and/or telepathy. Initially Price was given only the geographic coordinates, a world atlas map marked with the approximate location of URDF-3, and told it was a Soviet RD&E test site. Overnight, he produced the drawing on the bottom right of Figure 1b. Price further mentioned this was a "damned big crane" because he saw a person walk by and he only came up to the axles on the wheels (note sketch on left, Figure 1b). This performance caught my attention; but with two more days of work, we never heard about the derricks. Eventually, a decision was needed. Because the crane was so impressive, my branch chief and I decided the derricks description requirement should be relaxed and we should continue.

When the decision was made to make Price witting, I decided to test him. My branch chief and I sat in a conference room while Targ and Puthoff brought a smiling Pat Price into the room. I was introduced as the sponsor, and I immediately asked Price if he knew me.

Yes.

Name?

Ken Kress.

Occupation?

Works for CIA.

Since I was then a covert employee, the response was meaningful. After having Price sign a secrecy agreement, and some discussions, I confronted him again. I rolled out a large version of Figure 1a and asked if he had viewed this site.

Yes, of course!

Why didn't you see the four derricks?

Wait, I'll check.

Price closed his eyes, put on his glasses (he "sees" better that way) and in a few seconds answered· "I didn't see them because they are not there any more." Since my data were three or four months old, there was no rejoinder to the implied accusation that my data were not good. We proceeded and completed a voluminous data package.

In a few weeks, the latest URDF-3 reconnaissance was checked. Two derricks were partially disassembled, but basically all four were visible. In general, most of Price's data were wrong or could not be evaluated. He did, nevertheless, produce some amazing descriptions, like buildings then under construction, spherical tank sections, and the crane in Figure 1b. Two analysts, a photo interpreter at IAS[12] and a nuclear analyst at Los Alamos Scientific Laboratories agreed that Price's description of the crane was accurate; the nuclear analyst wrote that "one: he, the subject, actually saw it through remote viewing, or two: he was informed what to draw by someone knowledgeable of URDF-3."[13] But, again, since there was so much bad information mixed in with the good, the overall result was not considered useful. As proof of remote viewing, the data are at best inconclusive. The ORD officers concluded that

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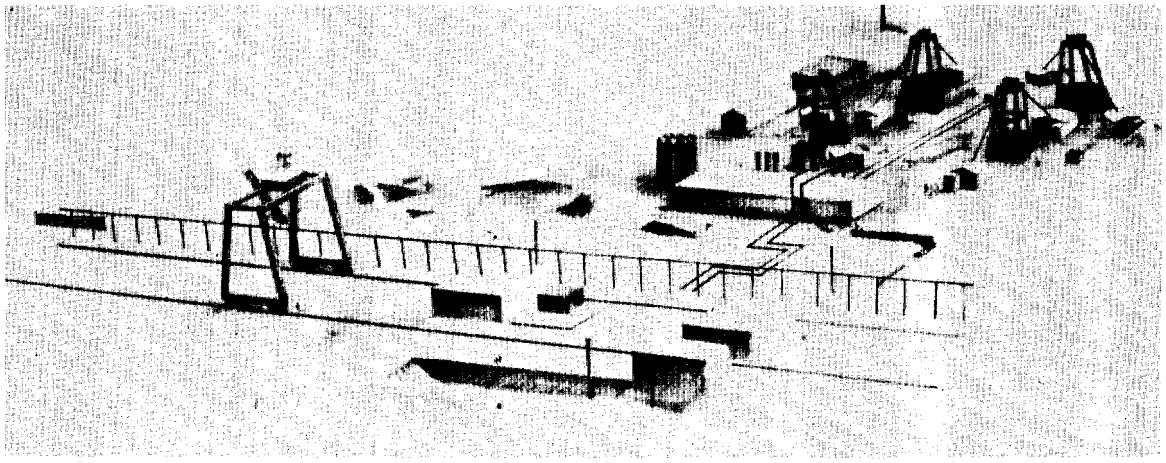
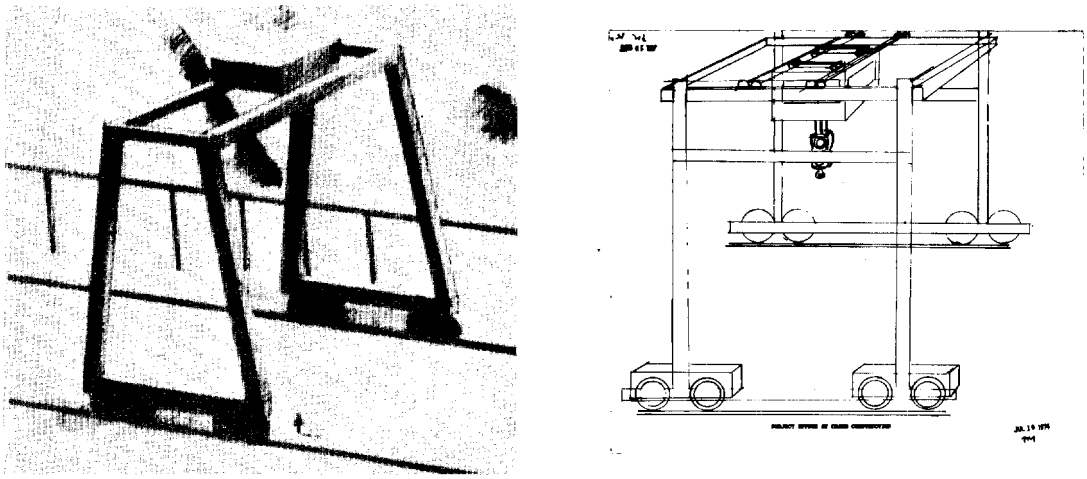
[12] W. T. Strand; C/ESO/IAS; Memorandum for Director, Office of Technical Service; Subject: Evaluation of Data on Semipalatinsk Unidentified R&D Facility No. 3, USSR; 20 August 1974 (SECRET).

[13] D. Stillman; Los Alamos Scientific Laboratory; "An Analysis of a Remote Viewing Experiment of URDF-3"; 4 December 1975 (CONFIDENTIAL).



(a) TARGET SITE



(b) CRANE COMPARISON

Figure 1: Comparison of Target Site and Drawing by Remote Viewer

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since there were no control experiments to compare with, the data were nothing but lucky guessing.

I began to doubt my own objectivity in evaluating the significance of paranormal abilities to intelligence collection. It was clear that the SRI contractors were claiming success while ORD advisors were saying the experiments were not meaningful because of poor experimental design. As a check on myself, I asked for a critique of the investigation from a disinterested consultant, a theoretical physicist with broad intellectual background. His first task was to evaluate the field of parapsychology without knowledge of the CIA data. After he had completed this critique, I asked him to acquaint himself with the CIA data and then to reassess the field. The first investigation produced genuine interest in paranormal functioning as a valid research area. After being acquainted with CIA data, his conclusion was, " a large body of reliable experimental evidence points to the inescapable conclusion that extrasensory perception does exist as a real phenomenon, albeit characterized by rarity and lack of reliability."[14] This judgment by a competent scientist gave impetus to continue serious inquiry into parapsychology.

Because of the general skepticism and the mixed results of the various operational experiments, a final challenge was issued by OTS management: OTS is not in the research business; do something of genuine operational significance. Price was chosen, and suggestions were solicited from operational personnel in both OTS and the DDO. An intriguing idea was selected from audio operational applications: the difficult and dangerous job of targeting and installing audio collection systems. A test to determine if remote viewing could help was suggested. The interiors of two foreign embassies were known to the audio teams who had made entries several years previously. Price was to visit these embassies by his remote viewing capability, locate the coderooms, and come up with information that might allow a member of the audio team to determine whether Price was likely to be of operational use in subsequent operations. Price was given operationally acceptable data such as the exterior photographs and the geographical coordinates of the embassies.

In both cases, Price correctly located the coderooms. He produced copious data, such as the location of interior doors and colors of marble stairs and fireplaces that were accurate and specific. As usual, much was also vague and incorrect. Regardless, the operations officer involved concluded, "It is my considered opinion that this technique—whatever it is—offers definite operational possibilities.[15]

This result was reviewed within OTS and the DDO, and various suggestions for potential follow-on activities were formulated.[16] This package of requirements, plus the final results of the current contract, were reviewed at several meetings within OTS and ORD. The results of those meetings are as follows:

1. According to the ORD Project Officers, the research was not productive or even competent; therefore, research support to SRI was dropped. The Director

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[14] J. A. Ball; "An Overview of Extrasensory Perception"; Report to CIA, 27 January 1975.

[15] C/AOB/OTS; Memorandum for the Record; Subject: Parapsychology/"Remote Viewing"; 20 April 1976 (SECRET).

[16] Chief/Division D/DDO; Memorandum for C/D&E; Subject: Perceptual Augmentation Techniques; 24 January 1975 (SECRET); AC/SE/DDO; Memorandum for C/D&E; Subject: Perceptual Augmentation Testing; 14 January 1975 (SECRET); C/EA/DDO; Memorandum for Director of Technical Service; Subject: Exploration of Operational Potential of "Paranormals"; 5 February 1975 (SECRET); C/Libya/EL/NE/DDO; Memorandum for OTS/CB; Subject: Libyan Desk Requirement for Psychic Experiments Relating to Libya; 31 January 1975 (SECRET); CI/Staff/DDO; Memorandum for the Record; Subject: SRI Experiment; 12 December 1974 (SECRET).

of OTS felt the OTS charter would not support research; therefore, all Agency funding in paranormal research stopped.

2. Because of the mixed results, the operational utility of the capability was considered questionable but deserved further testing.

3. To achieve better security, all the operations-oriented testing with the contractor was stopped, and a personal services contract with Price was started.

4. Since I was judged to be a positively biased advocate of paranormal functioning, the testing and evaluation of Price would be transferred to a more pragmatic OTS operations psychologist.

