

STUDIES in INTELLIGENCE



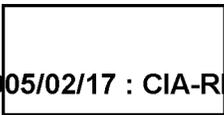
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STUDIES IN INTELLIGENCE

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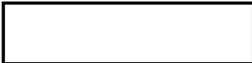


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Awards are normally announced in the first issue (Winter) of each volume for articles published during the preceding calendar year. The editorial board will welcome readers' nominations for awards, but reserves to itself exclusive competence in the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

SECRET

No Foreign Dissem

Technical intelligence must be content with delimiting the possibilities of foreign weapon development.

“FORETESTING” ABM SYSTEMS: SOME HAZARDS

Sayre Stevens

I am moved to respond with what I hope is a “reasoned” rejoinder to Mr. Tauss’ piece in your Winter issue describing his work in postulating a Soviet ABM system.¹ What he had done, essentially, was: to devise a hypothetical antimissile system for exoatmospheric intercept that would be consistent with the appearance of the Hen House radar at Sary Shagan and the VHF signals that had been associated with it; to have this system tested mathematically to show that its performance would be adequate; to assume therefore that the Soviets were actually in an advanced stage of developing such a weapon system, though they might not “construct it to operate in quite this manner”; and to urge that U.S. countermeasures in general be initiated on the basis of such early hypothesizing and without community coordination.

In order that my response be constructive and fair, I find it necessary to provide a brief look at my conception of how the game of technical intelligence analysis ought to be played when its objective is the definition of advanced foreign weapon systems. This will lay bare my peculiar biases.

When reading in alumni magazines about the exalted accomplishments of my fraternity brothers, I am tempted to use the defensive ploy of envisioning myself as today’s version of Sherlock Holmes’ brother, Mycroft. Lacking both energy and ambition but having the tidiest brain with the greatest capacity for storing facts of any man living, Mycroft Holmes became the most indispensable man in England, a point of omniscience dealing out true answers concerning all government problems. He thus represents what an intelligence analyst could wish to be: wise beyond compare, a storehouse of vital information nowhere else available, and able to pluck out from it any truth upon demand.

¹ *Studies* XII 1, p. 21 ff.

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from pg.
01-09

However appealing such a role may be to contemplate, it will of course simply not wash. There are several reasons. One is that the real business of technical intelligence analysis as it relates to advanced weapon systems cannot be that of dealing out true answers on the basis of an omniscience gained through years of experience. This is an important point to make because Mr. Tauss tended to attribute value to the work he described on the basis of its having provided an in some degree true answer. This attitude is embarrassing to the technical analyst: however moot other aspects of the article may be, there can be little contention about the fact that its definition of the ABM system in question was wrong. One of the objectives of this essay is to show that this awesome consideration actually need not be disabling at all.

Aim: Delimitation

No longer in this business can one make a bold enlightened grasp for the precise and only answer. In the analysis of foreign weapon systems, protected by all the mechanisms of security the modern state can erect, the problem has become one of cautiously (and above all, elegantly) defining the bounds of what is technically possible. By seizing on every bit of usable information made available, by utilizing techniques of systems analysis, Mycroft's replacement must with vigor and credibility bound an ever-narrowing range of possible capabilities for the weapon system under scrutiny.

In many regards this procedure is unsatisfactory; it is detested by some, scorned by others, and really understood by very few. I personally am excited by its challenge and feel that it is an absolutely necessary approach in coping with modern intelligence problems. Its objectives and accomplishments have limits, however, which it is critically important that we recognize and understand.

A number of factors have made it necessary to resort to this bounds-defining type of analysis. Principal among these causes is the extremely conservative policy—in the sense of "covering all bets"—followed in our own military planning. This planning—as to our targets of attack, projected forces, deployment of new weapons systems, and development of even more advanced ones—must, of course, be responsive to the enemy threat; and one of the purposes of intelligence is to define that threat. But in order to provide every assurance for the national security, it is natural to insulate the military planning decisions against errors in the definition of the

threat. Protection is sought by giving credence, for planning purposes, to the maximum possible offensive or defensive capability a foreign weapon system could have. This cautious policy effectively diminishes the contribution to planning made by intelligence on foreign weapon systems. It has also led to some of the greatest imbroglis imaginable when two sets of enterprising system designers undertake to conjure up the maximum threat from a state of ignorance about what is actually happening.

A second operative factor is, indeed, this lack of information about advanced weapons being developed or newly deployed in those areas of greatest concern to us. No direct access to the real answers we seek exists. Most of the reliable information available is either technical in nature or significant only in terms of technical analysis. The simplest and most critical answers—e.g., what specific targets a foreign weapon system is designed against, in what circumstances it will be used, what its measured effectiveness is—are consequently far removed from the information immediately available and can be reached only at the end of a long deductive chain which will almost certainly lack several links of significance for the answer. Most importantly, even if one has managed to finger the truth, there is no good way to know for sure that one has done so. And the truth has no unique value unless it is recognized as such by those who must act on it.

The piecemeal analytical trench-warfare we must substitute for a lightning thrust at such answers is also generated by the very nature of the information available: intercepted radar signals, snatches of telemetry, uncertain photography, or perhaps a representative electron tube acquired for analysis. Several fine articles have been published in the *Studies* on the ingenious uses of these types of information. I can rather imagine, however, that people engaged in more direct efforts to get answers to the central questions might be scornful of such scratching around on the edges. From this point of view it is a miserable way to do the job—expensive, slow, esoteric, and analytically hazardous; it is, however, the only approach that appears to be possible in the absence of direct access to needed information.

In some cases the answers provided by technical analysis are, in fact, precisely the ones sought. Such a situation arises when the questions are asked on behalf of the development of countermeasures aimed at degrading the performance of an enemy system by working on its very detailed technological susceptibilities. Countermeasures

development constitutes a unique type of problem, however, and is not really a part of what is being discussed here. It has had an impact on the full range of technical intelligence analysis, sharpening both collection and analytical techniques and giving an inherent value to derived technological facts they might not otherwise have; but it must come somewhat later in the game than the initial grappling with the characteristics of a new enemy system, since it presupposes an understanding of the operational concepts the system embodies and a knowledge of all the elements it embraces.

Side Effects

The use of technical intelligence analysis to set limits rather than give precise answers has had some important effects which should be noted:

As pointed out above, the demand for early description of a newly developed weapon system has been replaced by a willingness to accept and use a methodical, credible delimitation of the possible capabilities of the system.

Judgments as to the intended use of the system are apt to be made on the basis of these capabilities so delimited. When the range of possible capabilities extends over several missions, there is sure to be hell to pay: different people are more concerned about (and consequently will want to emphasize) different threats.

Credibility is vital. This is particularly true when the results are contentious, as they generally seem to be. In order to delimit meaningfully the capabilities of a system, it is necessary virtually to prove by the laws of physics (or other appropriate discipline) that something must be or cannot be the case. It is an unfortunate fact that some of these laws, particularly those relating to weapon effects, are themselves contentious.

Analytical elegance and rigor are the natural response to the complexities of the problem and the need for a demonstrable consonance with respectable science and technology. Technical competence must be continually demonstrated; any slip will result in a degradation of credibility.

The importance of credibility has also led to extensive reliance upon appeals to authority. Panels of experts by the dozens have been formed from scientific and technological cognoscenti to serve either as courts of appeal hearing the technical evidence

presented by analytical disputants or as "weekend warrior" pinch hitters who might catch the clue or provide the technique missed by the bureaucracy. (Bureaucratic responses to the threat inherent in these practices include the extensive use of external contracts with firms at the forefront of U.S. weapons development.) These panels often prove to be something of a trial to the working analyst, as they inevitably consist of people noted for their ability to "brainstorm" and overcome apparent obstacles. The primary concern of the technical intelligence analyst, on the other hand, is the search for valid technological constraints to use in creating an analytical framework in which to operate. Such frameworks are apt to be destroyed with gay abandon in a two-day panel session by making design choices calculated to skirt the constraints, while the trade-off penalties for doing so are left unconsidered.

Elegance and the need for credibility, together with repeated and often hostile technical review, all lead to complex conclusions very carefully qualified in technical jargon which tends to rob them of clean, crisp "punch."

Conflict develops between the technical and current intelligence communities as these conclusions are occasionally hammered into the Peter Rabbit style of current intelligence reporting.

Since these conclusions relate almost always to capabilities as technically derived and unmoderated by considerations of intent, economic feasibility, or political consistency, they create nasty problems in the preparation of estimates. These problems have been well discussed in an article by Wayne Jackson in the *Studies*.²

The disjunction between technical intelligence and the classical collection field grows ever wider as the analyst finds it increasingly difficult to make use of reports whose credibility he cannot fully establish and which generally lack the precision necessary for use in conjunction with technical information. No finer brouhaha has ever arisen, for example, than that surrounding attempts to establish the purpose behind the Soviets' deployment of the Tallinn defensive missile system. Appeals have been made to panel after panel and expert after expert. Not even the *New York Times* has been overlooked. As the DCI

² "Scientific Estimating," IX 3, pp. 7-11.

has said, blood has been shed on this question.³ A number of intelligence reports have ostensibly answered it. Very likely there is at least one good answer among those in hand. But which one? Unfortunately, they differ among themselves and none so clearly reflects a credible source that it can be defended against those who would prefer to reach a different conclusion and feel that other evidence supports it. Thus we come full circle and return to our eschewing of what *might* be the truth in favor of chipping away at the technical characteristics of new weapon systems and deriving their capabilities on the basis of peripheral but unchallenged evidence.

Finally, it must be noted that this analytical approach is on the one hand conservative in the extreme but on the other disturbingly reliant upon rational behavior on the part of the foreign designer. Read "rational" as "rational to us." Thus we tend to overrate the capabilities of a foreign system but are occasionally surprised by what we insist are irrational achievements. A serious technical mistake by some other country creates an analytical disaster area as its supposedly sinister import cannot be discovered. A technical approach wholly unappreciated in the United States raises the spectre of an unanticipated future threat. On the whole, however, reliance upon reason seems justified and probably has statistical advantages over resort to intuition, randomly selected reports, or the omniscience of Mycroft Holmes.

These are of course just my views. They are important, nevertheless, to my reaction to Mr. Tauss' article, and I think it important now to say something about that article, in part because it affects the credibility of technical intelligence analysis performed by CIA.

Critique

I have four major objections to "Foretesting a Soviet ABM System":
It claims accomplishments far beyond those actually achieved.
It fails to recognize the proper function of technical intelligence analysis undertaken on the basis of "a slim amount of data" and ascribes value to the hypothetical system "foretested" on the grounds that it represents a system actually under develop-

³ See *Studies* XI 3, p. 2.

ment. It does not in fact represent one, nor was any reason established for believing it might.

It suggests that countermeasures development can be undertaken apace with the early postulation of the gross parameters of a system.

Its publication is damaging because it is not quite technically respectable in the winter of 1968 and consequently detracts from the credibility of CIA technical intelligence analysts.

It is Mr. Tauss' thesis that a small amount of information enabled us to determine the characteristics and capabilities of a new Soviet ABM system prior to its actual emergence on the scene. The article describes his attempt to do this, first to model and then to investigate the characteristics of a likely Soviet system, though not before several major elements of the system were under test in the USSR. Such attempts are certainly a legitimate concern of technical intelligence analysts. When the amount of information is very small, however, a substantial amount of postulation is required, and the likelihood of being wrong is great.

The system characterization achieved by Mr. Tauss was for the most part wrong, and while it may have been useful at the time, it cannot now be pointed to as an inherently meaningful description of Soviet ABM defenses as he contends. Mr. Tauss does not demonstrate in his article how investigation of the hypothesis showed that it was in any important respect valid. On page 24 of the article is his qualification suggesting that the validity of the postulated model was under any circumstances a matter of little consequence to the analysis performed:

The important thing was that the range-dominant system model could be simulated and legitimately exercised to investigate its potentials and general vulnerabilities even if the Soviets would not in the final analysis construct it to operate in quite this manner.

If this means that the important thing accomplished was to show that one could not deny an ABM capability to a range-dominant VHF radar, I am sympathetic. If, as the article elsewhere suggests, however, it is contended that simulation and exercise of the model led to the determination of "the general characteristics and net capabilities" of Soviet ABM defenses, I am disturbed. Under these circumstances, a few twinges of concern should be felt when one discovers his model is not quite right. One should at least ponder the question as to

whether any other equally wrong theory might not produce equally convincing results.

As we have seen, a postulation may have value even though wrong if its investigation can establish some sort of bound on possible weapons system performance in the absence of any more direct evidence. This process of bounding or setting limits on capabilities gives no inherent validity to the postulation itself, however. Certainly more than a single postulation was possible on the basis of information available to Mr. Tauss and Data Dynamics, Inc., when the reported study was accomplished. Indeed, the location of the R&D Hen House at Sary Shagan makes its inclusion in an *endoatmospheric* system quite an attractive possibility. Later information, to be sure, proved that this was not the case. Because of the number of possibilities which existed, however, and the lack of sufficient information to rule out all but one at the time this work was done, the contention that it reflected ABM defenses as they really would develop was simply not a credible claim. This would remain true even if time had showed the model to be entirely correct. It was not accepted at the time as a credible description of Soviet ABM defenses and consequently lacked the impact claimed for it.

The article contends that the understanding of Soviet developments achieved as a result of this analysis led to major changes in U.S. countermeasures developments. I am unaware of any direct causal association of this sort, though changes did occur in this time period. It is essential to note that these changes were the result of establishing the frequency at which the Hen House radar operated rather than how it operated. This frequency was actually measured by mid-east intercept sites during the 28 October 1962 nuclear test and analytically associated with ABM surveillance radars by engineers working for Space Technology Laboratories under contract to CIA. These considerations tend to undermine the fundamental message carried by the article and its significance as a "study in intelligence."

The concluding section of the article contends that countermeasures developments should begin early and be supported by intelligence judgments unfettered by detailed knowledge or the agonies of community coordination. This conclusion is not unlike the little girl with the little curl in the middle of her forehead. The effects of vigorously responding to a number of postulations currently caroming about within the ABM intelligence community would be very, very horrid. An insistence upon some evidence and the nasty mechanism

of community coordination have, in fact, had value in preventing such responses.

More than this, however, the countermeasures problem is an extraordinarily difficult one. It is necessary that more than an early guess as to how a system might operate be at hand before really meaningful work on countermeasures can occur. The early recognition of new sorts of problems might be achieved, but major countermeasures commitments are unlikely to result from such preliminary analysis. One might point to Mr. Tauss' work and its conclusion that the Hen House radar could be used in an exoatmospheric system (which so unhappily is replaced with the conclusion that the Soviets *will* employ exoatmospheric intercept) as a basis for work now under way on chaff development or the hardening of warheads against nuclear effects. It is also true, however, that we are working hard at making chaff and decoys which will survive reentry down to very low altitudes, even though we still have no evidence of Soviet development of endo-atmospheric ABM defenses.

The article contains a number of errors in fact or interpretation which are embarrassing, particularly since some apparently lead to the conclusions reached. These are of no great consequence, however, except that they tend to erode that all-important attribute, credibility.

De Mortuis

Ed Tauss and I discussed all this several days before his unfortunate death, but our conversation quickly wandered off onto even more controversial paths. Ed was no mean protagonist. He understood the real problems, was excited by them, and felt a great inner need to do something in response. He did some important things about the Hen House and Soviet ABM defenses. They were the right things to do. In my view, the credit for this belongs more to Ed Tauss the man, with all of his enthusiasms which will be so sorely missed, than to this bit of analysis which he chose to record as representative of his activities in the ABM field.