The OTS psychologist picked up his new responsibilities and chose to complete an unfinished DDO requirement. The origin of the requirement went back to the fall of 1974 when several OTS engineers became aware of the parapsychology project in OTS and had volunteered to attempt remote viewing. They passed initial remote viewing tests at SRI with some apparent successes. To test these OTS insiders further, I chose a suggested requirement to obtain information about a Libyan site described only by its geographic coordinates. The OTS engineers described new construction which could be an SA-5 missile training site.[17] The Libyan Desk officer was immediately impressed. He then revealed to me that an agent had reported essentially the same story. More coordinates were quickly furnished but were put aside by me.

The second set of Libyan geographic coordinates was passed by the OTS psychologist to Price. A report describing a guerrilla training site was quickly returned. It contained a map-like drawing of the complex. Price described a related underwater sabotage training facility site several hundred kilometers away on the sea coast. This information was passed to the Libyan Desk. Some data were evaluated immediately, some were evaluated only after ordering special reconnaissance coverage. New information produced by Price was verified by the reconnaissance. The underwater sabotage training facility description was similar to a collateral agent's report. The Libyan Desk officer quickly escalated the requirement to what was going on inside those buildings, the plans and intentions, etc.[18] The second requirements list was passed to Pat Price. Price died of a heart attack a few days later, and the program stopped. There have been no further CIA-sponsored intelligence collection tests.

Since July, 1975, there has been only modest CIA and Intelligence Community Staff interest in parapsychology. The Office of Scientific Intelligence completed a study about Soviet military and KGB applied parapsychology.[19] During November of 1976, Director George Bush became aware that official Soviets were visiting and questioning Puthoff and Targ at SRI about their work in parapsychology. Mr. Bush requested and received a briefing on CIA's investigations into parapsychology. Before there was any official reaction, he left the Agency. Various intelligence community groups, such as the Human Resources Subcommittee on R&D, have exhaustively reviewed parapsychology in CIA, DOD, and the open research, but have failed to conclude whether parapsychology is or is not a worthwhile area for futher investigation. Several proposals from SRI and other contractors were received by CIA but none were accepted. There are no current plans for CIA to fund parapsychology investigations.

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[17] OTS/SDB; Notes on Interviews with F. P., E. L., C. J., K. G., and V. C., January 1975 (SECRET).

[18] DDO/NE; Memorandum for OTS/BAB; Subject: Experimental Collection Activity Relating to Libya; 8 October 1975 (SECRET).

[19] T. Hamilton; LSD/OSI; "Soviet and East European Parapsychology Research," SI 77-10012, April 1977 (SECRET/NOFORN).

Postscript

At this point, I have traced the action and reaction of various elements of CIA to what is certainly an unconventional and highly controversial subject. Also of interest are the concurrent reactions of other agencies to parapsychology. In August, 1973, parapsychology was discussed with several members of DIA. The DIA people were basically interested in the Soviet activities in this area, and expressed considerable interest in our own fledgling results. Numerous meetings have occurred during the past several years. DIA remains interested on a low priority basis.

The Army Materiel Command learned of CIA interest in the paranormal. We discovered the Army interest was generated by data which emerged from Vietnam. Apparently certain individuals called point men, who led patrols into hostile territory, had far fewer casualties from booby traps and ambushes than the average. These point men, needless to say, had a loyal following of men and, in general, greatly helped the morale of their troops under a brutal, stressful situation. The Army gave extensive physical and psychological tests to a group of unusually successful point men and came to no conclusion other than perhaps that paranormal capabilities may be the explanation! The Army was most interested in CIA results and wanted to stay closely informed. After a few more follow-up meetings, the Army Materiel Command was never heard from again.

The Defense Advanced Research Projects Agency (DARPA) reported that they had not only a showing of interest but a hostile response as well to the subject area. At one time, we felt we had the strong interest of some people at DARPA to discuss our data. The SRI contractors and I went to a briefing where we had a several-hour confrontation with an assemblage of hostile DARPA people who had been convened especially to debunk our results. After a long, inconclusive, emotional discussion, we left. Contacts with DARPA stopped for several years.

The Navy reviewed part of the work and became interested. Some groups developed strong interest, and minor funding was provided to SRI by Navy to replicate one of SRI's earlier experiments under more controlled conditions. The experiment was replicated. Then the Navy asked SRI to repeat the same experiment under different conditions. An effect was observed, but it was not the same as the previous observations. About this same time, the Navy became very concerned about this research being "mind warfare"-related. Funding was stopped.

The active funding for parapsychology now has shifted to the Air Force's Foreign Technology Division with the addition of modest testing being completed by another group at DARPA. These investigations are not yet completed, but a second phase is funded by the Air Force. The Air Force project is attempting to evaluate whether signals and communications can be sent and received by paranormal functioning. Also aircraft and missile intelligence which can be verified is being gathered and evaluated. To date the results are more consistent than those seen during the CIA research, but still they are mixed. Some simple experiments seemed very impressive and conclusive. The more complex experiments are difficult to assess.

In the non-government world an explosion of interest in unclassified parapsychology research occurred after the first publication of CIA-sponsored projects. Books have been written, prestigious professional societies have had sessions on parapsychology,

and several national news reports have been broadcast and printed.[20] Director Turner revealed publicly that CIA has had operational interest in parapsychology.[21] The open publication of these investigations is generally healthy and helpful. It shows a reduction of associated emotionalism and bias. These publications will also stimulate other scientific investigations into parapsychology.

There is a less positive aspect to open interest and publications. Before adequate assessment was made by CIA and others, we may have allowed some important national security information out into the public domain. It is my opinion that, as it relates to intelligence, sufficient understanding and assessment of parapsychology has not been achieved. There are observations, such as the original magnetic experiments at Stanford University, the OSI remote viewing, the OTS-coderoom experiments, and others done for the Department of Defense, that defy explanation. Coincidence is not likely, and fraud has not been discovered. The implication of these data cannot be determined until the assessment is done.

If the above is true, how is it that the phenomenon remains controversial and receives so little official government support? Why is it that the proper assessment was never made? This state of affairs occurs because of the elementary understanding of parapsychology and because of the peculiarities of the intelligence and military organizations which have attempted the assessments. There is no fundamental understanding of the mechanisms of paranormal functioning, and the reproducibility remains poor. The research and experiments have successfully demonstrated abilities but have not explained them nor made them reproducible. Past and current support of parapsychology comes from applications-oriented intelligence and military agencies. The people managing such agencies demand quick and relevant results. The intelligence and military agencies, therefore, press for results before there is sufficient experimental reproducibility or understanding of the physical mechanisms. Unless there is a major breakthrough in understanding, the situation is not likely to change as long as applications-oriented agencies are funding parapsychology. Agencies must commit long-term basic research funds and learn to confine attention to testing only abilities which at least appear reproducible enough to be used to augment other hard collection techniques (example: use parapsychology to help target hard intelligence collection techniques and determine if the take is thereby increased). Parapsychology, like other technical issues, can then rise or fall on its merits and not stumble over bureaucratic charters and conjectures proposed by people who are irrevocably on one side or the other in the controversial area.

[20] R. Targ and H. Puthoff; "Information Transfer Under Conditions of Sensory Shielding"; Nature, CC LII, 602-607 (October 18, 1974); H. Puthoff and R. Targ; "A Perceptual Channel for Information Transfer Over Kilometer Distances; Historical Perspective and Recent Research"; Proceedings of the IEEE, LXIV (March 1976, Number 3, 329-354); R. Targ and H. Puthoff; "Mind-Research Scientists Look at Psychic Ability"; Delacarte Press (1977); J. Wilhelm; "The Search for Superman"; Dell (1974); IEEE Conference on Man; Systems and Cybernetics; Washington (1976 and 1977); NBC Nightly News; 4 and 5 August 1976; NBC Today; 9 August 1976; J. Wilhelm, "Psychic Spying?"; *The Washington Post*, Outlook Section, August 7, 1977.

[21] J. O'Leary, "Turner Denies CIA Bugging of South Korea's Park," *The Washington Star*, 9 August 1977.

How military information became institutionalized

INTELLIGENCE AND THE GENERAL STAFF*

David Kahn

For eight years Hannibal, the Carthaginian military genius, had laid waste to the Roman provinces in the southern part of Italy. His father had made him swear eternal hatred to Rome, and Hannibal, in the second Punic War between Rome and Carthage to rule the Mediterranean, had beaten the Romans at Cannae and other battles and now ravaged their wheatfields and pastures. He was awaiting the arrival of his brother Hasdrubal, who in the spring of 207 B.C. had crossed the Alps with 48,000 foot, 8,000 horse, and 15 elephants. Their forces would unite and rout the Romans.

Soon after his arrival in the north of Italy, Hasdrubal drafted a message to his brother in the south. It said that he would meet Hannibal in Umbria, on the eastern coast of Italy. He dispatched four Gallic and two Numidian horsemen to carry the letter to Hannibal. They traversed the length of Italy without finding him, then turned around to follow him as he moved northward. Uncertain of the roads, they were captured by a party of Roman troops and brought before the praetor. At first they evaded his questions, but under threat of torture they acknowledged that they were carrying a letter from Hasdrubal to Hannibal.

The praetor sent it, still sealed, to one of the consuls of Rome, Gaius Claudius Nero (not the notorious emperor), commanding nearby. Nero had an interpreter read it. He recognized at once the danger if the two brothers combined forces. Sending the letter to the senate with a request for more troops, he at once marched north against Hasdrubal. At the Metaurus River, his legions attacked Hasdrubal, who was unsupported by his brother and outnumbered by the Romans. They decisively defeated him. The victory erased forever the threat of a Carthaginian conquest, and Rome advanced to become the mistress of the western world.

Early Role of Intelligence

The battle of the Metaurus holds a unique place in military history. It is the only one of Edward S. Creasy's *Fifteen Decisive Battles of the World: from Marathon to Waterloo* that had intelligence as a precondition of victory. In the 4,000 years from the dawn of civilization to World War I, military intelligence had little effect on warfare.

To be sure, it had always been an essential element. In the biological struggle for survival, even a protozoan must have mechanisms to receive stimuli and to judge whether they are good or bad for it. An animal must see or feel its quarry to kill it. But intelligence was like breathing: vital to the functioning of an organism, but not to its dominance. To the animal capacity for deriving information from the observation of physical objects, man then joined the ability to derive it from words. The addition of time- and distance-conquering verbal intelligence to physical expanded information's

*This article is a chapter from David Kahn's forthcoming book, *Hitler's Spies*.

range and powers. But even these did not at first enable intelligence to win many victories. In the main, there were not many to win. Strategies for conquering a country in ancient and medieval times were so vague, so imprecise, that information about them would bring only vague and diffuse benefits to the target nation. Intelligence had little opportunity to concentrate one's own strength enough to overcome enemy brute force.

This is not to say that tribes and nations spurned it. Often they gathered and used it. The primitive Jibaro of Ecuador crept into enemy villages to count houses and estimate the number of fighting men they had. The ancient Egyptians interrogated prisoners of war. Julius Caesar dispatched scouts to reconnoiter enemy forces. Medieval rulers paid spies. The Mongols flung out mounted patrols to scour the land. Codebreakers in Renaissance Venice solved the esoteric dispatches of foreign diplomats. And sometimes the intelligence produced victories. When Caesar learned from a prisoner that an enemy barbarian had assembled 6,000 infantry and 1,000 cavalry for an ambush, he counterplanned and defeated the chieftain. When spies told Richard the Lion-Hearted about a caravan bringing supplies to the Saracens, he concentrated his cavalry and raided it.

But most often intelligence did not control the course of events. The Pharaoh Ramses II won at Kadesh despite having dribbled away the advantage gained from a prisoner interrogation. Venice's knowledge, derived from an intercept, that the commander of the army of the Holy Roman Empire was requesting either 20,000 ducats or the presence of the emperor did not help her win any victories. Cannae, the classic victory of warfare in which Hannibal encircled a larger Roman force and defeated it, owed nothing to intelligence. Nor did the innumerable sieges, successful for one side or the other, of the Middle Ages. Nor did Creasy's 14 other decisive battles, such as Marathon, in which the Athenian hoplites defeated the Asiatic armies of Xerxes; Tours, where Christendom turned back the Moorish tide of Islam; Hastings, in which William of Normandy conquered England; Blenheim, which undercut the designs of Louis XIV for European domination; Saratoga, which all but decided the American Revolution, and the others. In these and all the other cases that comprise the vast majority of engagements in the long history of warfare, the issue was decided not by intelligence but by tactics, resolution, and strength.

Intelligence only began finding the opportunities and the powers it needed to become a significant factor in war in the industrial and the French revolutions. They created railroads, the telegraph, good maps, mass armies, and a general staff. These made it necessary and possible to draw detailed plans for the mobilization of an army and the invasion of an enemy. At the same time, industrialization made new aspects of society factors of importance for intelligence. The ancient Greeks did not care how much coal and iron a nation's mines could produce; it was a question of vital importance to a modern country—and to its enemy. At last intelligence had a chance to play a major role in war.

The same revolutions also furnished intelligence with the tools that would enable it to gain more knowledge of another country. A daily press emerged. Diplomacy evolved the military attaché. Bigger armies yielded more prisoners for interrogation, more documents for seizure. Tapping telegraph wires, and later intercepting radio transmissions, provided far greater volumes of enemy messages than the occasional waylaying of couriers. The balloon, the Zeppelin, and the airplane saw more and faster than the deepest-driving cavalry. The camera fixed fleeting impressions in greater detail than the eye and reproduced them for others. In all of these ways, intelligence amplified its ability to gather information.

At the same time, it was enhancing its evaluation of information. The proximate cause of this was the evolution of the general staff.

Beginnings of the General Staff

Though commanders of ancient times and feudal lords had called their lieutenants into council for military advice, these bodies were ad hoc and dissolved upon completion of their service. A permanent staff began to develop when the rise of capitalism enabled monarchs to cease relying on foraging and to supply their professional armies themselves, with the greater flexibility that this brought. In the 1600s, the Great Elector of Brandenburg assigned his quartermaster and some assistants to plan ahead for the next day's march and encampment—to reconnoiter and draft orders. In this planning lay the germ of a general staff.

During the next century, as the operations of war grew more complex, commanders gathered groups of specialized assistants around them to serve throughout a campaign. They channeled to the commander the information he needed to make his decisions, and they then elaborated these broad decisions in the detailed orders for march and supply needed to realize them. "Attack on the right flank," orders the commander, and his chief of staff barks out commands for the 2nd Regiment to advance, for the 3rd to change its direction of march from the left flank to the right and to go into reserve, for the artillery chief to begin firing, for the supply officers to bring up ammunition, and so on. Staffs vary as do commanders. Frederick the Great had a small staff, Napoleon a large and rather badly organized one. The generals of the newly created division of combined arms soon had small staffs of their own, called a "general's staff."

But these were all temporary wartime organizations. It remained for Prussia, in 1803, to establish the first permanent general staff—a body to plan for war even in peace.

Prussia's general staff constituted a separate corps, like, for example, the engineers. Originally it had its own uniform, which was later abbreviated to dark red stripes on the trousers of the army's field gray. It consisted of officers of the Prussian army who had been admitted to the War Academy on the basis of brains and who, after graduation, had been called to the general staff by its chief. Only about 2 percent of the officer corps attained this eminence—some 200 men in 1870, 600 in 1914. They divided their staff time between the central headquarters in the red brick building at Berlin, the Great General Staff, and the smaller staffs at corps, division, and fortress headquarters, known collectively as the Troops General Staff. At any one time, somewhat more than half were working in Berlin. In addition, at regular intervals they suspended their staff service to command troops in the field. This alternation sought both to keep them in contact with practical problems and to disseminate the concepts and the control of the general staff throughout the army. Their basic intellectual ability, their training, their selection, and their rapid advancement made the staff into an élite. Its reticence ("General staff officers have no names," said one chief), the secrecy of its work, the seeming mechanical unrolling of its victories over Austria in 1866 and over France 1870, the German awe of the military—all these combined to create the legend of mysterious invincibility, of dark control of the cords of destiny that has always enveloped the German general staff.

Intelligence Joins the General Staff

The basic task of the Great General Staff was to prepare the plans that the German army would follow in case of war with a particular nation. This naturally

required a modicum of information, just as on the individual level: a country has to "see" its enemy to strike it. "The work of the department [meaning the general staff]," stated the opening words of an 1816 order on the staff's basic duties and organization, "must aim at the most exact knowledge of this country and of the other European states in military matters and must prepare all that is necessary in an emerging war." Because this staff was permanent and its functions uninterrupted, it gave intelligence a continuous institutional existence for the first time in its history. This enabled it to improve its abilities in evaluation.

Nevertheless, intelligence in the Great General Staff did not crystallize as a separate activity. It blurred into planning. Raw data about a foreign country went to one of the two war-plans sections—one for the eastern theater, one for the western. Officers there blended it with all other factors in devising their strategy. The Great General Staff in Berlin did not create a permanent separate section for the general evaluation of intelligence. Likewise, no officer in the Troops General Staff worked solely on it.

The reason was a basic antagonism to intelligence that paralleled the opposition to any technical innovation. The aristocratic officer corps feared that it would lose its quasi-monopoly of commanders' jobs to the new technicians. Such concerns frightened Germany's officer corps more than those of other European countries. Consequently, while France had a G-2 section for the general evaluation of intelligence and England set up an Intelligence Division, Germany had neither.

She did bow slightly to the new realities, however. With the outbreak of hostilities in 1866 and 1870, the army mobilized. The Great General Staff converted into a General Headquarters. Its duties compelled it to organize, not geographically like its peacetime parent, but functionally. It thus included, for the only times during the existence of the Great General Staff up to 1914, a section for the general evaluation of intelligence. The job of this Intelligence Branch mainly consisted of receiving the immense flow of data, which is far greater in war than in peace, of picking out the important items, of judging their probable veracity, of assembling them into overall reports, and of passing them to the Operations Branch, which issued the orders of the chief of the general staff of the field army. With the return of peace, the objections to intelligence resumed their sway. The Intelligence Branch was dissolved, and intelligence reverted to its indeterminate and subaltern status.

In one area, however, it preserved in peace the gains made just before the start of Prussia's war with Austria. The area was espionage; the organization became the forerunner of World War II's legendary Abwehr.

On 25 March 1866, Helmuth Count von Moltke, chief of the general staff of the army, established an Intelligence Bureau on an emergency basis to get information he lacked about his prospective enemy. At the end of May, a few days before hostilities began, the bureau received from a young south German officer then in Vienna news that Austria was setting up a Northern army under the command of Ludwig von Benedek. This suggested to Moltke that the Austrians would advance in a unified force in a single direction, not in any encircling or pincers movement. He perfected his own plans. A couple of weeks later, another agent brought to Berlin the order of battle of the Austrian army, together with some profiles of its more important commanders. This agent was destined to become the greatest in Germany's history.

He was Baron August Schluga, 25, slim, blond, blue-eyed. Born in Zsolna, Hungary (now Zilina, Czechoslovakia), he had studied at the Polytechnical Institute in Vienna, had joined an Austrian infantry regiment, and had fought "very bravely" at

Magenta and Solferino in 1859. He had been described as a capable officer suited for a general staff post. But he resigned in 1863 just before taking the examination for the Austrian War School, saying he wanted to marry and to manage personally the estates he would gain. His credentials apparently enabled him to penetrate the Austrian headquarters as a journalist and obtain the information he brought to Berlin. After Moltke thrashed the Austrians in a seven-weeks' war, he made the Intelligence Bureau permanent and placed it directly under him.