*Some reflections on what should
make intelligence persuasive in
policy deliberations.*

ESTIMATES AND INFLUENCE

Sherman Kent ¹

There are a number of things about policy-making which the professional intelligence officer will not want to hear. For example, not all policy-makers can be guaranteed to be free of policy predilections prior to the time they begin to be exposed to the product of the intelligence calling. Indeed, there will be some policy-makers who could not pass a rudimentary test on the "facts of the matter" but who have the strongest views on what the policy should be and how to put it into effect. We do not need to inquire as to how these men got that way or why they stay that way, we need only realize that this kind of person is a fact of life.

Nor should we be surprised to realize that in any policy decision there are a number of issues which we who devote ourselves solely to foreign positive intelligence may almost by definition be innocent of. The bulk of them are, of course, purely domestic ones: domestic political issues, domestic economic issues, popular attitudes, public opinion, the orientation of the congressional leadership, and so on. Even if we know in our bones of the great weight which such issues have carried in many a foreign policy decision, we do not readily and consciously acknowledge it. Our wish is, of course, to have our knowledge and wisdom about the foreign trouble spot show itself so deep and so complete that it will perforce determine the decision. The nature of our calling requires that we pretend as hard as we are able that the wish is indeed the fact and that the policy-maker will invariably defer to our findings as opposed to the cries of some domestic lobby.

But consider for a moment how people other than ourselves and our consumers view these phenomena which I have just dismissed with a mild pejorative. Look, for example, at the table of contents

¹ Adapted by the author from his presentation before the September 1966 Intelligence Methods Conference in London.

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of any of the recent books devoted to "How Foreign Policy Is Made." Or look at the line-up of lectures and discussions in the syllabus of any of our senior service schools; look particularly at the section devoted to national security policy formulation. You will find that intelligence and what it contributes to the task, far from enjoying the overpowering importance with which we—quite understandably—like to endow it, is casually ticked off as one of a score of forces at work.

The Credibility of Intelligence

Thus a certain amount of all this worrying we do about our influence upon policy is off the mark. For in many cases, no matter what we tell the policy-maker, and no matter how right we are and how convincing, he will upon occasion disregard the thrust of our findings for reasons beyond our ken. If influence cannot be our goal, what should it be? Two things. It should be to be relevant within the area of our competence, and above all it should be to be credible. Let things be such that if our policy-making master is to disregard our knowledge and wisdom, he will never do so because our work was inaccurate, incomplete, or patently biased. Let him disregard us only when he must pay greater heed to someone else. And let him be uncomfortable—thoroughly uncomfortable—about his decision to heed this other.

Being uncomfortable is surely his second choice. Before he becomes uncomfortable he is going to ask himself if it is strictly necessary. This is of course the equivalent of asking himself if he really thinks that the information he has received from his intelligence colleagues is relevant to his problem and if he has to believe it. When we in intelligence look at the matter in this light we might consider ourselves fortunate that our policy-making consumers find so much of our product relevant, credible, and hence useful. Is there any way of categorizing that which is most happily, gratefully, and attentively read and that which is least? Perhaps a start can be made by having a quick critical look at three classical families of intelligence utterances.

First, basic intelligence. No question but that credibility is highest in this area of intelligence. Time and time again our consumer has need of something comparable to the perfect World Almanac or the perfect reference service. We come close to giving him just that, and nine times out of ten he is warmly appreciative of the breadth and

depth of our knowledge and the speed with which we can handle his requests.

Second, how about current intelligence? There is probably less enthusiasm among consumers for this than for basic. They have a tendency to compare it—and unfavorably—to the daily press or the weekly news magazines; or they gripe because they often find it a gloss upon something they have just read in a cable.

Lastly, in the formal estimate credibility is lowest. It was more than a decade ago that Roger Hilsman, after interrogating scores of policy-making consumers of intelligence, concluded thus. He discovered that the people with whom he talked were extremely grateful to intelligence when it came up with the *facts* that they felt they had to know before they went further with their policy-making and operating tasks. They seem to have gone out of their way to praise intelligence in its fact-finding role, but to be anything but grateful for intelligence utterances in the estimate category.

Why was this so? Although Hilsman does not make the point, one may safely infer from his findings: The policy-maker distinguished in his own mind between things which he thought of as factual and those which he thought of as speculative. For the first he was grateful, for the second not at all.

This puts a number of questions before the house. Why should Hilsman's respondents (implicitly, at least) have questioned the credibility of intelligence estimates? Was it because the respondents had caught intelligence out in self-serving errors? Was it because they were fearful of being misled by intelligence? Had intelligence on its part ever done anything to merit this want of confidence on the part of its customers? If not, how did it come about that the very officer who besought the help of intelligence in one area eschewed intelligence in another?

The Nature of the Estimate

Let me begin with a look at estimates and the business of making them.

Let me first be quite clear as to the general and the particular meaning of the word "estimate" in the present context. In intelligence, as in other callings, estimating is what you do when you do not know. This is the general meaning. In this broad sense, scarcely an intelligence document of any sort goes out to its consuming public that does not carry some sort of estimate. Field reports

CONFIDENTIAL

Estimates and Influence

are circulated only when someone has estimated that the source is sufficiently reliable and content sufficiently credible to be worthy of attention. Current intelligence items as often as not carry one of those words of likelihood—"probable," "doubtful," "highly unlikely," etc.—that indicate that someone has pondered and decided that the report should be read with something less than perfect assurance as to its accuracy. An endless number of important sentences in even the basic intelligence category carry the same evidence of this kind of speculative evaluation, i.e., estimating.

But what I have in mind in particular when I use the word "estimates" here are the formal intelligence documents which begin to examine a subject from the point of view of what is known about it, and then move on beyond the world of knowing and well into the world of speculating. When you reflect upon a whole large subject matter—the future of Greece or the armed strength of Communist China, for example—and realize that you cannot begin to know about either with the degree of certainty you know your own name, you reach for the thing next best to "knowing." You strive for some sort of useful approximation. In pursuit of this you evoke a group of techniques and ways of thinking, and with their help you endeavor logically and rationally (you hope) to unravel the unknown or at least roughly define some area of possibility by excluding a vast amount of the impossible. You know that the resultant, while still a lot better than nothing at all, will be in essence a mix of fact and judgment. Upon occasion it turns out to be almost exactly correct, but at the time you wrote it you expressed yourself with appropriate reservation.

To the extent that your judgment and the many quite subjective things which influence it are now involved, the man who reads this estimate will by no means accept it in the attitude of relaxed belief with which he reads, for example, that "not counting West Berlin, there are ten *Länder* in the FRG." It is this form of intelligence document that Hilsman's respondents were cool about. What follows is an attempt to explain the chill.

Let me ask you to think of one of these estimates in terms of the geometrical form called a pyramid. Think of the perfect estimate as a complete pyramid. At its base is a coagulation of all-but-indisputable fact. With an absolute minimum of manipulation on our part, the facts have arranged themselves to form what is quite clearly the base of a pyramid. They have spread out in the horizontal dimensions to the degree that we pretty well perceive its base area, and

piled up in the vertical dimension generally to indicate the slope of its sides.

Knowing the nature of the base of the pyramid, to take an illustrative case, is like saying that we now have enough solid information to know that a photo image we have been wondering about is of an aircraft—not, say, a dairy ranch; more importantly, it is a bomber aircraft, not a transport. As to the other things we want to know about it—its performance characteristics—we are not at all certain. We are, however, in a good position to speculate about them.

Raising the Pyramid

Now back to the pyramid. Let us assume that when we know the general locus in space where the sides will converge to form the apex, we will have most of what we want. Let us assume that the exact point of the apex is exactly what we want, that if we know this with certainty we will have what we are after. For the bomber, constructing the apex would be reasoned speculations about how it will perform: how far it can fly, how high, how fast, and with what bomb load. Just as classical induction revealed the base of the pyramid, so now we call upon the other classical methodologies of deduction, and with their help we reason our way up the pyramid toward the top.

The factual stuff of the base of the pyramid is likely to be largely the fruit of our own intelligence-gathering efforts and so constitute a body of material about which we are better informed than our consumers. But we enjoy no such primacy with respect to the matter above. In fact, the talent to deduce rigorously is one which we share with any other educated and intellectually disciplined human. Furthermore, the advantage we enjoy with respect to base material can be and usually is dissipated by our habit of making it available to quite an array of non-intelligence types. The point is that the studious consumer can approach our mastery at the base and match us higher up. He can be his own estimator whenever he wishes to invest the time.

Let me not pretend or even seem to pretend that all conceptual pyramids in our area of work are constructed as described. The procedure which moves from the known to the unknown with a certain amount of tentative foraying as new hypotheses are advanced, tested, and rejected is merely the most respectable way. Its very opposite

is sometimes employed, though usually with a certain amount of clandestinity.

The follower of this reverse method first decides what answer he desires to get. Once he has made this decision, he knows the exact locus of the apex of his pyramid but nothing else. There it floats, a simple assertion screaming for a rationale. This, then, is worked out from the top down. The difficulty of the maneuver comes to a climax when the last stage in the perverse downward deduction must be joined up smoothly and naturally with the reality of the base. This operation requires a very considerable skill, particularly where there is a rich supply of factual base-material. Without an artfully contrived joint, the whole structure can be made to proclaim its bastardy, to the chagrin of its progenitor.

The Peak

But even under the respectable method the intelligence estimator at some moment in the construction process reaches the place where he has used his last legitimate deductive crutch and must choose one of three possible courses.

The first is to let himself be propelled by the momentum of his reasoning into a final and fairly direct extrapolation. The effect of this is to put a sharpish top on the pyramid—a measure which, in turn, has the effect of telling his audience that he is pretty sure that he has discerned the outlines of what must be the truth. For the bomber it would be like saying: "Thus we conclude that the bomber in question is almost certainly a supersonic aircraft of medium range. See Table II for our estimate of its performance characteristics."

The second is not to make this final extrapolation but to leave the pyramid truncated near its apex. This has the effect of telling the reader that you have narrowed the range of possibilities down to only a few. The further down you truncate, the wider their range. Thus the most unsatisfactory kind of intelligence construction is often that which perforce has to stop where the factual stuff of the base runs out. Often it is the equivalent of issuing the most general kind of news and asking the reader to suspend judgment pending the appearance of new evidence. For example: "Thus we are unable at this time to be more precise regarding the performance characteristics of this bomber. It is possible that it is a new supersonic medium."

The third is what I will call "the look before the leap" or the "clandestine peep ahead." It is, one may hope, less often used by the

intelligence professional than by the policy officer doing his own estimating. What you do is to look hard at the final extrapolation and take full stock of where you will be if you go for it. Then, having taken stock, you ask yourself if you really wish to subscribe to this conclusion.

In the case I have in mind, you recoil. It may be that by making it yours you will be depicting yourself a non-patriot, or someone soft on Communism. It may be that by implication you can be made to seem a harsh critic of a higher authority or a scoffer at one of his policies. It may be that you will be doing the budget claims of your department or agency a grave disfavor. Or most important of all, you realize that your findings may be advanced to support a policy which you oppose or that they do not support with sufficient vigor a policy which you favor.

If you have taken the peep ahead and find the prospect not to your taste, you can settle for the second course and simply not complete the estimate. Or you can back down your argument, tearing it up as you go. Then when you have found a salubrious ground for another start, you can reargue your case upwards—perhaps using a few facts which you had dismissed as irrelevant the first time through, perhaps giving more weight to this analogy and forgetting about that, etc., etc. Thus with a small amount of tinkering you can create a somewhat different conceptual pyramid whose base is still the same, but whose apex will lie in a zone much less dangerous to your job security or much more appropriate to the requirements of your policy preconceptions.

The Policy Welcome

Irrespective of which of the three ways of handling the problem you choose and irrespective of the substantive conclusion—or lack of it—the completed estimate will be bad news to one if not more of its important readers: it may undercut a long-held position or destroy a line of painfully developed argument; it may indicate the unwisdom of a plan or the malallocation of large sums of money. Another thing you may be sure of is that he will react as any recipient of bad news reacts—the reflex is one of “I don’t believe you.” Need I emphasize again that estimates are far more vulnerable to the criticism which is bound to accompany incredulity than are propositions which are stated, at least, as if they were fact.

The disappointed consumer may begin with a hard look at our pyramid's factual base. He may find some loose masonry which can be jimmied apart, and then jimmy. He may find some quite substantial building stones left off to one side, stones which, although of the same material and cut to fit some sort of geometrical form, were not incorporated into the base structure. He will speedily perceive that if these are chiseled a bit here and there they can be made to fit into this structure, with the result that they change some important aspects of its configuration. You may be sure he will soon focus on the upper zones of our pyramid.

One thing he will be most alert to is any evidence that intelligence, having taken the "peep ahead" and found the pyramid about to peak at an unwanted place, went on to take the corrective action I have indicated. If he can find evidence of this sort of disingenuous case-making, he will attack with very weighty weaponry. Before he is done he may be able to prove to himself and a number of others that the so-called intelligence contribution is a fraud—nothing more nor less than a policy brief brazenly masquerading as an intelligence estimate.

In these terms we may readily understand why a good many of Hilsman's respondents felt as they did about the value of intelligence estimates. For purposes of fuller explanation, let us suppose that an intelligence estimate on the Banana Republics had been prepared; let us suppose that our policy-making reader Mr. "A" is his department's authority on these Republics. A tour of his psyche as he reads the paper may be illuminating.

First, let us assume that the estimate accords in very high degree with his own estimate of the present and probable future situation in Banania. His psyche will begin to purr in contentment; "What a remarkably perceptive document," it will whisper. But this may be as far as the word of praise gets. When the moment comes to articulate his comment on the estimate, he is less likely to praise it than to proclaim, "This is exactly what I have been saying all along. Why in the world do we have to have someone who knows less of the matter than I say so before anyone pays attention?" In short, as far as he is concerned, the intelligence effort that went into the study was *unnecessary*. "A" may not always feel this way, particularly if during the policy debate he realizes that he can make points against his opponents by citing the estimate as a dispassionate outside opinion.

Alternatively, let us assume that the estimate accords not at all with the views of Mr. "B." He will be unhappy, for he will realize

that if the conclusions of the estimate are believed by his peers and superiors, the policy which he has been championing will have to be modified—perhaps drastically. If he wishes to stay in the fight, then, he must be prepared to attack the intelligence estimate as *misleading* and erect one of his own to replace it.

Lastly, let us assume that the policy issue is one of those which is going to be settled almost entirely on the basis of some purely domestic matter: the cotton lobby, the gold flow, the budget, and so on. Our policy-making consumer does not have to attack the substance of the *irrelevant* estimate. He will chuckle patronizingly to himself while his psyche warms in the feeling of superiority to those poor boobs in intelligence who have thought that what they called the “Situation and Prospects in X” could have any bearing on the way U.S. policy towards X is being shaped today. Out loud he wonders how such naiveté can persist; he has no comment on the substance of the estimate.

These views of an estimate as unnecessary, misleading, or irrelevant may coincide with those of some of the people whom Hilsman polled and explain why they were less grateful for estimates than for what they considered factual intelligence issuances.

The Defense

How seriously should we in intelligence take the indictment which damns our estimating work as unnecessary, or misleading, or irrelevant? Take the misleading charge first. If it is made, and if it is true because the document was designed that way, then it must be taken very, very seriously indeed. For this accusation implied that the peep ahead had been taken and the necessary retracing of steps and reconstruction had followed so that the conclusion of the estimate suited the policy predispositions of the estimators. They have been caught out in their stupidity, and their credibility, at least for this estimate, is dead. It is dead not merely for the reader who found the conclusions abhorrent, but for all the others who found out by themselves or were told.

If the same group of estimators are caught out a second or third time, their credibility will probably be dead for good. Thereafter almost any intelligence pronouncement they or their associates make will be slightly referred to as propaganda, and perhaps not even read. They have not only lost all hope of directly influencing policy, they have lost what is even more important because more attainable

than direct influence. This is the indirect influence which they might have exercised through an honest contribution to the debate which ought to precede every substantial policy decision.