During its first half-century, the Intelligence Bureau bounced back and forth from one unit of the Great General Staff to another. In 1889, with the creation of a layer of deputy chiefs of the general staff called, in an apparent historical allusion, "Oberquartiermeister," it went to the IIIrd Oberquartiermeister, or O. Qu. III. Thenceforth it carried the designation by which in World War I it became famous—III b. The constant rise in its funds during those same years to an amount greater than any European country except Russia enabled what had been a tiny office to enlarge. By 1901, 124 officers and men directed agent activities from war intelligence posts in Belgium, Switzerland, England, Italy, Spain, Luxemburg, Denmark, and Sweden, and Rumania.

They aimed above all at the most secret enemy documents—those disclosing his deployment plans to concentrate his armies for the first, decisive battle. And with France, Germany's chief enemy, they partly succeeded.

Schluga had, after the war of 1866, gone to Paris, where he delivered information to the Prussian military attaché before the Franco-Prussian War. III b designated him "Agent 17."

He came to be regarded by the Germans as "the ideal of a major agent." A charming, well-educated, aristocratic man whose head resembled Bismarck's, he remained somewhat of a mystery to III b, who never knew his sources, his other activities, or even whether he lived in Paris under his own or another name. He fended off such inquiries, arguing that III b could be concerned only with his performance. During the 40 years of peace between the wars of 1870 and of 1914, III b kept him virtually on ice. Though he continued to report, often amusingly, the agency spoke to him only once a year, preserving him from suspicion, and for service in a catastrophe.

World War I

The plan worked to perfection. Some time before the outbreak of World War I, Agent 17 furnished Germany with a document of which spymasters dream. It detailed how the French would deploy some of their forces on the fifth day of their mobilization. With this coup, one of the greatest in the history of espionage, III b seemed to justify its existence and all the money that it had spent, for it had provided Germany with what appeared to be a key for the defeat of the counterattacking armies of France in a cataclysm that was sure to come.

A pistol shot in Sarajevo in 1914 detonated the cataclysm.

The German Army's *Field Service Regulations* of 1908, in force when World War I began, declared—as previous editions had done—that the most definite intelligence comes from visual observation and that obtaining this falls chiefly to the cavalry. But the army's 10 cavalry divisions failed to push deeply beyond the enemy foreposts at the start of the war and find out what was going on behind his front. Trench warfare then quashed any new hopes for it.

During such warfare, the bulk of enemy intelligence was acquired—as it always had been—by the visual observations of the fighting troops. Most of it was physical evidence. The men in the trenches reported the digging of new trenches and the installation of machine-gun nests. They sent out patrols to look more closely, to capture prisoners, and perhaps to obtain documents. And during the battle itself, they could spot new enemy positions, detect new tactics, take prisoners, capture new weapons.

Their basic information was supplemented by new sensing devices. Sound- and light-ranging units, for example, fixed the location to an enemy gun, enabling the German artillery to bombard and destroy it.

The tool of reconnaissance that made the most spectacular progress during World War I was, of course, aircraft. This activity expanded so rapidly that it had to be centralized at General Headquarters after only eight months of war. Where speed was paramount, as in artillery spotting and during the progress of a battle, reconnaissance was visual. The observers radioed in the fall of shot, or dropped notes about enemy actions.

But it was photography that gave aerial reconnaissance its greatest meaning. The introduction of vertical photographs during 1915 made it evident that they could yield far more information than the naked eye. By 1918, German cameras were photographing from the air each week an area larger than Connecticut. Aerial photography became Germany's chief means of military reconnaissance. The enormous influence that this new source of intelligence had on the operations of both sides was shown most dramatically in a single datum. After 1917, both Allied and Central powers so feared its apperceptions that neither dared move troops in daylight hours.

Communications Intelligence

In the opening days of the war, the radio station of the German fortress at Königsberg, in East Prussia, intercepted several Russian army radiograms in the clear. They disclosed the intentions of the Russian forces moving ponderously into East Prussia in such detail that the German commander in the east, Paul von Hindenburg, and his chief of staff, Erich Ludendorff, gained a knowledge of enemy intentions unprecedented in the whole of military history. With it, they enveloped, cut up, and destroyed an entire Russian army in the battle of Tannenberg, one of the few decisive victories of the war. It gave Russia its first great push toward defeat. And it opened German eyes to a form of intelligence they had never really considered.

After Tannenberg, the high command established radio intercept posts. The new source of information was nurtured mainly by Captain Ludwig Voit, the father of communications intelligence in the German army. When, at the end of 1914, aged 32, he became chief of the General Headquarters radio station, he set up the Cryptanalytic Station West within it. Though it could never quite overcome France's superiority in this area (France solved German diplomatic codes, for example, though the Germans never solved the French), in the east radio intelligence played a role of high importance. "We were always warned by the wireless messages of the Russian staff of the positions where troops were being concentrated for any new undertaking," said one high German commander. And with the help of these warnings, the Germans defeated Russia.

More verbal intelligence came from enemy trench telephones. Early in 1915, a 32-year-old telegraph inspector, Otto Arendt, devised an apparatus to overhear these

conversations by picking up and amplifying the return earth current. By 1918, 292 such apparatuses were in service, pouring out floods of frontline intelligence.

Espionage

Major Walther Nicolai, an energetic, blondish general staff officer of medium height, in his mid-thirties, headed III b throughout World War I. He ran the spy agency exactly as he would have led a regiment in the field, for he was a Prussian officer, who did his duty wherever he was assigned. He was far from being a mysterious spymaster, and indeed he claimed, "I myself have never seen a spy and never spoken to one." It was his way of saying that he believed his own main job was less in supervising espionage than in advising his superiors of its results.

By 1917, he commanded about 150 officers. Many served directly under him at General Headquarters, but others worked in Berlin, in regional posts, at lower headquarters on the western front, and in the headquarters for the eastern and southeastern theaters. Most of the agents were run by the nine regional War Intelligence Posts. Of these, Antwerp's headed from early 1915 by Dr. Elsbeth Schragmüller, the famous "Fräulein Doktor," was perhaps the most effective. In mid-December 1915, Antwerp controlled 62 of III b's 337 agents in the west; three months later; Dr. Schragmüller had almost doubled her number and had raised the fraction of active agents from two-thirds to three-quarters.

III b's best-known spy was, of course, Mata Hari. The idea of using the famous dancer came from a III b officer stationed in Kleve, Baron von Mirbach. Nicolai met her in the Domhotel in Cologne, apparently early in 1916. He put her up in the hotel Frankfurter Hof in Frankfurt-am-Main for her training. Captain Roepell, then leader of the War Intelligence Post Düsseldorf, who prudently stayed in a different hotel, instructed her in political and military matters. Dr. Schragmüller laid out her trip for her and taught her how to make observations and write reports. Herr Habersack of the Antwerp post showed her how to use invisible ink. Then, designated Agent H-21, she vanished into enemy territory. Roepell received two or three letters in secret ink from her at cover addresses; they contained nothing important. Early in 1917, the French intercepted and solved a message from the German military attaché in Madrid requesting that she be paid. They caught her, and shot her at dawn in the courtyard of the forbidding fortress of Vincennes.

Though Mata Hari became an eponym for "spy," the most successful German agent of the war remained undetected throughout his lifetime and unknown for years afterward. This was Agent 17—Schluga. It was he who, before the outbreak of war, had delivered to the German high command information on the deployment of some French forces on the fifth day of mobilization. This information had not realized the great hopes placed in it by Germany's master spy, for the German commanders were unclear as to whether or not a suspected variant of France's Plan XVII had been activated, and this worry prevented them from exploiting Schluga's intelligence.

Disappointment over the failure of his supreme effort may have contributed to the break in health that Schluga, then 73, suffered soon afterward. He went to Germany for a rest, but by May of 1915 was back in Paris in full activity. He sent in reports every second day through a messenger system tailored to the weaknesses of the border controls between France and Switzerland; they usually reached III b's Report Collection Station South at Lörrach, in southwestern Germany just across the border from Switzerland's Basel, within 48 hours. His report of 9 June 1915, which arrived on the 11th, disclosed: "English complaining over lack of munitions. They regret that the

promised support of the French attack of north of Arras is not possible on account of munition insufficiency."

Schluga's sources consisted mainly of members of the legislature and personnel in the war ministry. But their information was incomplete, mainly because Joseph Joffre, the commander in chief, and Alexandre Millerand, the war minister, kept their plans secret from the legislators. In general Schluga could throw light only on tactical matters. Moreover, his reports were sometimes true, sometimes false, reflecting his lags in reporting the constant changes of view in high French quarters. On the political, economic, and psychological situation, however, Schluga was well informed. His reports seemed accurate, as far as they went. And this very accuracy nearly bred disaster.

The presence of so veteran, so reliable, and so well placed an agent as Schluga overimpressed the then chief of the general staff of the field army, Erich von Falkenhayn. He insisted upon seeing Schluga's reports himself. He then read them, not as contributory, as part of the whole intelligence picture, but as determinative. And Schluga, whether consciously or not, repeatedly emphasized French weaknesses in character and in government. This reinforced Falkenhayn's inclination to underestimate the French will and ability to attack. Consequently, in the summer of 1915 he discounted clear indications of a threatening offensive: the bringing up of troops, the construction of installations for an attack, even the definite statements of prisoners. The inactivity of the Allies in midsummer and Schluga's report confirmed his view of the general situation as hopeless for the Allies. Had he continued to rely solely on Schluga, he might have suffered a serious defeat. But finally the authoritative tone of the heavy guns overruled the spy. Falkenhayn moved to repel the Allied advance.

Schluga continued in his work until ill health forced him to quit. His final report arrived 5 March 1916. He then went to Germany, where, after a year of receiving his pension from III b, he died, regarded by his chiefs as "the most important phenomenon in the entire history of espionage, so far as that history is known to us."

But if III b succeeded with Schluga, it failed in three critical areas. One was the United States. Nicolai held the astonishing view that it was "no business of the intelligence service" to obtain information about U.S. strength that might be brought to bear in Europe. III b did not even begin to prepare espionage against its new enemy until several months after the entry of the United States into the war. And in the end, its total espionage effort against the nation whose efforts would eventually defeat Germany consisted of the massive total of seven agents.

III b's second failure lay in inadequate economic espionage, during a war in which economics increasingly determined the outcome. Third, it failed to learn in advance and warn the troops and the high command of the frightening appearance on the battlefield of a new and epoch-making weapon—the tank.

The Imperial German Navy naturally utilized intelligence as well. The Admiralty Staff had four sections in it: an Intelligence Branch for reconnaissance and agents, an Observation and Cryptanalytic Service, a Military-Political Branch, and a Foreign Navies Branch to evaluate the material. Communications intelligence in particular evolved into an effective organization. Lieutenant Martin Braune, a north German in his early forties, recognized the importance of the work. He created a 458-man organization with headquarters in Neumünster, the north-German site of a major radio station, and supplemented by almost two dozen intercept and direction-finding

posts along the German coasts and inland and by floating units aboard German naval vessels. During the Battle of Jutland, his code-breakers fed the High Seas Fleet information on the position and movements of the British Grand Fleet, and in mid-October 1917, a team aboard the cruiser *Brummer* solved parts of an English message that disclosed the sailing of a convoy from Norway to Scotland guarded only by two destroyers. The *Brummer* and another cruiser sank both destroyers and 9 of the 12 merchantmen.

The Screening Function

No commander had the time to read all the intelligence that came in. The first half of 1917 produced 32,000 prisoner-of-war interrogation reports from just a single post in Berlin. Sometimes 800 Arendt reports (trench telephone intercepts) reached an army headquarters in a day. To pick out the useful reports, to fill in an incomplete picture from one source with material from another, to build up an image of the enemy forces and predict what they would do—this was the task of the agencies that evaluated intelligence.

Since no intelligence officers had existed in peacetime at the Troops General Staff, wartime commanders found it necessary to assign this work. At the level of division, army, and army groups, which had not existed in the prewar army, their designations varied widely: I e, I d, M.S.O. (for Melde-Sammel-Offizier, or Report Collection Officer), I b. Only at corps, which had existed in peacetime, did some uniformity appear: I c. (The roman numeral I indicated the staff's first, or command, section; the appended small letter designated a subsection.) All these officers focused mainly upon the enemy unit at the corresponding level opposite them.

The general evaluation of operational and strategic intelligence for the entire German army fell upon the Intelligence Branch of General Headquarters, formed upon mobilization and renamed after 20 June 1917 the Foreign Armies Branch. From shortly after the beginning to the end of the war, Major von Rauch, "an experienced and careful General Staff officer," headed it. The branch's staff of 5 officers and 2 officials plus clerks at the start of the war rose to 21 officers and 10 officials at the end. They sifted the enormous mass of incoming data to determine the enemy's activities and capabilities and possibly his intentions.

Some of Foreign Armies' reports served background purposes: studies of the English and French replacement situations, a 23-page overview of the war organization of the French army. More valuable to the high command were its predictions of Allied moves. One dealt with the mighty Allied offensive on the Somme in the summer of 1916.

As early as the end of February, German pilots had observed the construction of new barracks and other offensive installations in the area. Soon thereafter the number of British divisions increased. Patrols and other reconnaissances showed that these divisions stayed at the front only briefly; apparently they were being blooded for future use. By the end of April more than eight British divisions stood opposite four German in a certain sector. Air reconnaissance showed that the offensive would not be limited to the British forces but would also include French. On 23 June the Allies began to shell German batteries. The next day a more general heavy fire began. Allied mining activity increased. A prisoner reported that an infantry attack would begin in a few days. And at 8:30 a.m. on 1 July, after the drumfire preparation, the storm broke "in full accord with the observations, expectations, and reports."

But Foreign Armies could also err. When the French mounted their great offensive in July of 1918, they were stronger by almost a fifth than the Germans knew. And the attack succeeded.

Intelligence Comes into Its Own

World War I, a watershed in so many ways, proved one in intelligence as well. In her previous wars, Germany had distracted the chiefs of the Intelligence Branch with secondary duties: political matters in 1866, political and press in 1870. In World War I, after a single blunder at the start of the war, the branch chief concentrated strictly on his work. In 1870, Prussia had employed—outside of the cavalry—only a handful of men in intelligence: some balloonists, a 20-man field photography detachment, III b's spymasters. Between 1914 and 1918, Germany assigned thousands of men to intelligence. She evidently found them more useful doing this work than firing rifles from trench parapets.

The reason for this new importance of intelligence lay in the rise of verbal intelligence to preponderance over physical. An understanding of this and its effects requires making the distinction between the two clear.

Basically, verbal intelligence derives from words, physical intelligence from things. If the object of intelligence is a stolen order, a report on troop morale, or an intercepted order—that is, if it is words—the intelligence is verbal. If the object of intelligence is not words but other entities, the intelligence is physical. Among the objects of physical intelligence are bodies of troops, aerial photographs of fortifications, the noise of tank motors.

It is important to note that the difference between the two does not rest on how the stimulus is acquired: the eye both reads a report and sees enemy troops. Nor does it rest on the method of gaining the information: a spy or prisoner can verbally report on the presence of tanks or an enemy plan. Nor, finally, does it rest on the method of transmission: the presence of tanks can be passed by telephone, an enemy plan, by photography. The difference rests solely on the objects of intelligence itself. Verbal objects mean verbal intelligence; nonverbal mean physical. This distinction has perhaps little value in intelligence operations. But it is the key to understanding how intelligence evolved, why some forms are superior to others, and consequently why countries who exploit these forms best enjoy intelligence supremacy.

The explanation starts from the observation that war has both a physical and a mental component. All actions of war, therefore, affect the combatants physically or mentally or both. Artillery can kill or demoralize. Because war is, as Clausewitz said, "an act of force," the elements of "physical force"—men and guns—exert the most influence on the outcome. Killing is more decisive than demoralizing. The psychological elements, such as morale and tactics, though "among the most important in war," are less determinative. The best disciplined company cannot stop an army. As with artillery, the impact of intelligence takes two forms, depending upon whether the physical or the mental component transmits it.

In the physical realm, intelligence magnifies strength. Knowing where an enemy will attack enables a commander to dispose his men more efficiently. Psychologically, intelligence improves command. Knowing that a town ahead is free of the enemy relieves a commander of anxiety and facilitates his direction of his advancing troops. These are the ultimate purposes of military intelligence.

It might seem that verbal evidence should serve the mental component of war and physical, the physical. But in fact they cross. To begin with, war is a physical encounter. The men, guns, supplies, and so on must be present, waiting to kill the enemy and occupy his land, for the encounter to take place at all. The presence of these objects of physical intelligence affirms the likelihood of the encounter with greater probability than a plan, for men cannot move guns or troops as easily as they can rewrite orders. This relative certainty helps the commander make better decisions. Thus, physical evidence serves the mental component of war.

The plans and orders that are objects of verbal evidence, on the other hand, cannot kill. The enemy must realize them in physical form first. This step gives the commander who obtains verbal intelligence time. With this time he can shift his soldiers into the most endangered sectors, in effect adding to his forces. Thus, verbal evidence serves the physical component of war, and because the component is the more important, verbal evidence possesses greater importance than physical.

The time that verbal intelligence gives a commander puts his knowledge of the enemy ahead of the present situation—in effect, it foretells what the enemy will do. Physical intelligence, on the other hand, just reports on the present situation. The fundamental difference between them is that physical evidence merely confirms enemy intentions, while verbal evidence predicts them.

For the first 4,000 years of warfare, physical intelligence supplied nearly all information. World War I changed this. The conditions of the war fostered the new kinds of verbal information-gathering engendered by the French and industrial revolutions—many prisoner interrogations, a daily press, above all radio and telephone intercepts. Verbal intelligence became more important than physical. It gave enough commanders enough time in enough cases to win perceptible numbers of victories. It awarded Germany its greatest triumph—Tannenberg—and contributed substantially to the defeat of Russia. Largely because of it, intelligence became what it had never been before: a significant instrument of war.

At last it convinced the German generals of its value. They finally acknowledged this in the single most important event in the history of German military intelligence. In contradistinction to their disbanding of the intelligence branches of general headquarters at the end of the 1866 and 1870 wars, in 1919 they set up a permanent unit for the general evaluation of intelligence for the first time. Intelligence had arrived.

It had done so in the pattern of World War I, and it persisted in this pattern. Almost all the sources of information of World War II had existed in World War I, and the German army of 1939 reproduced many of the organizations for exploiting these sources that were operating in 1918. In the same way, the heightened acquisitiveness of intelligence, its potential for victory, its recognition (though reluctant) by the generals as an essential factor in war—these characteristics, forged in the original total war, endured in its successor. The First World War shaped German military intelligence in the Second.

INTELLIGENCE IN RECENT PUBLIC LITERATURE

THE MAN WHO BROKE PURPLE: A LIFE OF THE WORLD'S GREATEST CRYPTOGRAPHER, COL. WILLIAM F. FRIEDMAN. By *Ronald W. Clark* (Little, Brown, Boston, 1977).

In describing the career of the late William F. Friedman (1891-1969), the author does a creditable job where he bases his statements on information provided by Friedman's wife, Elizabeth. She collaborated with her husband in practically all of his unclassified cryptologic work[1] and, in her own right, is well known as a cryptologist.