Suppose the charge of misleading is made simply as a function of a committed reader's general disbelief or annoyance, and suppose that, try as he may, he cannot show a trace of bad faith on the part of the estimators. The estimators are confronted with nothing more sinister than a human disagreement, perhaps from a reader whose nose is out of joint. This is just life.

What of the charge, unnecessary? The question here is—unnecessary to whom? To everyone involved in the policy decision? Already I have dealt with Mr. "A" to whom it was unnecessary because it accorded exactly with his views, and Mr. "B" to whom it was unnecessary and many times worse because he found it misleading. But are these the only two officers or two kinds of officers involved? Is there perhaps not a Mr. "C" or Messrs. "C" who have no more than a layman's knowledge of the subject but who must participate in the policy debate and decision? Of course there are the Messrs. "C," and important men they are. The President, upon many an occasion, is a Mr. "C," and so are members of his staff and his Security Council. They have found the estimate anything but unnecessary.

It does not follow, however, that the impact which the estimate may make upon the Mr. "C"s will in itself cause the defeat of the dissenting Mr. "B"s. What it will do is to force the Mr. "B"s to put forth a better effort. This will stimulate the Mr. "A"s themselves to better effort. At a minimum, the intelligence estimate will have made its contribution in the way it promoted a more thorough and enlightened debate and a higher level of discourse within the high policy-making echelon. At a maximum it may have denied a wrong-headed Mr. "B" an easy triumph.

Lastly the charge of irrelevant. This rested upon the fact that the foreign policy decision was going to have to be made on the basis of a domestic consideration, something about which the estimate is wholly—and properly—mute. But it is just possible that the domestic consideration is not all that important and that the national interest is not really being served by this sort of deference to it. It may be that the estimate helped the policy people to reach this new appreciation of the national interest. Hence, even if the decision I am talking about gets made in conformity with the wish of the domestic pressure group, maybe the next such decision will not.

Truth Before Power

I suppose that if we in intelligence were one day given three wishes, they would be to know everything, to be believed when we spoke, and in such a way to exercise an influence to the good in the matter of policy. But absent the Good Fairy, we sometimes get the order of our unarticulated wishes mixed. Often we feel the desire to influence policy and perhaps just stop wishing here. This is too bad, because to wish simply for influence can, and upon occasion does, get intelligence to the place where it can have no influence whatever. By striving too hard in this direction intelligence may come to seem just another policy voice, and an unwanted one at that.

On the other hand, if intelligence strives for omniscience and strives to be believed, giving a third place to influence, serendipity may take over. Unselfconscious intelligence work, even in the speculative and highly competitive area of estimates, may prove (in fact, has proved many times) a key determinant in policy decision.

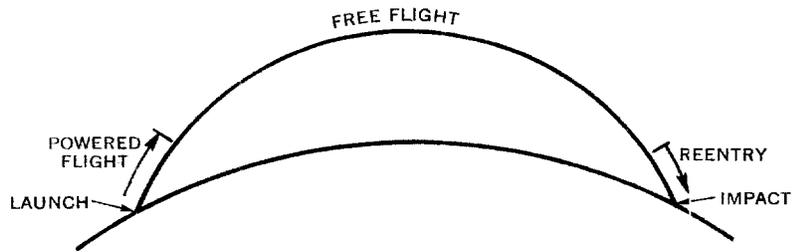


Figure 1a. ICBM Trajectory

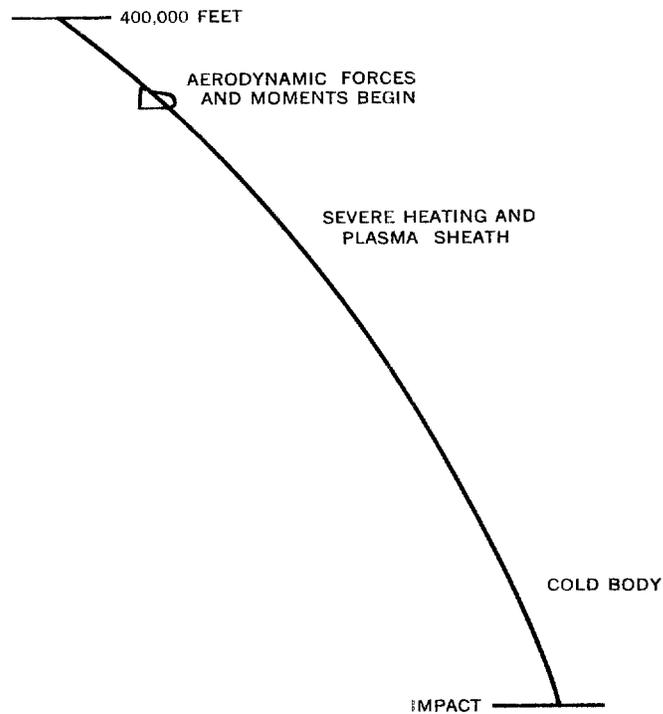


Figure 1b. Reentry

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*Making the most of tenuous information
on the warheads of Soviet ICBMs.*

REENTRY VEHICLE ANALYSIS

Jerold H. Klaimon

An intercontinental ballistic missile consists usually of two or three propulsion stages topped by a nose cone stage more properly called the reentry vehicle. The RV is designed to withstand the stresses of atmospheric reentry so that the weapon it carries can be delivered intact and operable to the intended target. It may also be designed to withstand other stresses, such as those imposed by an active defense system.

The goal of RV intelligence analysis is to determine the yield of the nuclear weapon, the contribution of the RV to inaccuracies in delivery, and its vulnerability to defense systems. In order to address these questions, it is necessary first to have in hand estimates of the size and shape of the RV and the material from which it is made. The process leading to these latter estimates is described in this article.

Reentry Phenomena

A typical ICBM trajectory is shown in Figure 1a. It consists of three phases—powered flight, free flight, and reentry. In the case of a two-stage missile, the first stage is separated and impacts about two or three hundred miles down range; the second stage and RV are usually separated immediately after the end of powered flight, but both remain on essentially the same trajectory until reentry occurs. Reentry begins when the aerodynamic forces caused by passage through the atmosphere become significant. (Although this may not always occur at the same altitude, the altitude of 400,000 feet is taken as the arbitrary point of reentry.) From this point on, the difference in shape and weight between the second-stage tank and the RV results in different trajectories. The tank, not being designed to survive reentry, is usually destroyed by the aerodynamic forces and heating. It breaks up above 50,000 feet altitude, and only fragments reach the earth's surface.

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An expanded view of the reentry phase of the trajectory is shown in Figure 1b. As the RV enters the denser regions of the atmosphere, aerodynamic forces and moments develop, causing it to slow down and to oscillate. As the air density increases further, both the RV and the air around it are subjected to severe heating. The hot air begins to ionize and forms a plasma sheath which surrounds the RV from about 250,000 ft. to 50,000 ft. altitude. The RV is continuously slowing down, however, so that at about 50,000 ft. its heating is no longer significant. From this altitude to impact it is relatively cool.

The RV consists of substructure, weapon package, primary heat shield, and secondary shielding. A schematic design is shown in Figure 2, where 2a is a simple sphere-cone configuration and 2b a more complex flared shape. Both represent typical reentry vehicle designs.

Data for Analysis

Several kinds of data are available for RV analysis, although rarely is more than one kind collected on a given reentry. There are telemetry, radar, photographic, and spectrographic data, and on occasion small pieces of RVs have been obtained. Each of these kinds is described in more detail below. Figure 3 shows the portions of the trajectory where each can be obtained. The kinds of data actually obtained on a reentry, and the extent of the coverage, depend a great deal on the location of the impact area and what sensors are in its vicinity.

Soviet ICBM tests are aimed at several more or less regular impact areas, shown in Figure 4. That on the Kamchatka Peninsula receives by far the majority of them, but there are some extended-range tests into the various Pacific impact areas. The Soviets announce publicly that these are closed to shipping and air traffic before they begin testing. One or more U.S. intelligence collection ships are usually deployed there when such announcements are made.

The Soviets conduct tests for the purpose of determining whether the RV is meeting its design goals. They therefore equip it with instruments to measure longitudinal acceleration, lateral motion, temperature, base pressure, etc. By intercepting the telemetry carrying these measurements it is sometimes possible to obtain a clue to the RV design. RV telemetry is normally available only in the early stages of developing a missile system or when a modification has been made; and even on those tests that have telemetry, it is

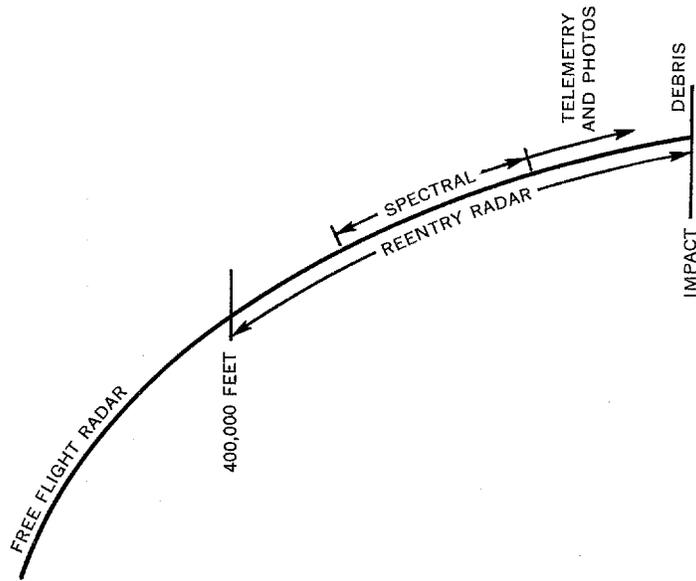


Figure 3. Reentry Data

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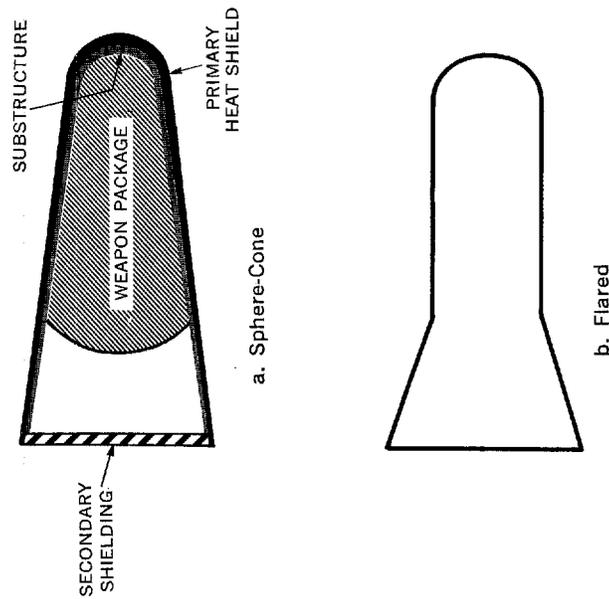


Figure 2. RV Configurations

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not always obtained. One of the problems is that the plasma sheath acts as a shield to prevent the passage of radio signals—the reentry blackout familiar to man-in-space watchers. The Soviets also have this problem, and at times they record the telemetry on board during blackout and play it back afterwards. This kind of data is collected by mobile platforms in the vicinity of impact. Both ships and aircraft are used.

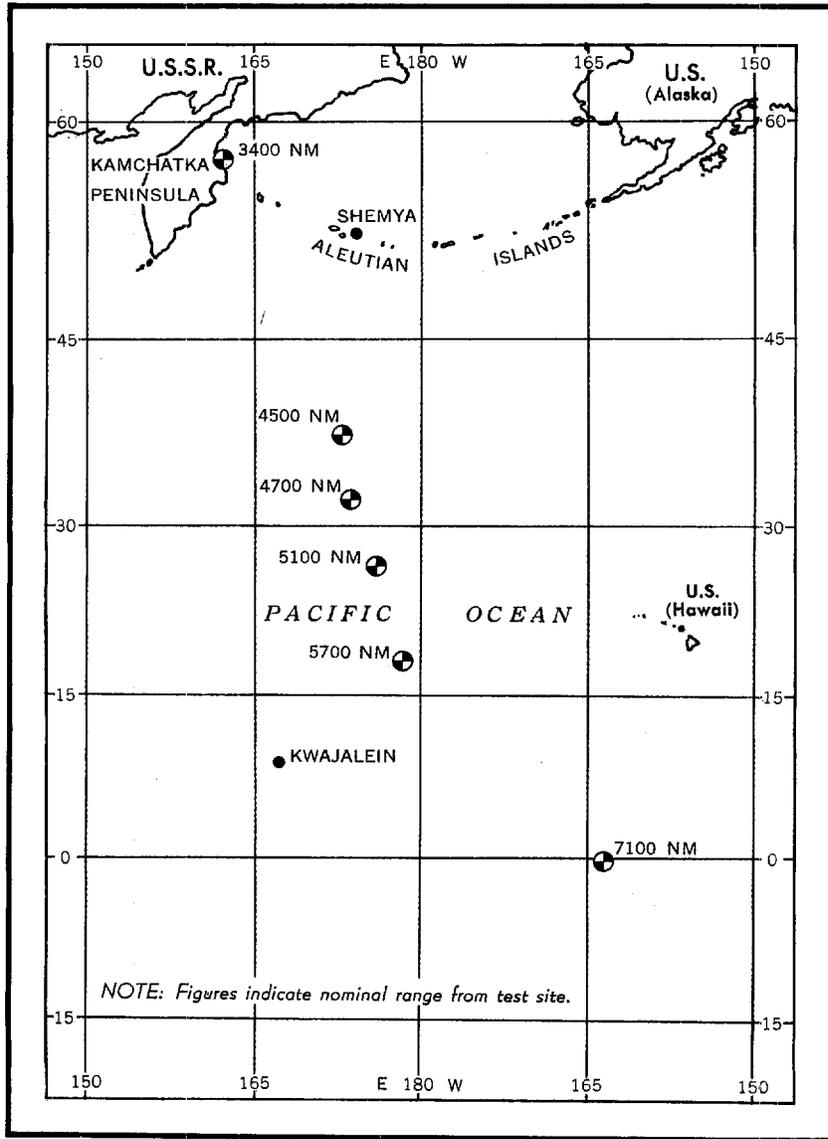
Unlike telemetry, which one must depend on the Soviets to furnish, radar, photographic, and spectral data are always potentially available. Of radar data there are two kinds. One, relating to the trajectory, i.e., yielding a history of the position of the RV, is called metric. The other, indicating size and shape of the RV by the magnitude and variation of the radar signal, is known as signature data. There is only one collector of radar data during reentry, a pair of ships (ARIS I and II) operated by the Air Force in support of U.S. missile programs. During the past three years one or the other of these ships has on occasion been used in the intelligence effort, being deployed as near the impact area as practicable. In the case of Kamchatka impacts they have to remain more than 100 nautical miles away.

At Shemya, Alaska, there are two radars which obtain free-flight data on the majority of Soviet ICBM tests. One is a fixed radar with an array of horizontal and vertical beams. This system, operated continuously, registers whenever a missile intercepts a beam. The information thus obtained is rather imprecise but serves to alert the second radar, which tracks the missile and provides more accurate data. Shemya is too far away for reentry radar coverage. During Soviet tests to the 7100 nm impact area, the radars located on Kwajalein atoll to cover U.S. tests are capable of obtaining free-flight data and have sometimes done so.

Spectrographic data are obtained from the radiation emitted by the hot gases surrounding the RV during reentry. These data consist of the wavelengths and amplitude of the observed radiation. Photographic data, spatially resolved images, are very seldom obtained during the tests. Only recently has high-quality photographic equipment been installed on a ship for use in the water impact areas.

When a water impact occurs there is usually a large amount of debris in the area, from both the RV and the breakup of the tank during reentry. The RV is most often reduced to debris by an explosive charge fired on or near impact. One of the U.S. ships in the area is always tasked with collecting some of this debris.