The first five chapters of the book are its best. These tell how the Friedmans became involved in cryptology. They describe the more important cryptologic studies conducted by the Friedmans while working for a wealthy eccentric, Colonel George Fabyan, the head and financial sponsor of the Riverbank Laboratories. They also explain how Friedman's exceptional talents in cryptanalysis came to the attention of the War Department.

Friedman's work during World War I as a cryptanalytic officer in the Radio Intelligence Section of the American Expeditionary Force was outstanding. At the end of the war he returned to the Riverbank Laboratories. There he solved two machine ciphers, claimed to be indecipherable by other experts, which were under consideration for adoption by the U.S. Signal Corps. These accomplishments led to his employment in 1921 in the Office of the Chief Signal Officer, Washington, as the chief cryptanalyst in charge of the War Department's code and cipher production program.

In the mid-twenties, when the U.S. Navy became interested in the Hebern electro-mechanical cipher, Friedman questioned its security. He accepted a challenge to solve a set of messages enciphered by it. He not only recovered the clear texts of all the messages, but also reconstructed, in full detail, the wiring arrangement of the complex electrical commutating system employed in the device for its enciphering and deciphering functions.

It was these achievements that established Friedman's reputation among his contemporaries as America's ablest machine cipher analyst.

When Yardley's "Black Chamber" was abolished by the State Department in 1929, the stage was set for the War Department to undertake the development of its own code-breaking operations. War Department G-2 had been receiving intelligence produced from coded messages of certain foreign governments and, in return, had been supplying a portion of the funds for the Black Chamber operation.

The responsibility for peacetime interception and analysis of foreign code and cipher messages for military intelligence purposes now was given to the Chief Signal Officer. G-2 retained its responsibilities for establishing priorities and for the intelligence processing of message translations produced by the Signal Corps. The Signal Intelligence Service was formed, and in 1930 Friedman's duties were expanded to include the recruitment of additional personnel to be trained in all the processes

[1] Several of Friedman's early (1919-1935) handbooks on cryptography, long out of print, have recently been republished by Aegean Park Press, Laguna Hills, Calif., as parts of a cryptographic series. Ed.

and techniques of code-making and code-breaking known to him. G-2 released to the Chief Signal Officer funds previously provided to the Black Chamber, and this permitted the early employment of a small staff, so that Friedman was able to start his training program by late spring of 1930. This activity survived the tight military budgets of the depression years and was expanded to several dozen employees by the end of 1940.

The author, Ronald Clark, has been severely handicapped by the fact that from the time Friedman took on the job of developing the Army's Signal Intelligence System cryptologic capability in 1930, his official duties were conducted in secrecy. Knowledge of his work was limited to those individuals in the U.S. Army and Navy who were actually involved in cryptologic activities or who were responsible for their management. Very little authentic information about Friedman's work has been made public, except for a few isolated facts revealed during the Pearl Harbor inquiry and in special reports to the U.S. Congress by the War Department (in support of the 1956 award of $100,000 to Friedman in payment for inventions he could not exploit commercially because they were held in secrecy status by the U.S. Government). Even Mrs. Friedman was not allowed to have knowledge of her husband's classified duties.

Some of those who have written about the cryptologic operations of the U.S. have allowed themselves, either through speculation or outright fabrication, to enlarge upon the few facts available. They have generated a considerable body of misinformation which now forms the popular concept of code-breaking operations. Clark has drawn upon this body of misinformation for almost all that he has written about Friedman's official accomplishments. In so doing, he has painted a distorted picture of the more important aspects of Friedman's career.

The Pearl Harbor inquiry revealed that the U.S. Army and Navy cryptanalysts were collaborating closely in the exploitation of Japanese diplomatic code and cipher systems. They could promptly decrypt all Japanese diplomatic messages intercepted during the months before the Pearl Harbor attack. The Purple was the most important of these systems, and it was broken by the group responsible for the Army's work on Japanese diplomatic intercepts. Its recovery was too great a task for one person to accomplish.

The reconstruction of the Purple cipher machine and the keying system used with it took approximately 18 months. It was the result of a concerted effort by a team made up of proficient Japanese linguists, a topflight electronics engineer, accounting machine experts (computers were not then available), and cryptanalysts specially skilled in machine cipher analysis. Friedman personally contributed to the breaking of the Purple system, notably in the selection and assignment of personnel to the Purple team as well as in his part-time participation in the diagnosis and analysis of the system.

Those familiar with Friedman's work consider that his greatest contribution to U.S. cryptology was his influence on the joint Army-Navy development and production of the cipher machine used extensively by both services during World War II for high-level classified communications. The consequences to our war effort if our high-level cryptographic systems had been broken or even partially exploited by the enemy are terrifying to contemplate.

Although Clark discusses Friedman's work on this machine, his remarks are mostly directed at Friedman's difficulties in obtaining monetary compensation for his inventions. He tends to ignore the fact that Friedman's part in the development and

production of the machine in time for World War II was his most significant and praiseworthy cryptologic achievement.

The Man Who Broke Purple is certainly not the best, and in some respects may be one of the worst of the recently published books on secret government operations. The career of William F. Friedman and his contributions to the security of the nation deserve fairer treatment.

Frank B. Rowlett

VERY SPECIAL INTELLIGENCE, by *Patrick Beesly* (Hamish Hamilton, London, 1977). [An American edition is to be published by Doubleday & Co., Garden City, N.Y., in spring 1978.]

Very Special Intelligence is the first complete account of the decrypting and operational use by the British of German naval ciphers, particularly those used with the German U-Boats. The author, Patrick Beesly, was Deputy Chief of the U-Boat Tracking Room at the Admiralty during the period from 1939 to 1945, and was, therefore, at the very heart of British Naval Intelligence. With that personal background, and with access to most of the pertinent naval records, Beesly has produced a clear and well-balanced account of the Admiralty's wartime Operational Intelligence Centre (O.I.C.), in the Office of Naval Intelligence.

The basic German naval cipher was generated by the "Enigma" keyboard machine, comprising a system of rotors, levers, and wires whose combinations extended into the sextillions (an integer followed by 21 zeros). The German naval cipher was the most secure of the Services. The German Army and Air Force ciphers were broken early in the war, but the Navy cipher was not broken until 1941 with the capture on 8 May of the submarine U-110 and an Enigma machine complete with instructions.

The wartime British Code and Cipher Centre was located in Bletchley Park, or "B.P.," an estate outside of London. Through the acquisition of the Enigma machine and the development—initially by the Poles—of electronic computers, plus some of the keenest British and American brains, B.P. for four years produced the most priceless source of enemy intelligence. The full story of that cryptographic operation, however, must await publication of the official history of British wartime intelligence now being prepared by Prof. F. H. Hinsley.

It was Group Captain Winterbotham who first openly used the word "Ultra" in his book *The Ultra Secret*. In naval communications, "Ultra" was used as a designator to indicate decrypted material in a dispatch or other communication. The breaking of the German naval ciphers was the most carefully guarded secret of World War II. As recently as 1973 Admiral Doenitz was still unaware of the Allied success. The British use the term "Special Intelligence" to designate this type of material, and it is so used in Beesly's book.

During the critical period of the Battle of the Atlantic from 1941-1943, the Germans also were reading much of the British naval ciphers. It was only the incredible foolishness of the German U-Boat Command itself that finally convinced the British that their naval messages were being decrypted by the Germans. A signal to U-Boats actually revealed that information being transmitted was derived from British dispatches. The subsequent changes in the British codes and ciphers brought to an end this profitable field of German radio intelligence.[1]

[1] Students of these matters are referred to Dr. Juergen Rowher, *The Critical Convoy Battles of March 1943* (Naval Institute Press, Annapolis, Md., 1977). Beesly describes Dr. Rowher as having "unrivaled knowledge of the German Navy and the Battle of the Atlantic." When Dr. Rowher originally published his book in Germany, the Ultra secret had not yet become public knowledge. In the American edition cited above, however, Rowher has added a scholarly and fascinating Appendix 10, "Notes on the Security of the German Decoding Systems," which is important reading. It specifies that for a time the Germans were indeed reading British instructions to convoys. Ed.

Historians generally consider that the turning point in the Battle of the Atlantic came during the summer of 1943 following the sinking of more than 90 U-boats. The spring of that year had been disastrous in Allied ship losses, with tonnage exceeding any previous period. The U-boat fleet was at its prime, while the Allies had not yet attained the necessary strength in long-range aircraft, surface escorts, and carriers. Also, timely radio intelligence had been sparse. After that period, the Allies certainly had the distinct edge, especially because the Germans had lost so many of their experienced U-Boat captains and crews. Beesly notes: "The U-Boat men never gave up the fight right up to the last day of the war. They were always ready to believe Doenitz's promise that, if only they would hold on, new weapons and new U-Boats would turn the tide; they never ceased to make the sacrifices which he called for, and this despite the fact that, out of 39,000 members of the U-Boat Arm engaged on operations throughout the war, fatal casualties reached the dreadful total of 28,000."

In the background, however, a whole new ball game was emerging: a fleet working up of highly sophisticated Type XXI 1600-tonners and smaller Type XXIII U-Boats, with snorkels permitting underwater speeds exceeding most of our escorts. Once these boats became operational, it would be touch-and-go all over again.

In addition to these technical advances, including a new high-speed torpedo, the Germans were improving their surface radar and radar detection (search receivers), and introducing a revolutionary communication method of "flash" transmission—an entire message sent in seconds rather than minutes by the usual hand key method. Such brief radio transmissions would have literally scrapped our system of high-frequency (HF/DF) bearings and fixes, and could have cut seriously into the interception of U-Boat radio traffic—the very grist of the Ultra mill.

It was imperative, therefore, that the Allies crush German seapower before these ominous developments became operational. Here is where Ultra intelligence did yeoman service, for it enabled the Allied so to weaken the German Navy after 1943 that we could hasten the European victory while there was still time. It was providential that the periscope vibration problem of the new U-Boats delayed development so long that only one Type XXI 1600-tonner became operational before the German surrender.