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Figure 4. Soviet Impact Areas

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Approach to Analysis

By way of demonstrating how the various kinds of data contribute to the RV analysis problem, the discussion that follows includes all the kinds potentially available. It should be borne in mind that never have all of them been collected on a single test.

It is rarely possible to complete an analysis from one type of data without recourse to any other. Even in the seemingly straightforward case of a photograph (and even disregarding optical distortion and insufficiency of resolution) the size and shape of the RV cannot be determined without first knowing (from trajectory analysis) its distance from the camera and ascertaining its relative attitude. It is true that when good-quality radar tracking data are available throughout reentry, the trajectory can be determined on the basis of these only. In any event, the trajectory calculations are usually carried out first.

Trajectory Analysis

When good-quality radar metric data, giving azimuth, elevation, and range relative to the sensor, are collected during the reentry phase of the trajectory, a direct estimate of the reentry trajectory is made. Such data are seldom available. More frequently, free-flight radar data and post-blackout telemetry are collected. These two kinds of data are then combined to construct the reentry trajectory.

The free-flight metric data determine a free-flight trajectory. A search is then made for a reentry trajectory which matches smoothly (in space and time) with the end of the free-flight trajectory at 400,000 ft. altitude and which satisfies the demands of certain constraints. These constraints include the physical equations of motion, the altitude of impact, the time of Mach 1 (i.e., the moment when the RV velocity is equal to the local speed of sound), and the time of impact. These times are obtained from the telemetry data; see Figure 5.¹

The final results of the trajectory calculations form histories of altitude, velocity, acceleration, and flight path angle. In addition, the variation of a figure for effective inertia with diminishing speed before and after Mach 1 is obtained. This inertia figure is called ballistic coefficient and is equal to the RV weight divided by a drag force

¹ At speeds above Mach 1 the RV must continuously push along its own compression wave front, creating a type of drag known as "wave drag." Below Mach 1 the pressure waves move out ahead, and this element of drag is lost. At Mach 1, therefore, there is an acceleration bump in the deceleration curve.

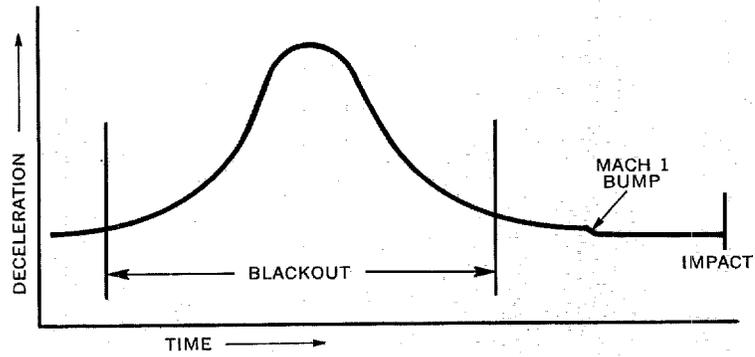


Figure 5. Telemetry Data

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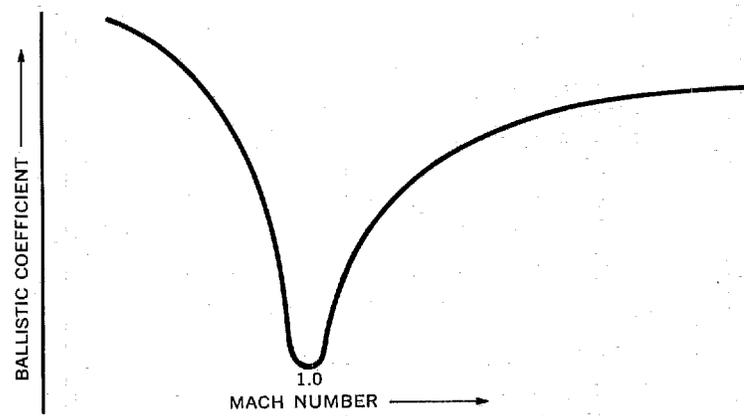


Figure 6. Ballistic Coefficient

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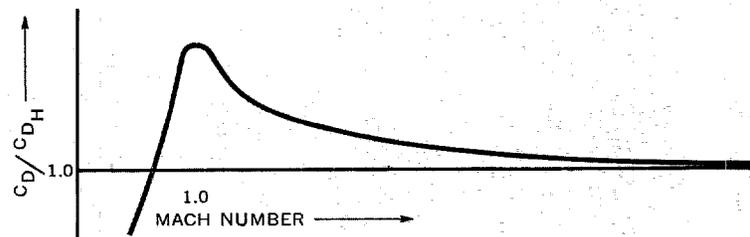


Figure 7. Normalized Drag Coefficient

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proportionality term; its variation is shown in Figure 6. Dividing its initial (hypersonic) value by subsequent values gives a normalized drag coefficient, as shown in Figure 7. This curve is to a certain degree characteristic of the geometry of the RV; very blunt shapes have low Mach 1 peaks on it compared with those of less blunt shapes. Uncertainty whether the RV has a simple sphere-cone shape or a more complex one, say the flared design, confuses the picture, however.

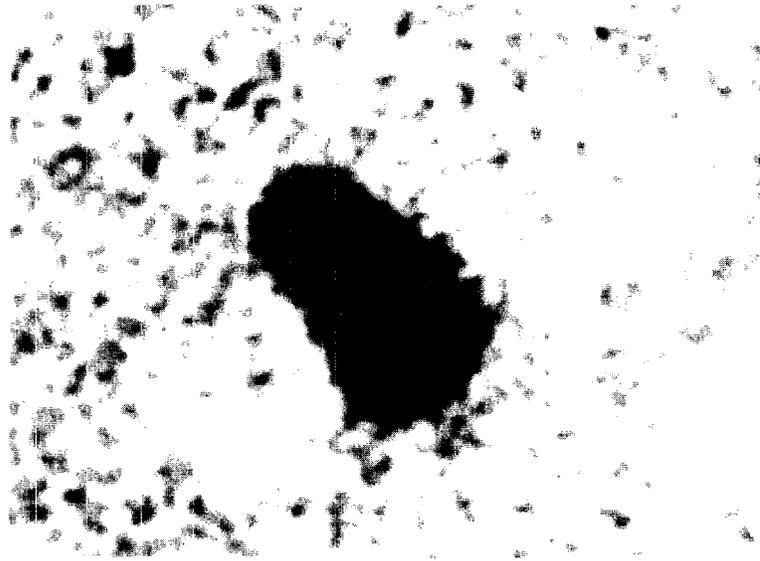
At best, then, the calculations described thus far yield a rather accurate estimate of the trajectory. No estimate as to RV size or weight can yet be made. The value of the RV's hypersonic ballistic coefficient by itself, however, is a strong clue to its accuracy, i.e., freedom from random deviation during reentry. Large values of ballistic coefficient lead in general to much less dispersion among a given number of impacts than small values. But detailed calculations of dispersion cannot be carried out without a good estimate of RV shape.

Size and Shape

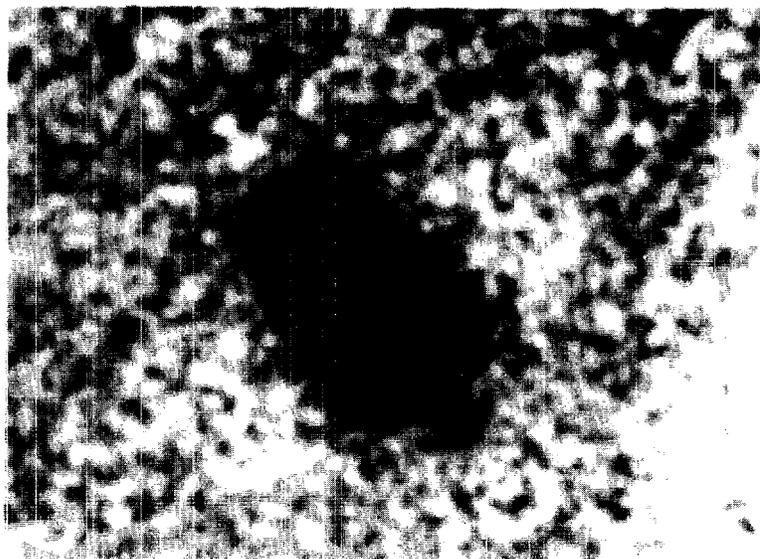
The best way to estimate RV shape and size is from a good-quality photograph taken when the RV is relatively cool, and such photographs are obtained only rarely. In the one reproduced as Figure 8 the quality is not as good as could be desired, but it is good enough to obtain size and shape details with some degree of confidence.

Radar cross-section data, although less directly revealing shape than a photograph, can provide some size and shape information. When the RV is illuminated by a radar, the character of the reflected signal is affected by the size and shape of the RV and its attitude with respect to the radar beam. For instance, the maximum returns are obtained when the RV is viewed nose-on or at right angles to the lateral surfaces. A sample intensity-aspect curve is shown in Figure 9. The magnitude of the peaks gives an indication of the size of the RV. In addition the shape of the curve gives an indication of the shape of the RV.

The analysis of these data is not straightforward. Reentry vehicles do not consist of pure shapes like spheres, cones, or cylinders, but of combinations of geometric forms. Furthermore, the precise way the radar pulses scatter from the reflecting surfaces is not predictable on the basis of theory. During a test reentry the RV may never be viewed nose-on or broadside, so that what appear to be maximum values of radar cross section may only be relative highs and thus not indicative of the full size. Finally, in order to decide which



A RESOLVED PHOTOGRAPH



B MIRROR IMAGE ENHANCED COMPOSITE

Figure 8. A Soviet RV

analysis formulas are applicable, an estimate of the geometric configuration must be made a priori. Nevertheless, the radar cross-section data provide the only potential means, except the rare photograph, for a direct estimate of RV size and shape.

Materials

From spectral data, that is, intensities resolved by wavelength of the radiation from the hot gases surrounding the RV during reentry, indications of the composition of the primary heat shield can sometimes be obtained. In keeping the RV relatively cool, portions of the shield vaporize, and its atoms and molecules radiate energy at their characteristic wavelengths. That a particular element is observed does not, however, necessarily mean it is part of the heat shield. Impurities such as sodium and potassium often occur in the shield as well as in air. If there is paint on the RV, it may give spectral data not related to the heat shield. Finally, chemical reactions may produce compounds not originally present.

In addition to the composition of the shield material, a knowledge of its mechanical construction is necessary to assess fully its shielding capabilities. In the use of woven materials, for instance, a tight weave, giving high density, has certain advantages and disadvantages as compared to a loose one.

The only real way to determine what materials the RV is made of is to obtain samples. This can be done after an impact on the open sea. When the RV is destroyed either by the impact or by an explosion, debris is often widely scattered in the area. On several occasions small pieces which appear to be secondary shielding of some kind have been collected. In one recent test a sample of what is thought to be the primary heat shield was obtained; it is still undergoing analysis. While no definitive conclusions have yet been reached on the basis of the little debris collection done so far, this is essentially an untapped source of information of potentially great value.

Efforts are under way to intensify debris collection operations. Improved photographic equipment, as noted above, is also being deployed. Exploited successfully, these two sources can contribute more to RV estimates in the near future than all the other data sources in the past. Analyses based on telemetry, radar, and spectral data, which have constituted the great bulk of what is available, will always be subject to varying interpretations and can at best be considered only approximately correct. Only photography and the analysis of debris are likely to yield firm RV estimates.

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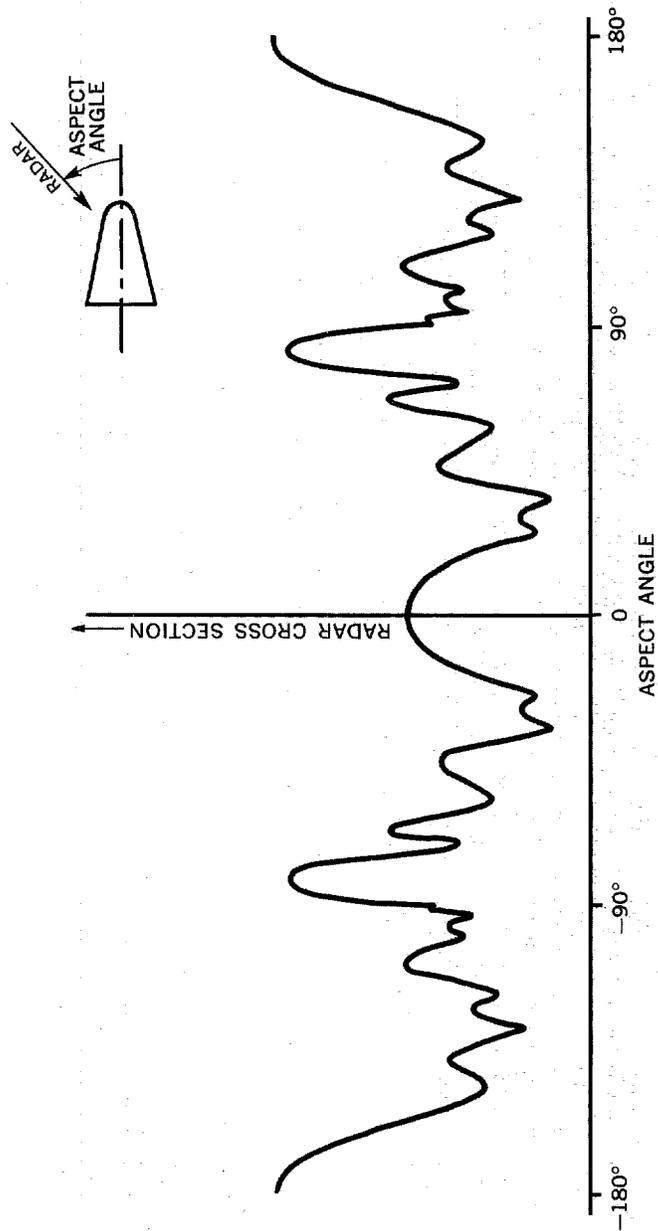


Figure 9. Radar Cross Section

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*An interesting if abortive effort
to locate Chinese nuclear plants
through biological phenomena.*

IN SEARCH OF MIGRATORY ISOTOPES

Ned C. Horel

The acquisition of information on the atomic energy program of Communist China, which has had the highest priority for a number of years, was considered especially critical during the uncertainties of the early 1960s. The following account of one attempt to gather such information illustrates how no stone was left unturned. It was sought to exploit the natural access of living beings, animal and vegetable, to otherwise denied territory in China, taking advantage of their inherent capabilities to concentrate materials of interest and depending on their natural or commercial migration for data recovery. Although unsuccessful in attaining its intelligence objective, the project did yield some basic information valuable to medical research in connection with national defense.

Generation of a Project

In the earlier effort to locate Soviet nuclear plants and identify their major functions a program for the collection and analysis of environmental samples from their vicinity had had some success. Now in the winter of 1961-62 Air Force Lt. Col. Charles M. Barnes, assigned to AEC's Division of Reactor Development, conceived of an extension of this technique to operate more remotely through the examination of migratory animals, birds, fish, and other biological specimens for traces of radioactive waste liberated from nuclear facilities. He reasoned that some biological specimens "tagged" with such radioactive materials would migrate in traceable patterns to areas where they could be sampled, so that by establishing the migration patterns it might be possible to determine the location of nuclear plants. Then a careful radiochemical analysis of the biological samples could show what nuclear process was responsible for the contamination. It had been found that banded birds captured in Argentina bore unmistakable evidence of their summertime residence near the U.S. plutonium production site at Hanford, Washington. If

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the Chinese were producing nuclear materials in plants comparable to those in the West, the waste products released to the environment would be similar.