One factor, often overlooked in the breaking of the Enigma cipher, was the sheer volume of U-Boat radio traffic stemming from Doenitz's direct control of U-Boat tactics, especially those involving U-Boat attack concentrations, such as the "Wolf Packs." He not only insisted on complete information from his commanders, but also would himself personally direct individual U-Boat tactics. No such volumn of radio traffic—so urgently needed by cryptanalysts—would have been available in normal submarine operations. But then, Doenitz's methods almost succeeded!

Beesly lays great stress on the unusual ability of Commander Roger Winn, the brilliant London barrister, who headed the Admiralty's U-Boat Tracking Room—and rightfully so. This reviewer, as Winn's opposite American number, worked closely with him during the years 1942-1945, and came to recognize and appreciate Winn's great contribution to the winning of the Atlantic Battle.

In evaluating Special Intelligence, Beesly balances its contribution against other factors: Anti-submarine technical breakthroughs; the growing skills of escort personnel and their tactics; the availability of adequate planes and ships; and the brilliant analyses of the Admiralty's Operational Intelligence Centre. As Beesly clearly shows, there were many lapses in the flow of Ultra intelligence, and, even when the German naval ciphers were being broken, the time delays of even a few days were frequently

critical in terms of operational usefulness. For example, the sinking of the *Bismarck* resulted from HF/DF and clear analysis by O.I.C., not from Special Intelligence sources. On the other hand, *Scharnhorst's* sinking resulted from excellent and timely radio intelligence. Incidentally, Beesly gives graphic and gripping play-by-play accounts of these actions.

Coming down to the bottom line: How valuable was Special Intelligence in the winning of the Battle of the Atlantic? Beesly puts it this way:

"The U-Boats were defeated in 1943 because, at long last, the Allied forces were supplied with the right weapons and, above all, with 10 cm. radar. But without Special Intelligence the victory might not have been achieved until much later and at a far greater cost. Who can say what the consequences would have been if such a delay had prevented, as it certainly would have done, an invasion of France in 1944? Would Russia have remained in the war? Would the V-weapons have knocked out Britain? Would the new types of U-Boats have arrived in time to turn the tide in the Atlantic? "Wars, in the end, have to be won by men in ships, aircraft, tanks or trenches. . . . The author would like to think that Special Intelligence and the way in which O.I.C. handled it at least made the task of the Allied seamen and airmen less difficult."

Perhaps the most significant lesson of intelligence that came out of the Battle of the Atlantic was the focusing of all intelligence sources, including Ultra, in an Operational Intelligence Centre in the case of the British, and in a Tenth Fleet of COMINCH in the case of the Americans.[2] Both organizations had the full intelligence and operational picture and could, therefore, act with knowledge and decision as no other naval activity or command could act. The Tenth Fleet not only combined intelligence and operations, including Convoy & Routing, but also Operations Research that gave scientific guidance of a high order in developing and improving anti-submarine weapons and tactics.

Kenneth Alward Knowles, Capt. U.S. Navy (ret.)

[2] See *Studies VII/2* p. A19, review by Kenneth A. Knowles of Ladislas Farago, *The Tenth Fleet* (Ivan Obolensky, New York, 1962).

DULLES: A BIOGRAPHY OF ELEANOR, ALLEN, AND JOHN FOSTER DULLES AND THEIR FAMILY NETWORK. By *Leonard Mosley* (Dial Press, New York, 1978).

This book is an engaging, gossipy, slipshod, and frequently inaccurate piece of work.

The British author, Leonard Mosley, set out early in 1976 to write a biography on John Foster Dulles, Allen Welsh Dulles, and their sister Eleanor, and how their lives intertwined. He started with good credentials for the job: almost 20 volumes of biography, and other non-fiction largely dealing with Europe, the Middle East, and Far East. Three, including *Dulles*, have been Book-of-the-Month Club selections. When he began his latest work, he had just published *Lindbergh: A Biography* (Doubleday & Co., New York, 1976), which was on its way to being a best-seller and has recently appeared in paperback. He had dealt with intelligence work before in *The Cat and the Mice* (Harper and Brothers, New York, 1958) about John Eppler, a World War II spy in Cairo for General Rommel. Mosley also had extensive journalistic experience, including service as war correspondent for the London *Sunday Times*.

In this biography, Mosley has tried to entwine the lives of the three "*Dullesi*," but more often it presents three parallel lines. The author will describe John Foster's and Eleanor's or Allen's activities at a given point in time, indicating where they may have touched each other. Thus, the book is somewhat chopped up by date sequences. In this review, I do not propose to discuss those portions of the book which deal with Mrs. Eleanor Dulles (who resumed her maiden name after the death of her husband), or with John Foster Dulles (although the latter's conversation with the President in the spring of 1960, described on p. 465, must have been difficult inasmuch as the Secretary died in May 1959). It should be noted, however, that Mosley thought most highly of the sister ("Readers of the narrative will have gathered that of all the Dulles clan, she is the one I most admire"). As a journalist, Mosley had often covered John Foster Dulles in various world capitals and had met him on occasion; Allen he scarcely knew. He spent much time with Mrs. Eleanor Dulles, interviewing her for this book, and many of the family details and much other material apparently came from her. Mrs. Dulles is very unhappy with some of the inaccurate results and has written Mosely telling him so. It is also obvious that Mosley had a considerable dislike for John Foster Dulles and is highly critical of most of his work as Secretary of State, praising only his negotiation of the Japanese Peace Treaty before he became Secretary. On Allen Dulles he is more ambivalent, showing neither the dislike he felt for the brother nor the high praise he bestowed on the sister. Beyond the foregoing remarks, I restrict my comments to the aspects of this volume I can best assess—those parts dealing with Allen Dulles and the Central Intelligence Agency.

It is very hard to summarize Mosley's view of CIA or of the accomplishments of Allen Dulles as DCI. One has the impression, from the author's use of Harold A. R."Kim" Philby's letters to him (which Mosley includes as an appendix), that he is inclined to accept Philby's evaluation of Dulles as "bumbling" and "lazy"—not quite up to "the post he held;" certainly not as tough-minded as General Walter Bedell Smith, his predecessor as DCI. On the other hand, Mosley on occasion tends to cloak Allen Dulles, in operational matters, with an omniscience which may be as overdrawn on one side as Philby's derogatory comments are on the other. And, of course, Mosley

is obsessed with Allen's apparent bias for covert action operations—partly because they have loomed so large recently in the media, and partly because the author has no real knowledge of Allen Dulles' work on the many clandestine collection operations in which CIA was engaged at the time under his supervision and direction as DCI (although the Berlin Tunnel is mentioned).

One also receives the impression, however, that were Mosley to have had an evening over drinks with Allen Dulles, he would have enjoyed it hugely. It is also obvious that Mosley much prefers the extroverted nature and more liberal views of Allen Dulles to those of this brother; John Foster Dulles always suffers by comparison in this book.

Happily, *Dulles* is not another volume in the field of "attack literature" against the Agency. Rather, in those portions dealing with CIA, it is almost a disconnected series of anecdotes as they pop up in a given time frame. The Agency also gets some praise for its role in U-2 and other overhead reconnaissance development. But this book is hardly detailed enough or accurate enough to be a good history of CIA in the Dulles regime. Those who are searching for a more definitive look at the Agency will have to await another day and author.

For source material, Mosley has relied in part on many personal interviews. He also made extensive use of the oral histories on file with the John Foster and Allen Welsh Dulles papers at the Princeton Library—oral histories made by former associates who knew the Dulles family well. Mosley's sourcing thus *appears* authoritative, but I must urge this readership to use the book with the greatest caution as far as facts, dates, and events are concerned. Of many of the personal interviews, the kindest thing one can say is that the author could not have been listening very well. There are errors in names, dates, and events, even though those who were present tried to describe them precisely. Some of these sources say they never made many of the statements attributed to them.

This reviewer speaks from personal experience; Mosley first came to see me on 6 April 1976, and over the next few months we met several times, including once at his villa in the south of France. I know I tried to use meticulous care in keeping various details straight as to time and events, but as shall become apparent in the rest of this review, identification by Mosley as a primary source for many things that appear in this book is at best a dubious honor which I and a number of my colleagues are anxious to disclaim. As I read the book, I found nothing classified that I or any of my fellow alumni told the author; in this connection we were very cautious; but Mosley fails to reciprocate in turn with equal caution in reporting what we did tell him. The high hopes which many of us had for the book have been sorely disappointed. As with other Mosley books, it is well written and sounds plausible. It will probably sell quite well. It doesn't deserve it.

Let us start with the "Prologue: The Man Upstairs." This describes a party allegedly given at the home of Mr. and Mrs. Allen Dulles on Christmas Eve, 1968. In the "Source Notes," the information is attributed, *inter alia*, to Lawrence R. Houston, CIA's longtime General Counsel, and this reviewer. Mosley describes the arrival at the party of Larry Houston and his wife, who is quoted directly as asking Mrs. Allen (Clover) Dulles: "Where's Allen?" On being told that he was upstairs, she was disturbed and whispered to her husband, "I'm worried. I think you should go upstairs and find out what's happening to Allen." Mr. Houston went upstairs and allegedly found Allen deathly pale, covered with sweat, and half choking as if he could not swallow. Mr. Houston is then quoted as saying to his colleague James Hunt, whom he

had brought upstairs with him, "He's sick all right." They dispersed the guests and called an ambulance to take Allen off to the hospital. Mrs. Dulles climbed into the ambulance, with Mrs. Houston running after her to give her a hat and coat. I do not know whether such a party actually took place or not, although I am cited as one of the sources; what I do know is that I was not there; my records show quite clearly that I was in Rye, New York, at that time. What is more important is that Larry Houston tells me neither he nor his wife were at the party, and, therefore, could not have said what they were quoted as having said. Mrs. Houston tells me she was never in the Dulles home on Q Street until after he died, and she never called him "Allen." James Hunt has told this reviewer he cannot recall whether there was such a party on that date, or, if so, whether he was there, but he is certain that the events and conversations described never happened at such an occasion.