Colonel Barnes drew up a proposal to station small teams strategically around the periphery of mainland China to gather samples for analysis and presented it to the USIB's Joint Atomic Energy Intelligence Committee in the fall of 1962. At this time, although the gaps in information about the Chinese atomic energy program were substantial, there was no question about the existence of a significant program. The Chinese effort begun in the early 1950's had been materially accelerated by Soviet aid between 1955 and 1960. A Roddis Panel assembled at the request of the DCI was trying to evaluate its progress toward a nuclear weapon and advanced delivery capability. One of the panel's tasks was to "assess existing and planned collection and analysis programs against Communist China and to recommend additional or alternative approaches." It reported as follows:

There is ample evidence of the existence of a significant AE program in Communist China. We are, however, unable to factually identify the locations at which the program is carried on. No production reactor site has been even tentatively identified. Without adequate collateral information to pinpoint possible reactor locations it will not be easy to even predict when a site may be located. Until this occurs it is impossible to predict when the first material for the test of a nuclear device will become available.

It appears to the panel that an immediate exploitation of the present environmental sampling technical capability through an expanded collection activity, especially of biological samples from the river systems, particularly the Yellow River, would be most fruitful.

In line with this recommendation the Barnes project was approved by JAEIC as one approach to filling the tremendous need for information, and Colonel Barnes was transferred to CIA to direct it. It was divided into three major programs, the most ambitious and important of which was a migratory bird program—a coordinated effort to band birds and collect data to determine their migratory patterns. The other two were a plankton program—for the acquisition of marine life from rivers and territorial waters—and a slaughterhouse program—for sampling animal tissue from slaughterhouses on the Chinese periphery.

The cover mission of the project was to determine the role of migrating biota in the international transport of diseases of human importance. It was called the Migratory Animal Pathological Survey

and operated under the Armed Forces Institute of Pathology. The samples and tissues collected would be subjected to study and analysis in keeping with this overt purpose but also to radiochemical examination revelatory of Chinese nuclear activities. The bird-banding program would be carried out at seven to ten peripheral sampling stations. Marine life off the China coast would be sampled with the cooperation of the U.S. Navy. Animal tissues would be collected from slaughterhouses mainly in Hong Kong.

In the MAPS bird program it would be necessary to establish basic information on migratory flyways from the Far East, particularly China, and this would require that Chinese ornithologists be induced to cooperate with other Far East ornithological groups. Colonel Barnes spent February and March of 1963 in the Far East arranging for the establishment of a permanent office in Tokyo and recruiting interested parties to work on the program.

The Plankton Program

The sampling of plankton and water off the China coast was done mainly as a "piggyback" operation in connection with destroyer patrols on so-called Desota, primarily Elint, missions. The Laboratory of Radiation Biology of the University of Washington furnished and supervised the installation of the required sampling equipment. The first patrol was conducted in September-October 1963, twenty miles offshore, from Taiwan north to the entrance of the Gulf of Chihli with the mouths of the Yangtze and Yellow rivers as its main targets. The ship was challenged by the Chinese, however, and turned back before entering the Gulf of Chihli, so that no samples from the Yellow River plume were obtained.

Elsewhere samples were taken by pumping water at the rate of 150 to 180 gallons a minute through a collecting barrel in which fine-mesh nets filtered out the plankton. When the nets became clogged, they were replaced and the plankton sample on them was filtered again through a stainless steel "Millipore" filter funnel. These filtered samples were then carefully slow-dried and packaged for shipment to the laboratory. The laboratory results on the samples from the northern trip were similar to those on samples from other northern waters, showing radioactivity slightly higher than in southern waters. This was the expected pattern due to fallout from prior Soviet nuclear tests. There was no detectable evidence of higher activity at the mouth of the Yangtze than in the general northern coastal waters.

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Migratory Isotopes

Water samples collected by other assets during the summer and fall of 1963, primarily from the mouths of the Yangtze, Huang-P'u, and Pearl rivers, showed no sign of waste from a nuclear facility but did provide a record of normal levels of radioactivity for these areas. Since the Chinese began their nuclear testing in October 1964 these prior measurements have been useful in determining amounts of fallout and estimating the make-up of the new background radioactivity.

Only two patrols, the one northward and another unproductive one to the south, were made before it was decided that Elint could be collected better from aircraft, so that no new Desota patrols were scheduled. Not much later it was concluded, on the basis of photographic readout from Chinese Nationalist U-2 overflights, that the likeliest location for the assumed Chinese plutonium reactor was at Paotou, on the Yellow River, and that the possible reactor there was an air-cooled facility, which would deposit only a minimal amount of radioactive material on the surrounding terrain for rains to wash into the Yellow River. These developments resulted in the cancellation of the plankton program.

The Slaughterhouse Program

An Iodine-129 isotope, which occurs in nature only in minute quantities, is released through the operation of a plutonium production plant. Cattle grazing on land which has been exposed to radioactive fallout, and other animals eating contaminated food, will concentrate from five to ten thousand times as much radio-iodine in their thyroids as in other tissues, and the amounts of the I-129 can be measured. The primary object of the MAPS slaughterhouse program was then to collect specimens of thyroids from animals originating in Red China.

This part of the project was based in Hong Kong because the colony imports from the mainland large numbers of cattle, goats, and swine whose point of origin is always stated in the shipping manifests. Negotiations with Hong Kong government officials over the establishment of the program were long and tedious, largely because of their concern with protecting their delicate relationship with the Chinese government. Permission to proceed was finally granted, however, and a British veterinarian was hired to collect thyroids from the local slaughterhouses. He collected them weekly, stripped them of excess connective and fatty tissue, and packed them in containers for ship-

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ment to the laboratory. In all, 336 animal thyroids were obtained from 13 Chinese provinces.

As a natural sideline to the slaughterhouse operation, MAPS cooperated with the broad regional Environmental Sampling Program by collecting agricultural products for analysis. Samples were purchased of items labeled as to origin, for example Lanchou melons, during routine shopping trips in Hong Kong. Samples from 17 provinces were secured, peeled, dissected, or otherwise prepared and forwarded for analysis. Since the mail took several days, all samples were preserved with formaldehyde, and the resulting noxious odors [redacted] made this aspect of the program quite unpopular.

Of a total of 647 samples obtained in Hong Kong, few were from provinces within the central target area and none showed more than background values upon analysis for radioactive elements.

The Bird Migration Program

The main emphasis of the MAPS project was on the bird migration program. There was a minimal amount of information to begin with on migratory flyways in the Far East, and several seasons would have to be spent making observations and banding before enough data would be available to provide a basis for any meaningful conclusions. For this purpose bird-banding teams were established in eight locations on the Chinese perimeter—in Japan, Korea, Taiwan, the Philip-pines, Thailand, Malaysia, and Sarawak.

An American ecologist-ornithologist, Dr. H. Elliott McClure, who had been working in Asia some 13 years in medical research activities, supervised the bird-banding teams, each of which was headed by a competent scientist, usually an ornithologist, and had a minimum of three full-time workers, more during the migration season. It was interesting to find that while many of the workers had college degrees, these were not always the best men in the field. They could not match uneducated colleagues who had gained experience netting birds for food.

Work on the banding program began in May 1964; by July 1966 approximately 300,000 birds of 725 species had been banded in most habitats from the equator to 37°N latitude. 104 birds were recovered outside the country in which they were banded and 292 in the same country or at the original banding site after a migration cycle.

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Migratory Isotopes

This work of banding was a significant scientific accomplishment, but it would have intelligence value only if mainland Chinese ornithologists cooperated by banding or returning bands so that the precise flyways into China could be determined. Efforts to stimulate Chinese bird-banding and reporting were made through international ornithological contacts, and a correspondence was carried on between Dr. McClure and the chief Chinese ornithologist, Dr. Tso-Hsin Cheng; but not a single recovery was reported from the CPR. Offices of the International Committee for Bird Preservation have been encouraged to correspond with Peking, and it is hoped from the scientific point of view that ultimately the Chinese will join in the international banding program, extending to their country the data from the MAPS effort.

Russian ornithologists cooperated to some extent with the program, and North Korea responded once through the ICBP.

Because of the failure of Chinese ornithologists to participate and the development of more sophisticated techniques for collecting the required information, the intelligence sponsorship of MAPS was terminated in July 1966. The program was transferred to the Walter Reed Army Institute of Research and its headquarters moved from Tokyo to Bangkok. Its future plans call for the continuation of basic migration studies, the collection and identification of ectoparasites, and studies on problems of the geographic spread of zoonoses that are of interest to medical scientists.

The effort was thus abortive with respect to its intelligence aim, but it remains not without results and prospects in the fields of natural science and medicine; and some of the medical findings will be useful to U.S. national defense.

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No Foreign Dissem

*The head of a famous Soviet wartime
spy net now collects geographic intel-
ligence in Budapest.*

ALEXANDER RADO

Louis Thomas ¹

Part I

Highlights of a Remarkable Career

Alexander (Sandor) Rado, Alexander Foote's chief in the Swiss-based "Rote Drei" net that in 1941-43 supplied Moscow with detailed information on German order of battle, now plays a leading role in Soviet Bloc mapping programs and has shown exceptional zeal in collecting geographic intelligence on the West. His activity in intelligence, mapping, and related fields has lasted nearly 50 years and may earn him a place in the pantheon of major intelligence figures of the times.²

Rado was born in Ujpest, Hungary, in 1899 of wealthy Jewish parents. While a student, reportedly a brilliant one, at the Budapest gymnasium he joined a socialist group whose members included Matyas Rakosi and Erno Gero. He became one of the first members of the Hungarian Communist Party when it was formed in November 1918. He took an active part in the Bela Kun uprising, 1918-1919, serving as political commissar in Ferenc Munnich's division. Forced to leave Hungary when the short-lived Communist government was ousted in 1919, he went to Austria and later to Germany.

¹ Adapted from CIA/BGI PN 63.2300, a 39-page study of the same title.

² The Soviets' long silence about their wartime operation in Switzerland was broken on 20 February 1968 by a *Komsomolskaya Pravda* story that told a little about the Switzerland network and praised Rado. Since then other stories about him have appeared in Bloc media. The latest items claim that he will soon publish his memoirs.

MORI/HRP
from pg.
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Geographer in Germany

In the fall of 1919 Rado started academic work at the University of Jena, changing his field of study from law to geography and cartography. Continuing his Communist activities, he was in touch with Rosa Luxemburg and Karl Liebknecht, founders of the German Communist movement. Through the influence of German and Hungarian friends he was brought to Moscow at the end of 1919 to work in the Secretariat of the Comintern. He performed well and enjoyed the sponsorship of several leaders, among them Comintern president Zinoviev.



Alexander Rado at Age 60

At age 20 or 21 he was made director of a Soviet intelligence and propaganda office located at Haparanda, Sweden, on the Finnish frontier, and subsequently he held a similar position in Vienna. In late 1922 or in 1923 he resumed his studies at the University of Jena, where he continued until 1925.

While in Moscow in 1919 Rado had met Helene Jansen, an avid German Communist then working as second or third secretary to Lenin. (He himself had at least one talk with Lenin.) In 1923 or 1924 he married her in Moscow and she joined him in Germany while he completed his studies. Thereafter she participated extensively in his intelligence activities. The Soviets regarded them as Soviet citizens, although Rado, holding a valid Hungarian passport, could also claim Hungarian citizenship. He seems to have received financial support from the USSR continuously from 1919 on.

In 1925, upon completing his studies at Jena, Rado was trained in the USSR for service with Soviet military intelligence and then settled in Berlin. He was assigned to a Soviet intelligence network concerned mainly with German politics and industrial development. To establish his cover he worked for the German publishing firm Meyer's Lexicon, and later he was employed as a cartographer preparing air charts for Lufthansa. While with Lufthansa he reportedly studied photogrammetry and traveled several hundred thousand miles throughout the world.

Rado prepared and published in Berlin in 1928 a German-language guide to the USSR and in 1929 an *Arbeiteratlas des Imperialismus*, the Communist slant of which did not seem to affect his standing with Lufthansa. In the early 1930's he did air chart work in Stockholm for Aerotransport, a Scandinavian Airlines predecessor then affiliated with Lufthansa. This work gave him some access to defense secrets of Sweden and possibly other countries—secrets which, it may be assumed, soon found their way to Moscow.

The Rados made a trip to Moscow in 1931, presumably for briefing and orientation. Upon returning to Germany in 1932, he accepted employment as a geographer for *Almanac de Gotha* in Berlin, a position he held until 1933. During this period he wrote geographic articles for a number of journals and became a fellow of several geographical societies, including the Royal Geographical Society of Great Britain.

Paris Enterprise

In 1933 Rado moved with his family (sons were born in 1925 and 1930) to Paris, where he founded, with Soviet financial backing, a press agency known as Inpress, specializing in maps and geographic data related to current events. Soviet operations against Germany would be more secure if the directing center were outside the target country. Inpress employed some 16 people, including four or five agents using the firm as cover. Communications for the network were handled through couriers whom Rado would meet in France and Spain or later, after the start of the Spanish Civil War, in the Scandinavian countries, especially Finland. Particularly sensitive information was sometimes transmitted through the Soviet embassy in Paris. High-level Soviet officials such as Litvinov and Molotov are reported to have conferred clandestinely with Rado when passing through Paris.

In early 1936 Rado was called to the USSR for consultation. Since Inpress had not become self-sustaining financially, it was decided that the firm should be closed down and Rado moved to another assignment. Rado, however, asked to be released from intelligence work, and the Soviets agreed, on condition that he and his family resettle in the USSR. He returned to Paris to close down Inpress and to discuss the Soviet proposal with his wife.

But before they had decided what to do, Rado is said to have been approached by German officials and asked to undertake a

special assignment for them. Mussolini had requested the Germans to recommend an expert to assist Italy in the solution of some geographic and cartographic problems; Rado was to pose as a German officer and take the job. He did so, spending some 8 months on it while his family remained in Paris. His findings were sent to Mussolini, to the Germans, and gratuitously to the Russians. Why German officials of Nazi persuasion should have sought out Rado for the Italian assignment remains a mystery.

Change of Station

Rado's personal contact with the Fascists in Italy, the rise of Nazism in Germany, and the trend of the Spanish Civil War convinced him, it is reported, that he should continue his work for Soviet military intelligence. He was assigned to direct and expand a small Red Army intelligence network operating in Switzerland against Germany. He proceeded to Geneva with his family, including Helene's mother, in late 1936, ostensibly to take a position with the League of Nations International Labor Office, in which there were at that time many Communist sympathizers. After several months of working full time for ILO, he became its part-time consultant and devoted his main energies to his intelligence work and the development of cover for it.

In 1936 or 1937, with Soviet funds and having a Swiss citizen as silent partner, Rado organized Geopress, a news agency specializing as Inpress had in maps and geographic background data. Geopress was more successful than Inpress because of better organization and the increased demand for news maps in the advancing shadows of World War II. As cover for an intelligence operation it proved ideal. Its normal activity—news collection and dissemination—provided justification for contacts with businessmen, officials, diplomats, journalists, and military leaders, some of whom became intelligence sources. It also justified a large volume of telephone and telegraph traffic, extensive postal business, and the maintenance of a courier system.

While building up his Geopress cover Rado also developed his sources, organized communications, and summarized for transmission the reports collected by his growing network. And he even found time to maintain through publications his image as an internationally known geographer. A left-slanted *Atlas of Today and*

Tomorrow, prepared jointly by Rado and Marthe Rajchman, was published in London (1937) by Victor Gollancz Ltd.

War Service

As resident director of the Switzerland network, Rado held the secret Red Army rank of Major General; he was awarded the Order of Lenin in 1943. A description of the apparatus he administered was first made public in 1949 in Alexander Foote's *Handbook for Spies*, and interest in it has recently been revived by a flurry of speculation and controversy, chiefly among French and German researchers, about how its prime source "Lucy" (Rudolph Rössler) got such prompt access to the secrets of the German high command. Moscow, Foote declares, largely fought the war on Rössler's messages. But in 1941, when Rössler first made contact with Rado, Moscow was extremely suspicious and advised Rado to have nothing to do with him. Rado, in what must surely rank as the most important decision of his life, nevertheless went ahead and paid Rössler, insisting that his information was authentic and vital, an evaluation later accepted by Moscow. Foote, de facto number two man in the network and no Rado admirer, calls this one of Rado's few independent acts during the war.

The network had many troubles. Prominent among them were the difficulty of getting funds from Moscow to Switzerland, Moscow's pathological suspicion of the British, rivalry between Red Army intelligence and other Soviet services, the security of personnel inherited from other networks, and a serious personality clash between Rado and Foote. Rado thought Foote misused network funds, was overly cautious and "hard to work with." Foote thought the same of Rado. Nevertheless, they accomplished much with the knowledge and tacit approval of officially neutral Switzerland. German pressure on the Swiss rather than independent Swiss initiative brought about the breakup of the net.

Rado's main participation in the work of his apparatus ended in 1943. Compromised and forced to hide out, he and his wife spent several months at a safe house, while their sons remained with their grandmother in Geneva. Their exit to France was finally arranged by the Nicole organization of Swiss Communists.

Foote believed that Rados did nothing but hide out until their exit. Another version holds that during this period Rado tried to

reestablish contact with Moscow through the British embassy, there being no Soviet-Swiss diplomatic contact at the time, and then through the Chinese embassy. Finally, communication via Chungking proving too slow and unreliable, he attempted to get a new transmitter built in Liechtenstein with funds from Swiss businessmen who were to be repaid and rewarded with large orders from the USSR after the war. Although the Liechtenstein transmitter never got into operation, the Swiss financial backers presented their claims when diplomatic relations between Switzerland and the USSR were established in 1946. Soviet diplomats, however, disclaimed any knowledge of Rado and his wartime activities, and the claims were not paid.

In 1944 the Rados contacted friends in the French Resistance and spent five or six months working with the Maquis in southern France, for which they were later awarded the Legion of Honor by the French Government. They did not attempt to report to the Soviets until Paris was liberated in 1944, when they made contact with the Soviet military attaché there. The Nicole organization brought their boys to Paris to rejoin them. Helene's mother remained in Geneva to liquidate the household.

Disgrace

Alexander Foote, only recently freed from a Swiss jail, reached Paris about the same time as the Rados. The two men were interrogated individually by the Soviets regarding the last days of the network. With a more complete and current picture of the situation in Switzerland, Foote's antagonistic opinions evidently prevailed when his account was weighed against Rado's. Both were ordered to report to Moscow for consultation.

Apprehensive about the fate that might await him in the USSR, Rado considered declining Moscow's invitation. It is reported that Helene finally persuaded him to go, arguing that he had done his best with the Switzerland network under difficult conditions and so had nothing to fear from the Soviets. In January 1945, still somewhat dubious, he and Foote left Paris on a Soviet aircraft bound for Moscow via Cairo. After talking at length with Foote, Rado's doubts again got the upper hand and he left the flight in Cairo.

He was soon picked up by the British-directed Egyptian police, who were puzzled and uncertain as to how he should be handled. A

ensor's information card, passed at the time to OSS representatives in Cairo, sums up what seems to be the story he first told his captors:

24 Feb. 1945

RADO, SANDOR

During the German occupation of Hungary, lived in Geneva where published geographical maps for the Allied Governments until 1943; discovered by the GESTAPO and consequently his relatives in Hungary were murdered/went with family to Paris in September 1944 and continued his work/summoned to Russia to report on his activities with the Free French Organization and left on 8 Jan. 1945 by special plane for Moscow/suspecting a trap, he got off the plane in Cairo where he remained/received no news from his wife in Paris and suspects that she might have been deported/he was formerly a Fellow of the Geographical Society in London, New York, Paris, Geneva, Rome and Washington, D.C.

OFFICE OF CENSORSHIP, Egypt, 11 April 1945

He had apparently decided that his interests would be best served by painting himself as a victim of persecution and devoted to the Allied cause while holding to a minimum revelations that might increase the ire of Moscow. The result was a mixture of truths, half-truths, lies, and distortions.

After some local maneuvering Rado made a direct effort to defect to the British but was turned down. Also to no avail was his legal resistance to Soviet extradition. He was handed over to the Soviets and flown to Moscow in the summer of 1945. Confined to Lubyanka prison for a year and a half, he was eventually charged with espionage in favor of the West, letting code keys fall into enemy hands, misuse of network funds, and failure to keep his network functioning. He was sentenced without trial to 15 years' imprisonment and stripped of rank and honors.

A hostile attitude on the part of Beria may have figured importantly in the disposition of Rado's case. During the war Beria reportedly sent his son to Switzerland to work in Rado's net in order to keep him out of front-line army duty. The son, a playboy type, wasted network funds, jeopardized security, and did no useful work. Rado had him recalled to the USSR, where he was eventually killed serving with the Red Army; and for this his father blamed Rado.

Reports on Rado's period of forced labor in the USSR are few and somewhat contradictory. In early 1947 he was apparently moved from Lubyanka to a coal mine in Siberia. In a short time he became labor manager of the mine and thus was not subjected to hard

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Alexander Rado

physical work. He was soon shifted to Kuchino, near Moscow, the site of a geophysical observatory. According to one interpretation, the move to Kuchino was the result of an error: officials reviewing his papers saw that he had transmitted intelligence by radio and so thought him a radio technician. At Kuchino he was put to work on map and chart problems connected with the development of a navigation system and possibly missile guidance. He made noteworthy contributions, apparently, for he soon became a "prisoner with privileges," entitled to a private apartment and access to Western publications. It is conceivable that the "error" which brought him to Kuchino was the result of string-pulling by friends.

In 1946, while still in Lubyanka prison, Rado had been pressured into writing his wife in Paris and suggesting that she and their sons follow him to the USSR. Helene, suspecting that the letter had been written under duress, declined; the Soviets then directly urged her to come. Other letters of Rado's to members of his family were not forwarded to them, and their letters were not delivered to him in the Soviet Union. In 1948 or 1949, Helene, still in Paris, obtained a divorce of convenience in the hope that it would discourage further Soviet attempts to make her return to the USSR.

Rehabilitation and Return

Rado was released from prison in 1954, his sentence being reduced by work credits. The amnesty that followed Stalin's death, along with the intervention of friends and the fall of Beria, may have expedited the release. For perhaps a year he remained in the USSR working, ironing out his citizenship status (the Soviets now consider him a dual citizen), obtaining documentation, and weighing alternative plans for his future. There are a number of contradictions in reports on him during this period. One account says he worked as a geographic expert for the KGB. Another report states that he was a translator and cartographer for the Soviet Academy of Sciences, a position he obtained through Professor N. N. Baranskiy, whom he had met while a prisoner.

His negotiations with the Soviets, at any rate, were not smooth. At one point he was offered his choice of professorships in the USSR; at another Soviet officials wanted to send him to Siberia. It was reportedly only through the intercession of Hungarian Ambassador Ferenc Munnich, an old friend from the Bela Kun period, that the way was finally cleared for Rado to return to Hungary. Khrushchev

is said to have sent a telegram to the Hungarian Communist Party vouching for him on the eve of his return.

According to one report, Rado reentered his native land in July 1955; yet his name is listed as a member of the editorial board of the Hungarian journal *Geodézia és Kartográfia* in its first issue for 1955. Either the reported date is incorrect or he began participating in Hungarian mapping affairs before leaving the USSR. In either case, his appointment to membership on the journal's editorial board was remarkably fast for one who had not spent a day in Hungary since 1919.

A considerable number of Hungarians who had been prisoners in the USSR returned at about the same time as Rado, so that his arrival in Budapest attracted little attention. He found to his surprise that his sister, Elizabeth Klein, was living in Budapest with her son; the Soviets had told him that none of his relatives in Hungary survived the war. At first he worked as cartographic editor of an encyclopedia but soon discovered many old friends in high places who wanted to use his talents and experience. Rakosi and his deputy Gero, whom he had known since 1916, reportedly offered him the position of chief of intelligence and he refused, claiming he did not want to get mixed up in "dirty work."

He worked briefly for the Ministry of Foreign Trade, then returned to his encyclopedia job, and finally, still in 1955, accepted a position as deputy chief of the Allami Földmérési és Térképészeti Hivatal (State Survey and Cartographic Office) with specific duties as head of the Cartographic Department. This continues to be his main official position, except that in the spring of 1967 the previously autonomous AFTH was put under the Ministry of Agriculture and Food and its name changed to the Országos Földügyi és Térképészeti Hivatal (National Land and Cartographic Office). Other posts Rado holds or has held include a professorship at the Karl Marx University of Economic Science, numerous editorships, and the chairmanship of many committees and commissions.

Shortly after his return to Hungary and unaware of Helene's divorce, he wrote her in Paris suggesting that she join him but that their sons, French citizens, remain in France; if they entered Hungary they might be treated as Hungarian citizens and denied egress. Helene, ill with cancer, was thus reunited with Rado in 1956. She died in Budapest in 1958.

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Alexander Rado

Rado reportedly took no part in the Hungarian revolt of 1956, but it seems more by luck than by design. At one point in the power struggle the principal figures on both sides, Imre Nagy on the one and two Soviet generals on the other, were old friends of his. He thought he might be able to bring them together to work out a modus vivendi. To this end he attempted to see Nagy but was unable to reach him, and there the matter ended.

After the revolt the Soviets showed a new and favorable interest in Rado. To their appreciation of his mapping and intelligence know-how had been added the important fact that he did not take part in the uprising or attempt to leave Hungary while it was in progress. It is reported that he was appointed Chairman of the Warsaw Pact Committee on Mapping and Geodesy in 1957. While this specific has not been confirmed, there is much evidence that at about this time his power and prestige increased greatly, that he was accepted by the Soviets as he had not been before, and that he began making short trips to the USSR at approximately six-month intervals.

A U.S. official in touch with Rado and other Hungarian geographers and cartographers in 1959 noted that the younger men coming up in the mapping organizations were being drawn from the Karl Marx University of Economic Science, where Rado taught Communist theory, the geography of the Soviet Union, and economic geography and presumably exercised some screening authority. In 1959 he married a librarian at the University, Erzebet Bokor. Fortyish and the holder of a doctorate, she shares many of his professional interests and has accompanied him on trips to the West.

A source who worked with Rado in the 1950's noted in 1963 that he seemed very well satisfied with his situation. He was better dressed than in the past and had a chauffeur-driven limousine at his disposal.

Rado has written or edited many articles, books, and maps and has received honorary degrees and prizes. Noteworthy among the latter is a 1963 Kossuth Prize, Class III, for "achievements in organizing and raising the scientific standards of civilian cartography in Hungary." A deliberate effort has been made to establish him as an internationally recognized geographer. He has represented Hungary at several international meetings and has made numerous trips to the West, a sign that he enjoys Soviet confidence. It is noteworthy that he has been willing to interpret the Bloc line on such sticky matters as the role of Albania in the Socialist camp, the China-India boundary, and the Oder-Neisse question both at international meetings and in un-

classified publications. On several occasions he has been observed in extended conversation with K. A. Salishchev, a key figure in Soviet mapping.

Since 1956 Rado's influence has been projected into an ever-widening circle of activities. He is an administrator and coordinator of mapping programs, a cartographer, a teacher, a scholar, an editor, a propagandist, a diplomat, an intelligence collector, a security officer, and a still-alert old man who derives much enjoyment from his present position of power and the opportunities he now has to carry out his ideas and programs.

Part II

Contemporary Intelligence Collector

Although the record of his early years is far from complete, there seem to have been few times from the early 1920's through World War II when Alexander Rado was not engaged in some phase of intelligence collection. Whether his work upon returning to Hungary in 1955 was intended from the beginning to include such collection is moot. The fact remains that an emphasis on procurement became noticeable in the Hungarian mapping milieu shortly after he appeared on the scene and has increased steadily to the present. At some stage Moscow seems to have given him a green light to make Hungary a special instrument for the collection of geographic intelligence on the West.

Main Collection Schemes: Cartactical

The emphasis Rado places on the collection of geographic intelligence is illustrated in several of the Hungarian publications under his influence. The journal *Földméréstani Kozlemények* (Periodical of Geodesy), which appeared from 1949 to 1954, came out under a new name, *Geodézia és Kartográfia*, in 1955, simultaneously with Rado's first being listed on the cover as a member of the editorial board. Its second issue for 1956 incorporated format adjustments and several new sections, among them *Változások a Térképen* (Map Changes), comprising some three pages of current data for both Communist and Western countries on civil divisions, place names, hydrography, transportation, and other changes of particular interest to cartographers. Rado's name appeared at the end of the section as "coordinating editor." This section, carried regularly since 1956, has increased in size to five

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Alexander Rado

or six pages. The credit to Rado was elaborated in the final 1959 issue to read, at the head of the section, "Coordinating Editor—Sandor Rado, Doctor of Geographic Science," a form used consistently in all issues thereafter.

In 1962 the publication schedule of *Geodézia és Kartográfia* was stepped up from four to six issues per year. This made the section on changes more valuable in getting word to cartographers sooner, and it permitted an increase in the volume of data handled. As an intelligence window to the West, however, the section still had a great disadvantage—publication in the Hungarian language. This was remedied in September 1965 with the first issue of a new quarterly, *Cartactual*, having text in English, French, and German. *Cartactual* broke the language barrier and gave Rado an instrument apparently designed specifically to establish and maintain contacts between his office and map makers and publishers throughout the world.

Each issue of *Cartactual* is essentially a collection of easy-to-reproduce maps illustrating the more noteworthy map changes cited in *Geodézia és Kartográfia*. On the whole, it is a cleverly conceived instrument that reflects a well-honed appreciation of:

- expanding Bloc needs for geographic information on foreign areas,
- the thirst of the West for hard data on the Communist world,
- news values and the role of maps in statecraft,
- the problem of keeping maps current in a technological climate wherein man can change the landscape significantly at an ever-increasing pace,
- the needs and interests of cartographers and publishers, especially those working with limited resources and facilities, and
- the peculiar mechanics of "data trade" around the world.

The content of *Cartactual* seems to be gleaned entirely from open sources and reflects a careful reading of many newspapers and technical journals. Much of the research, as well as the selection of items, is believed to be handled personally by Rado, who is fluent in at least six languages. A typical recent issue included 22 pages of maps on non-Communist countries but only two on Communist countries. Some of the Western items are old hat by the time they appear in *Cartactual*, but many working cartographers find it helpful and convenient to have the data organized, indexed, and illustrated with clear maps.

Although some information on Communist countries is provided, essentially Rado and his coworkers contribute service—search, selec-

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tive collection, organization, illustration, and publication of known data. In return he gets the subscription price (\$10 per year), an extensive systematic file of Western data needed to keep Bloc maps current, a plausible basis for maintaining close contact with Western sources (some of which may be susceptible to development as clandestine agents), and finally, prestige for his office as a "world clearinghouse" for geographic intelligence. He is trying to encourage mapping agencies throughout the world to contribute more large-scale maps and detailed data for his use.

Now in two colors, *Cartactual* has been generally well received in the West by private cartographers and publishers. A review in the British *Cartographic Journal* for December 1966 gave it unreserved and naive praise:

. . . In preparing *Cartactual*, Professor Rado and his colleagues have placed all map makers in their debt. . . . A very high standard of cartographic line drawing was achieved from the outset and it should not be thought that the maps are sketchy or diagrammatic in form. Each is carefully drawn in a simple style based almost entirely on line work and with little reliance on areal shading or hatching. A variety of neatly applied lettering styles is used to make the appropriate emphasis in different parts of each map. A scale of miles and kilometres is included in each map and all relevant locational information is clearly provided. A particularly noteworthy feature is the inclusion of the source and date of the information used in the preparation of each map. . . .