At the top of page 10 in this "Prologue," Mosley describes Houston as having been present during World War II when they fished the body of one of his agents out of Salonika Harbor. Houston tells me this never happened, that as OSS Deputy Chief for the Middle East Theater he never "ran" any agents; that he has no recollection of any such person; and that he did not visit Salonika during the war. There are three more errors on page 9 of the "Prologue:" (a) The statement that "No one knows the head of KGB. . ." is, of course, arrant nonsense. (b) It is stated that after his retirement Allen Dulles had started "compiling anthologies of fictional spy stories." This is unfair; Dulles' first anthology was *Great True Spy Stories* (Harper and Row, New York, 1968); his *only* fictional anthology appeared a year later: *Great Spy Stories from Fiction* (Harper and Row, New York, 1969). (c) Mosley notes that Allen Dulles, after submitting his resignation to President Kennedy following the Bay of Pigs, "made a recommendation about his successor. It was ignored and another man chosen." Whether Allen Dulles made any such recommendation I do not know. What I do know is that President Kennedy proposed a name (Fowler Hamilton) for the directorship which was bruited about in the press, and that Allen Dulles had sufficient clout to kill this suggestion as totally unsuitable; it sank without further trace. The inaccuracies of the "Prologue" to *Dulles* give some indication of what is to be found in the rest of the book.

On pages 108-109, Mosley notes that General William J. Donovan "had risen from private to the rank of colonel in the famous Fighting Irish 69th Division. . ." in World War I; actually, Donovan entered service as a Captain in the New York National Guard. Mosley goes on to say that "Donovan, though a Republican, had always had close relations with Franklin D. Roosevelt." I do not think anybody who knew the situation would describe the realtionship as "close." They had been Columbia Law School classmates, but Donovan always realized that the patrician Roosevelt had little use for the young man who had come from the wrong side of the tracks in Buffalo. Even when he became Director of OSS, Donovan's relations with the President were cordial but not "close"; he was never a member of the inner circle. FDR, although greatly appreciative of Donovan's support for the President's pre-Pearl Harbor foreign policy, was always a little leery of the Republican who had been the candidate to succeed him as Governor of New York in 1932 and who, he feared, might still have a post-war political career ahead of him. Nor, as Mosley suggests, was Donovan's former law partner John Lord O'Brien the main link between the President and the General; Donovan's chief sponsor in that regard was Secretary of the Navy Frank Knox. Elsewhere on these same two pages Mosley describes a conversation between Donovan and Allen Dulles on the day in late June 1940, when Wendell Willkie received the Republican presidential nomination. According to Mosley, Donovan revealed to Allen Dulles that "he had just returned from Europe, where he

had been on a secret mission for the President." Donovan did not even start on that mission until mid-July, so the conversation in that context could hardly have taken place in late June.

Writing of 1949 on page 222, Mosley states that "Not many people, even in the government, knew that Allen Dulles was part of the new Central Intelligence Agency. . . ." Dulles at the same time was *not* part of the CIA; he was still a partner in the law firm of Sullivan and Cromwell in New York. Dulles had, in fact, in company with two other New York lawyers, William H. Jackson and Mathias Correa, made a survey of CIA before the 1948 election, at the request of the President conveyed through the National Security Council, but he was not "part" of the CIA.

On page 239 Mosley says that President Truman "reluctantly agreed to the creation of the CIG . . ." and that Truman had to be persuaded to create the Central Intelligence Group and to go forward with its statutory base in the National Security Act of 1947. Actually, it was President Truman's insistent demands on the Secretaries of State, War, and Navy that led to the final creation of CIG and its subsequent statutory embodiment as CIA. Truman had abolished OSS by Executive Order effective 1 October 1945, but the only problem before him from then until he issued his CIG directive on 22 January 1946 was the form that CIG would ultimately take. It is almost certain that without Truman's insistence such an organization would not have been established at that time.

Another error perhaps worth noting is Mosley's statement that the German intelligence unit of General Gehlen "became an operating arm of OPC" (Page 274). The Gehlen organization would have been under the general control of our collection mechanism, then known as the Office of Special Operations—never OPC.

One also reads with interest Mosley's description of the ultimate recall of the British SIS liaison officer in Washington, "Kim" Philby. I am not aware of what, if any, role Allen Dulles may have played in Philby's recall following the defection of Burgess and Maclean in May 1951. In dealing with this matter Mosley notes (on page 284) that "Four months after Allen Dulles returned to the official world of espionage, William Jackson at last resigned . . ." and Dulles became DDCI. He adds that "Just before leaving, Jackson sent out an instruction that in the future Philby was to have certain information withheld from him. . . ." What is certain is that the British recalled Philby from Washington at the insistence of the then DCI, General Smith, and Philby actually returned to England within the first 10 days of June 1951. At that time Dulles was the DDP. He did not succeed Bill Jackson as DDCI until 3 August 1951—by which time any instructions about passing information to a long-gone Philby would have been moot.

Mosley devotes several pages (318-323) to CIA's occasional problems with Sen. Joseph R. McCarthy and, in particular, my efforts on 9 July 1953 in my role as CIA's Legislative Counsel to protect William P. Bundy, a senior DDI official, from McCarthy's demands that Bundy should appear to testify on two hours notice that very morning before the Senator's subcommittee and explain his donation of $400 for the defense of Alger Hiss. I remember describing these events meticulously to Mosley on at least two occasions, but some errors still crop up, e.g., Senator McCarthy's Permanent Investigations Subcommittee of the Senate Committee on Government Operations becomes the Un-American Activities Committee, which existed only in the House of Representatives. Later Mosley, quoting Bundy, says that because of CIA's stand "nobody from the Executive Branch ever went before McCarthy again"—which

is, of course, an error, as anyone knows who remembers the Army-McCarthy hearings of 1954.

On page 346 Mosley talks of Frank Wisner's travels (when he was DDP) including a boat trip into China and "a mysterious rendezvous in Prague." It is more than doubtful that Security would have allowed Wisner, with his clearances and knowledge, to go anywhere near China or Prague. Nor did Richard Bissell, then a Special Assistant to Director Dulles, have anything to do with the Berlin Tunnel operation, and Bissell has also assured this reviewer that he was not "in joint charge" of the Guatemala operation with Tracy Barnes.

In describing Allen Dulles' succession to General Smith as Director of Central Intelligence in 1953, Mosley has some events out of sequence, which gives this reviewer the opportunity to add an historical footnote. Mosley is quite correct in stating that there was some infighting over General Smith's successor between those favoring General Donovan—who wanted the job very much—and those who wanted the appointment of Dulles. President Eisenhower, before the administration changed hands, had announced his desire to appoint General Smith Under Secretary of State. What happened thereafter was told to me by John McCormack, then the Majority Leader and later Speaker of the House of Representatives. General Smith went to see President Truman and advised the President that General Eisenhower had offered him the position at State. Smith told Truman that if, as an official of the Truman Administration, his taking another position in the Eisenhower Administration would in any way cause embarrassment to President Truman, he would, of course, reject the offer immediately. President Truman told General Smith to accept. Truman later told this to McCormack, who in turn told me that there were tears in Truman's eyes when he told McCormack the story, so touched was the President at the loyalty displayed by General Smith.

Smith became Under Secretary on 9 February 1953, and it was only then that President Eisenhower had the DCI vacancy which permitted him to forward to the Senate the nomination of Allen Dulles. Dulles became the Director on 26 February. Among many others, he would have been horrified by Mosley's book.

Walter Pforzheimer

SPIES AND SPYMASTERS: A CONCISE HISTORY OF INTELLIGENCE. By *Jock Haswell* (Thames and Hudson, London, 1977).

Major C. J. D. Haswell, a retired British army career officer, is employed by the Ministry of Defence School of Service Intelligence as a "Retired Officer Grade 2 (Author)," in which capacity he writes texts for intelligence schools, one of which (*British Military Intelligence*, Weidenfeld & Nicholson, London, 1973) was previously reviewed here.[1] This time, he has written a pleasant little layman's book possibly intended for the utter neophyte but more probably for your Aunt Susan when she asks you what you really do at that place.

More than half of the book is devoted to an entertaining recital of the uses of intelligence for and by such varied individuals as Julius Caesar, King Harold of Saxony (who learned William the Conqueror's Order of Battle), Genghis Khan, Sir Francis Walsingham, Cardinal Richelieu, Ben Franklin, Wellington, Napoleon, and Allan Pinkerton. Barely a quarter of the book covers World War II, the Cold War, and the present, with "Lucy," Dusko Popov, Moravec, Sorge, Cicero, Donovan, Dulles, Gehlen, Penkovskiy, Kim Philby, and a cast of hundreds.

Haswell makes the usual obeisance to Moses in the Wilderness of Paran and Joshua before Jericho for professional operations, but cites as his candidate for earliest recorded intelligence a clay tablet dated about 2,000 B.C. in which one Bannum, commanding a desert patrol, advised his "lord" in Mari by the Euphrates that the border villages of the Banjamites were exchanging fire signals, the significance of which was not yet determined.[2]

There are interesting sections on lesser-known figures such as Karl Schulmeister, an agent for René Savary and Napoleon, and Wilhelm Stieber, described as "Bismarck's King of Sleuthhounds." The book of 166 pages, plus bibliography and index, is highly readable, but at $10.95, you have to be fond of your Aunt Susan.

Clinton B. Conger

[1] *Studies XVII/4* p. 81.

[2] The reviewer prefers Noah, who launched a subsonic dove from the Ark which brought back meteorological and terrain intelligence, and—considering the location of Ararat—quite probably SOVMAT as well.

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