When one discovers among these maps details of ferry services in Scandinavia or the alignment of a new road through the holiday towns of the Adriatic coast, one realizes the value of this publication to a wide range of users, other than cartographers and geographers. In clear, uncomplicated maps such as these the school teacher, and the layman, can find *at a glance* information of considerable importance to him which would seldom be quickly retrieved if given in textual form in technical journals or the press. . . .

In 1967 *Cartactual* began to carry lists of "correspondents" on the back cover. It is likely that some of these have agreed to supply data from their home countries, but no details on the working arrangements are now available. It is noteworthy that the correspondents for three important map-producing countries (Rand McNally for the United States, Du Jonchay for France, and Esselte for Sweden) are individuals or organizations that have collaborated with Rado on joint projects, as discussed below. The lists suggest that Rado has been zealous in seeking correspondents and is having some success in his attempt to become a world clearinghouse for geographic intelligence.

The *Cartactual* collection scheme is believed to bring the Bloc substantial intelligence gains at modest cost. It is similar in many ways,

in its neat completeness, to the Geopress cover scheme Rado operated in Switzerland from about 1937 to 1943. In developing the current operation Rado must have been influenced by his Swiss experience and have been trying, if only subconsciously, to get back on his old track, with appropriate adjustments and allowances for a changed world situation.

Bloc 1:2,500,000 World Map

The scale of 1:2,500,000 has been much used in the USSR since the 1930's. In 1956 the Soviets proposed, within the framework of the Economic and Social Council of the United Nations, that a world map with uniform sheets at 1:2,500,000 be endorsed as an international mapping project in place of the International Map of the World at 1:1,000,000, to which they object for security reasons. They would like to have the advantages of participating in international mapping programs but do not want to reveal the detail on the USSR that would be shown by one-to-a-million sheets covering Soviet territory. After their proposal was rejected, they decided to go ahead anyway with a 1:2,500,000 world map, with most Bloc countries participating in the work.³ Rado had much to do with this decision and may have been the prime mover behind it. He claims that all 244 sheets of the series will be published "within a few years time" and then kept current by a revision program.

Although it may thus not have been conceived as a procurement gambit, the Bloc 1:2,500,000 program, with Rado as the leading spokesman, offers many procurement advantages. It may be possible to get some Western mapping agencies to participate directly in the compilation of sheets covering their own or adjacent territory, but regardless of what is or is not accomplished along this line, production of the series and later maintenance will provide a logical pretext for seeking geographic data from all parts of the non-Communist world for years to come. The project can be represented to potential data suppliers as an "international" program, and to innocents in some of the underdeveloped countries it may not be apparent that ultimate control rests solely with the USSR.

Rado has used and no doubt intends to make further use of the 1:2,500,000 map as justification for seeking geographic intelligence

³ When the project was in the early planning stage, Communist China agreed to prepare sheets covering Chinese territory, but later backed out. It is reported that Czechoslovakia will now prepare the China coverage.

Alexander Rado

from the West. In a 1967 request he noted that his office is "discharging the functions of Information Centre of the *World Map* programme." At the Latin American Regional Conference of the International Geographical Union held at Mexico City in 1966, Rado delivered a long paper on the *World Map* and displayed available sheets covering the Americas. He also brought with him preliminary proofs of some 28 not-then-published sheets covering Latin America. There is reason to believe that he sought and perhaps obtained Latin American assistance in checking and reviewing the proofs.

He wrote in 1965 to the U.S. Navy Oceanographic Office seeking a large quantity of bathymetric data for use in the compilation of *World Map* sheets. He received an answer giving an approximate cost figure which was probably higher than he expected. He then asked a U.S. geographic attaché in Europe about the possibility of obtaining the desired data at a lower figure but was given no encouragement. In October 1967 he wrote to the U.S. Coast and Geodetic Survey reiterating his need for bathymetric data "as detailed as possible" for use in compiling the world 1:2,500,000 map. He asked specifically for copies of Coast Survey charts of the coast of the United States and offered to "return your courtesy in any form, among others to send you in exchange all the sheets of the *World Map*."

The *World Map* and *Cartactual* tie in especially with the procurement of geographic intelligence needed to keep maps current. They now seem to be Rado's favored schemes and to be receiving most of his time and attention. He has not abandoned other collection schemes, however.

Other Collection Devices

Rado and his colleagues have been zealous in seeking exchange agreements with both official and private agencies in non-Communist countries. Proposed agreements have covered maps of all kinds and a not very specifically defined range of miscellaneous publications. These efforts have been clearly identified in the United States, Latin America, Europe, and Asia, and they are believed to be world-wide in scope. In general, the exchange agreements have been a good thing for the Hungarians and a poor bargain for their partners. Hungary has persistently demanded the best topographic maps, engineering studies, technical publications, and specific data needed for map compilation in exchange for school maps, tourist maps, picture books, and items of little intelligence value. An official U.S.-Hungarian exchange was cancelled by the United States in 1961 because

Rado was unwilling to maintain approximate parity in the quality of items exchanged.

The Hungarians procure by purchase some of the most desired maps and studies, as for example topographic maps of the United States at 1:24,000. Orders are sent to U.S. Geological Survey field offices and to book and map dealers throughout the United States. Orders are also directed to book and map dealers in foreign countries who handle U.S. publications, as for example dealers in the United Kingdom, France, Germany, and Japan. Hungarian military attachés have placed some orders personally; others have been handled by correspondence. For some orders a Hungarian origin has been suspected but could not be proved. Rado and his colleagues use the purchase approach sparingly, even though it should be the most expeditious way of obtaining some desired materials. The reasons are not clear; a shortage of hard currency may figure in it.⁴

Hungarian solicitations come by letter to a wide range of national and local government offices, transportation authorities, chambers of commerce, educational and research institutions, and business firms throughout the non-Communist world. Usually the requests are for specific publications or data and are justified in various ways: We are compiling a scientific map, preparing a news map,⁵ writing a textbook, preparing a statistical compendium, correcting an encyclopedia, compiling an atlas, assembling material for a university course, and so forth. It is noteworthy that Rado finds time to serve nominally as co-editor of the Hungarian International Almanac; in that capacity he signs letters requesting statistical data and other information on subjects beyond the realm of cartography or geography.

Budapest map exhibitions, an ingenious collection scheme, were started in 1962. Exhibitions are held yearly, usually in October, with the theme changing from year to year. The 1962 exhibition focused

⁴In their contacts with the West, Rado and his aids consistently complain about their organization's budgetary woes and shortage of hard currency, a posture that may reflect the truth. On the other hand, it is possible that they sound the we-are-poor note as a matter of policy in the belief that it will open free procurement doors, invite contract work, and give their activities an aura of innocence that a well-funded operation would not have.

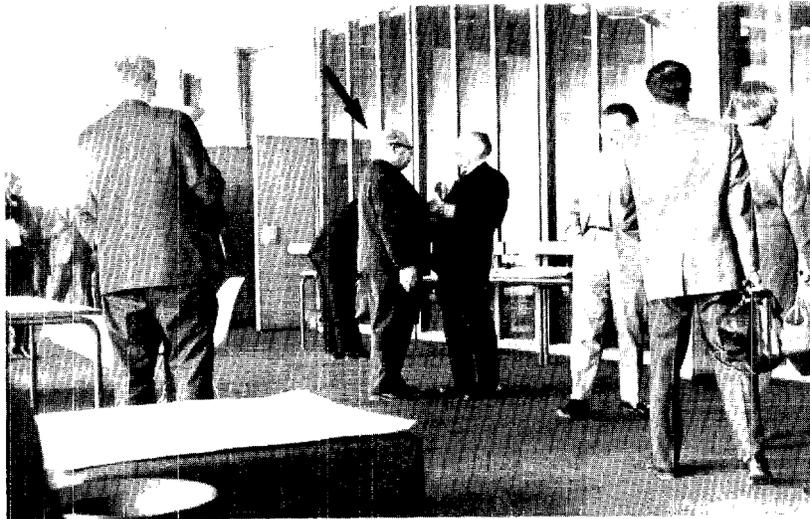
⁵For Terra, a Budapest-based news service that issues geographic background summaries on areas in the news. Releases are accompanied by outline maps designed especially for newspaper reproduction. The service is subscribed to by many Hungarian newspapers and perhaps also by papers in other countries. In function, Terra has much in common with the Geopress service that Rado operated in Switzerland.

on national atlases. Themes for other years were as follows: 1963, road maps; 1964, tourist maps; 1965, city plans; and 1966, school atlases and globes. Requests for maps for the 1964 exhibit went to many private organizations in the United States, including Rand McNally Company, Goushá Company, and the American Automobile Association; 1,419 maps of the United States or parts thereof were contributed without charge for exhibition and retention. The contributions of other countries were probably more modest, but the take from the world as a whole was considerable. Rado, who knows a good thing when he sees it, refers in a recently published *International Geographic Union Newsletter* to the "now traditional Budapest map exhibitions."

Rado or Hungarian agencies arrange joint projects with publishers in the West to produce specific maps or atlases. Three arrangements of this type have come to attention to date: a 1966-67 map of China published jointly by Esselte (Sweden) and "Cartographia"⁶ (Hungary), based mainly on data supplied by Rado; a French atlas published in 1966, *Atlas International Larousse, Politique et Économique*, prepared under the direction of Rado and a French geographer, Ivan du Jonchay; and an arrangement with the Rand McNally Company of the United States under which "Cartographia" will prepare (along with companies in England, Sweden, Hungary, Japan, and West Germany) parts of an international atlas to be published in 1968 by Rand McNally and the Encyclopedia Britannica.

Such joint projects develop contacts for Rado in Western countries, open data-collecting doors, and earn hard currency. He is known to have proposed to an Italian organization that it economize by having its cartographic work done on a contract basis by Hungarian agencies, a suggestion that was rejected. No other rejected proposals for joint work have been reliably reported, but it is likely that there have been some. The collaboration with Du Jonchay may be partly rooted in wartime camaraderie. Du Jonchay is a retired French naval officer with an odd World War II record, an Africa expert, and a member of the Comité Français de Géodésie et de Géophysique. He reportedly collaborated—or pretended to collaborate—with the Germans in North Africa during the early phase of the war but later became active in the French Resistance in southeastern France, as Rado was in 1944.

⁶The commercial front for Rado's official civil mapping agency, Országos Földügyi és Térképészeti Hivatal . . . (National Land and Cartographic Office . . .).



Alexander Rado (arrow) at Third International Conference on Cartography, 17-21 April 1967, Amsterdam.

Another aid to collection is participation in international conferences. Rado has been very active in the work of the ICU and the ICA and seems to be the chairman of most Hungarian national committees tributary to these organizations. He has also found time to attend other meetings such as the general assemblies of geographical societies in Bloc countries, an exhibition in Finland, an international conference on economic regions convened in Poland, and a reception held by the Cuban Academy of Sciences. His last two forays into the West were to the Regional Latin America Conference of the ICU in Mexico City in 1966 and the conference of the ICA held at Amsterdam in April 1967. Some of his activities and objectives at such conferences are essentially the same as those of Western participants—to obtain the latest word on new developments, make useful contacts, inspect exhibits, obtain literature, and negotiate publication exchanges. In addition, he propagandizes the achievements of Bloc cartographic science and technology, looks for penetrative opportunities such as a chance to send Bloc experts to an underdeveloped country, and polices contacts between Bloc representatives and Western delegates.

In general, Rado carries to international meetings the same get-everything-give-nothing tactics that have characterized his handling

of routine map and publication exchanges. Although he still enjoys a measure of success, his background is apparently becoming known and some of his overtures are now brushed off or are received warily.

Trends and Prospects

Firm quantitative estimates of Rado's take are unavailable, and its value to the Bloc can only be guessed at. There are, however, some indications that the volume is considerable and the low cost of obtaining it makes the collection program a bargain. The procurement push began with Rado's reappearance in Hungary in 1955, and the schemes and gambits have grown steadily in number and complexity since that date. There has been no trailing off. The awards and honors Rado has received suggest that his efforts have been officially evaluated as successful and that in the Communist hierarchy there is considerable appreciation of what he has accomplished.

A few foreign agencies, as well as U.S. business firms and municipalities, have sought advice from U.S. officials on how they should respond to Rado requests. In reply they have been told something of his collection activities and encouraged to refuse. When it became evident that Rado had written to officials of virtually all sizable U.S. cities seeking city plans for a map exhibition, the Department of State wrote letters to U.S. municipal authorities calling attention to his one-sided exchange policies and suggesting that they refrain from filling his requests. The most effective action has probably been the informal passing of the word at international geographic and cartographic meetings that exchanges with him are one-way streets that benefit the Bloc considerably while bringing nothing of value to the West. His poor reputation in this respect was a factor in his rejection, at least temporarily, as a candidate for vice president of the ICA at its 1967 meeting in Amsterdam. Given the expectation that the person elected would become president in three to four years, Rado's Bloc-endorsed candidacy met resistance, and after some backstage argument the final settlement of the matter was postponed until the 1968 meeting in New Delhi.

Recent word to the effect that Rado will soon publish his memoirs, making public "all he deems it possible to say about his political, revolutionary, and intelligence activity before and during World War II" seems to mean, *inter alia*, that in the near future he will give less time to mapping and geographic intelligence collection (possibly abandoning the ICA presidency as an objective) for the

sake of producing propagandistic history. The Soviets were stung by recent European press interpretations of their espionage in Switzerland during the war and have evidently decided to tell some of their side of the story through Rado, even at the expense of his current activities.

If relatively detailed and candid, Rado's account may throw new light on the history of the war and his own remarkable career. In a May 1968 press interview he declared that he wanted in his memoirs to "crack the myth" that Germany lost the war because of traitors in the Wehrmacht's General Staff. It is virtually certain that his recollections, whatever their merits or deficiencies, will touch off a new round of discussion and controversy.

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COMMUNICATION TO THE EDITORS

Historian's Query

Dear Sirs:

The Assessment and Evaluation Staff of CIA is currently trying to put together a history and an evaluation of psychological testing programs used in support of intelligence operations over the past 20 years. Any reader who has ever been directly or indirectly connected with such a program is earnestly invited to forward to the Staff, directly or through this journal, any information he can about the tests or assessment techniques used.

The bare fact is known that such programs were carried out, either by U.S. personnel or by liaison services, in connection with spotting, selection, recruitment, or management in operations as listed below. By whom they were administered and for what purpose, what techniques were used, and how successful they were is the information now sought.

Early 1950s: Iron Curtain countries

Mid-1950s: Korea, Taiwan

Late 1950s: Greece, Cambodia, Laos, Vietnam, Indonesia, Philippines, Japan, Tibet, Burma, Pakistan

Early 1960s: USSR, Berlin, Korea, Laos, Vietnam, Thailand, China, Tibet, Cuba, Libya

Mid-1960s: USSR, Laos, Vietnam, Indonesia, Thailand, China, Ceylon, India, Argentina, Bolivia, Dominican Republic, Panama, Peru, Congo, Nigeria

Any information will be gratefully received.

Joseph L. Kimbrell

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*Setbacks, successes, and conversion
to war work of the Tsar's counter-
subversion field agency.*

PARIS OKHRANA: FINAL PHASE

Rita T. Kronenbitter

The exposure of its much-decorated chief, Arkadiy Harting, as a provocateur and fugitive from French justice came as a severe blow to the Okhrana abroad in June 1909. The greatest organizer and operator ever to head it had to be whisked out of Paris to evade arrest after Vladimir Burtzev's revolutionary intelligence, supported by the liberal press of France, demonstrated beyond doubt that he was the same man as both Abraham Hackelman, a police informer of the 1880's, and the provocateur Landesén whom a Paris court had sentenced *in absentia* to five years' imprisonment in 1890.¹ When the blow fell Harting was at the height of his success. The strong intelligence service he had organized, with much praise from Petersburg, operated in many European countries, recognized by them and having working liaison with their security services. For his achievements in France and other Western countries he was being considered for a Legion of Honor award when the exposure terminated his career.

Harting was not immediately replaced. Until November 1909 the Paris Okhrana had as acting chiefs his two case officers Captains Dolgov and Andreev successively. In ordering them to take charge headquarters violated its own rule prohibiting staff agents (as well, of course, as non-staff agents) from entering Okhrana premises. The overt staff remained the same, and so did the "external" service of non-Russian detective and surveillance personnel, but several important penetration agents had to be deleted from the "internal" service roster. This was because Burtzev, with his counterintelligence crew including such defectors as Michael Bakai and Leonid Mentshchikov, succeeded in exposing them and making them useless as agents, sometimes killing them off if they failed to hide away on time.²

¹ See the author's "The Illustrious Career of Arkadiy Harting" in *Studies XI* 1, p. 71 ff.

² For the work of Burtzev's bureau see the author's "The Sherlock Holmes of the Revolution" in *Studies XI* 4, p. 83 ff.

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Mending Liaison Fences

When Aleksandr Aleksandrovich Krassilnikov arrived in November of 1909 to become the last chief of the Okhrana abroad, the staff personnel had increased by one assistant, Mikhail Bobrov. The case officers, because of their overt affiliation with the Paris center, could no longer handle the penetration agents and were therefore recalled to Russia. They were replaced by a Lt. Colonel Erhardt, an exceptionally competent staff agent, who remained as the principal case officer until his death from appendicitis in May 1915.

The immediate and very pressing problem for Krassilnikov was to regain something of the prestige necessary for successful operation of the service abroad. The repercussions of Burtzev's relentless campaign against France's harboring a branch of the Russian police were nearly disastrous. The liberal press and parliamentary interpellations vigorously demanded expulsion of all MVD representation, even as the operatives of the Turkish services had been summarily expelled earlier that year. Minister Clemenceau prohibited the Sûreté from engaging in any further liaison with the Okhrana. In time he rescinded the order, but then he was succeeded by Briand, a more determined radical. For months a closing of the entire Russian service in France appeared imminent.

Finally a visit of Tzar Nicholas to France and Okhrana's intelligence to the effect that Russian Anarchists were placing a bomb on the S.S. Vérité in Cherbourg, where His Majesty intended to board, turned the unfavorable tide. The Sûreté had to cooperate. Ambassador Nedilov also interceded, holding conferences with Briand, and eventually obtained an assurance that the French government would do nothing to interfere with the Okhrana. Briand issued instructions to the Sûreté for the renewal of liaison but at the same time asked the Russians "to avoid, as much as possible, all activities that would lead to scandalous consequences and not to undertake any action that could be construed as violating the rights of French citizens."

Even with this official reprieve the Okhrana's prestige in France remained severely shaken. In England also, the Harting scandal led to a complete termination of liaison with Scotland Yard, and it was only after a year of friendly and professional approaches that Krassilnikov was able to regain a close working relationship with Thomas Quinn, head of the Yard. The chiefs of the Prussian Sicherheit and other services in Germany, however, remained fairly constant in exchanging anti-revolutionary intelligence despite the scandal.

Krassilnikov was not as dynamic a leader as Harting, who studied every target, planned every important operation, gave personal guidance to penetration agents, and himself often acted as their case officer. Krassilnikov, strong on systematic organization of the service, was more of a manager, capable of giving good guidance for operations but always aloof from any direct participation in them. The running of operations, in his view, was the job of the agents and their case officers in the Russian internal service and of the investigators and their supervisors in the non-Russian external service.

Staff Agents

Soon after his arrival the new chief reported to headquarters that he had transferred all deep-cover agents in France except one to Lt. Colonel Erhardt. The important ones were contacted personally without the participation of the outgoing case officer Captain Dolgov; others were informed in writing. Captain Rekk, another staff man assigned to act as case officer, was gradually given a number of the penetration agents. Krassilnikov rented a new safe house for his own meetings with the case officers, and they found safe places for meeting their agents. By the middle of 1911 Erhardt was in charge of thirteen penetration agents, four who lived in Paris and met the case officer in person and nine in other cities and countries who maintained contact mostly through correspondence by cable and registered mail. Captain Rekk had a similar arrangement with three men in Paris and six abroad.

In a 1911 dispatch to headquarters, making the point that headquarters should no longer write to case officers directly but only through him, Krassilnikov spelled out in detail how the reporting process worked. Penetration agents were under as strict and continuous control as circumstances and the work load of the two case officers permitted. The agent submitted raw reports to the case officer, who reviewed and edited them, destroyed the original, and sent the edited report unsigned to the Paris office. Only a code term on the report indicated its origin so that the Paris office would know the agent source and the dispatching case officer. But when a report was sent to headquarters, all references to agents and case officers were dropped. Krassilnikov insisted on this because after the Harting affair all agents were afraid of exposure, and Burtzev had alluded to his well-placed sources at headquarters.

From the beginning of his administration until the termination of the service in March 1917 the shortage of competent case officers was the subject of many memoranda exchanged between Krassilnikov and

Petersburg. For a short time Colonel von Kotten of the Gendarme Administration in Moscow assisted as case officer, but he had to be recalled after an agent named Moses Ripps whom he had hired earlier in Moscow, actually an assassin planted by the revolutionaries, attempted to kill both him and Harting and was brought to trial by the French authorities. The public trial, fully exploited by the leftist press, exposed von Kotten to the extent that he could no longer serve abroad in any Okhrana capacity. Then Captain Rekk had to go after he got similar publicity in connection with a tour to London. His handling of agents there created disaffection, and his work in liaison with British security organs at the time of the coronation of King George V was poor. Krassilnikov's recommendation that he be dismissed was accepted.

Two replacements arrived in due course—Captain Litvin in July 1912 and Captain Lustig in August. Both were soon promoted to lieutenant colonel, and Erhardt could then distribute the handling of deep-cover agents geographically. He himself covered most of the agents in France; Litvin those in England, the Low Countries, and Germany; Lustig those in Switzerland and Italy. This division of labor was subject to frequent changes and adjustments, however, as the agents' targets moved around. Captain Likhovskoi was the last case officer assigned, when Erhardt died in 1915. During the war the reports of some agents in Switzerland refer also to a case officer named Keller, on whom the Okhrana files contain no information.

Case officer tasks had to be entrusted quite frequently to the senior assistants in Krassilnikov's office—his deputy and business manager Boris Sushkov and assistants Ivan Melnikov and Mikhail Bobrov. (The other overt employees were Chashnikov and Fedorova, who did reports and code room work, and Kozhanov.) And one of these, deputy Sushkov, was a presumed traitor. The story of how he was found out is sufficiently intriguing to interrupt this exposition.

A Provocation by Disguise

Burtzev spoke, as mentioned above, of intelligence contacts at Petersburg that led to his exposure of Okhrana agents, but there were subtler allusions to a possible leak right in the Paris office. Krassilnikov was all but sure that Burtzev had a source there, but there was not the slightest ground to suspect anyone in particular. On one occasion a penetration agent in Burtzev's office was present when he had a telephone conversation with someone in the Russian embassy, and at other times he made references to an "embassy source." Krassilnikov,

knowing that no one in the embassy proper could have access to Okhrana records, expressed his suspicions to headquarters. But all his own officers and clerks were employees of many years' good standing, known for their loyalty, and devoted to him personally. The unsettling puzzle persisted through several months.

In October and November of 1913, Burtzev's exposures of Okhrana agents became dangerously frequent for the service. Then one day Burtzev announced that he would soon have in his possession the names of *all* the secret agents of the Russian police in Paris. Krassilnikov went to Petersburg for a conference with the Director centering on two sets of recommendations for putting an end to Burtzev's intelligence activity. After the conference a measure was approved by the MVD Minister which would change the whole structure of the Okhrana in Paris. As one consequence of the reorganization Boris Sushkov's functions as business manager would be absorbed elsewhere. Sushkov, who was then also visiting Petersburg, was instructed not to return to Paris.

For the period of his own absence from Paris, Krassilnikov had ordered increased surveillance of Burtzev. Two teams were engaged to keep the revolutionary intelligence establishment under constant watch, and the penetration agents inside it were instructed to double their observation and reporting. Upon his return to Paris, Krassilnikov studied the reports of these surveillance teams and penetration agents. They contained no lead to Burtzev's particular source, but they all agreed on one significant observation: Burtzev had suddenly become sullen and ill tempered, deliberately refusing any discussion of his big operation to expose all of the Okhrana agents. He also appeared to be less well informed than theretofore about the current activities in the Okhrana office. On the basis of these and other observations Krassilnikov reported his impression that Burtzev was disturbed and frustrated by the sudden loss of an important source of intelligence. But there was still no indication of who that might be.

Eugene Jollivet, who had started work in Burtzev's office as a double agent for the Okhrana about 1 November, reported among other things that Burtzev had asked him to locate Boris Sushkov's new address. Burtzev said he needed it to include in a list he was publishing of the names and addresses of people connected with the Okhrana. But his evident anxiety in singling out Sushkov's address and not asking for any others struck Jollivet. Krassilnikov was shocked.

When he left Paris Sushkov had not given his landlady a forwarding address because he supposed he was coming back. It did not occur

to Burtzev, finding him gone, that he had left Paris; and Jollivet also supposed he was in the city somewhere. Krassilnikov therefore instructed Jollivet to keep on searching for Sushkov, but not to report any finding to Burtzev before clearing it with himself. Jollivet should also try to worm out of Burtzev the reason for the search.

In the days following, Jollivet had several more meetings with Burtzev, who appeared more and more frantic at each. And each time he modified the story as to why he needed the address so urgently. First he said that the address was for a mutual friend. Then he said he was trying to locate Sushkov for a noblewoman who would find it embarrassing to approach him at the embassy. Finally he went so far as to admit that the woman for whom he wanted the address would be his go-between to Sushkov to get information about the Okhrana. It was now clear that he wanted the address for his own personal contact.

With this information on hand, Krassilnikov quickly developed a plan with his case officer Litvin, who was of approximately the same height and build as Sushkov. Litvin rented a furnished house under the name and title "Boris Sushkov, Official of the Russian Embassy." Jollivet rushed the address to Burtzev, who was delighted but cautious: he wanted to make sure this Sushkov was the one he was after. He had begun to suspect that Sushkov might have left Paris when two of his surveillance agents reported that he was no longer observed anywhere around the embassy.

Burtzev telephoned the address, and the concierge confirmed that M. Boris Sushkov, official of the Imperial Embassy, was the tenant there. He then instructed Jollivet to find out whether this Sushkov looked like the man Burtzev knew, wearing pince-nez and a soft velour hat with wide brim, and also what time of day he left and returned home and where he went. Krassilnikov and Litvin had paid proper attention to details, so Jollivet returned to Burtzev with a surveillance report establishing that the man did look like Sushkov, wore a pince-nez and soft velour hat with wide brim, and was leaving his quarters daily at 6 P.M. for a walk to a physician's some three blocks away.

Burtzev was convinced. He ordered Jollivet to leave Paris immediately and to stay in his country home until called upon again. It was obvious that he wanted to contact Sushkov without the danger of being observed doing it even by his good agent. On the same day, 25 January 1914, Colonel Litvin left the house at 6 P.M. and turned in the direction of the physician's office. Although he knew

Burtzev to be nearsighted, he took no chances; he had added to the Sushkov hat and glasses some shoulder padding to appear more like the man. Soon after he started out he noticed an older gentleman crossing the street in his direction. The stranger pointed with his finger to signal the way they should turn. He came quite close, peered at Litvin sharply, then started, turned suddenly, took another look, and quickly walked away and disappeared. A surveillance agent, on hand for the purpose, followed him home—to Burtzev's house. To make sure, Colonel Litvin had Burtzev pointed out to him at a lecture three days later. It was the same man.

This confirmed fully the suspicion that Sushkov had served as Burtzev's source for identifying Okhrana agents. Other incriminating evidence piled up subsequently, including a written deposition signed by his colleagues Melnikov and Bobrov. They described Sushkov's truculent behavior in the office, the nature of his complaints, and incidents indicative of disloyalty. There is no record in the files of how headquarters disposed of the case, but Krassilnikov's little operation had some really important results. Burtzev was never again in a position to expose any agents, internal or external, and this is one reason his sources of income dried up and he was left without a service.

The External Service

Giving his staff officers full authority to handle the penetration agents and make independent decisions with regard to operations, manager Krassilnikov devoted more personal attention to the organization of the external service. When he took over, there were only 22 external agents, some of them controlled by Henri Bint, a veteran of some 30 years of Okhrana service who was in charge of various ever-shifting investigation and surveillance teams. Krassilnikov studied the records of these agents, their loyalty and achievements, and found justification for some dismissals. Others he met to evaluate personally and determine which would make the more likely leaders. He selected as principal agents for area coverage the following: Invernizzi for Italy, Woltz for Germany, Tueppinger for Austria and Switzerland, and Aebersold for England. Among the French agents he found Marcel Bittard-Monin the best prospective leader; he had had ten years experience in the French service and had a fine record with the Okhrana from the time he was hired by Harting in 1908.

This proposed geographic distribution, despite efforts to achieve it in 1910 and 1911, failed for various reasons. The agents, as they

were repeatedly regrouped into surveillance crews, almost constantly bickered among themselves. For the most part they were selfish mercenaries. There was much jealousy because of differences in pay and kinds of jobs. They preferred duty on the Riviera. They objected to assignments if they did not like the other members of the team. Italians and Frenchmen were sullen if they had to work with Germans. The French resented Italian supervision. The older ones looked down on the newer recruits. The use of female agents caused an occasional fist fight among the males.

By the end of 1911 the number of non-Russian agents had increased to 50, mostly men. Krassilnikov had Bittard-Monin establish an office in Paris for communication with all team supervisors and individual investigative agents in the countries of Western Europe. By giving Monin the communications code for release to crew supervisors, he set up a network that he believed would suffice until a more geographic grouping could be established.

The only geographic grouping that did become possible was attained in England by 1912. Krassilnikov made a special trip to see Thomas Quinn and asked for the services of one man who could be entrusted with the handling of the Okhrana's external agents in England. Quinn designated Francis Powell, an Irishman whom he called one of his best men at the Yard, and Powell accepted under the condition that working for the Russians would in no way prejudice his status at Scotland Yard. After six months of trial operation, Powell was placed in charge of all Britishers then or afterwards serving the Okhrana. All were former Scotland Yard employees, fully trained, who proved to be true assets to Krassilnikov. There were never any reports of friction among them.

This arrangement of relying entirely on Powell and his personnel with the recommendations and approval of the Scotland Yard chief was Krassilnikov's master stroke. After an initial period marked by rather sharp corrections and even reprimands, all available correspondence attests to good cooperation and efficiency. Particularly when the war broke out and the Okhrana added counterespionage to its tasks, Powell's group became an active center of intelligence liaison with the British. A sample reprimand from the period of adjustment is reproduced below.

Paris, 11 September 1913

Mr. Powell:

I should feel grateful if you stopped creating problems on every occasion. I must remind you that in this service everything is done upon my orders. If I am at all times disposed to acknowledge your observations and explana-

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tions and to take into account matters that appear justifiable, I cannot tolerate any lectures or acrimony on your part.

Will you from now on accept the observations that I have to make about your agents without presenting me with problems and explanations and with the calm that is required by the dignity of our service.

So much said, now to answer your letter of September.

With regard to your note of 82.80 francs for your mission to Sandringham, you know well that the payment of accounts can never be made on the same day or the day after. Delays occur for many reasons—control, my absence, etc.

As for the incident concerning the transport of baggage of [agents] Aebersold and Kerr from Copenhagen to Klampenborg, the matter first of all is not within your competence. Your agents on a mission to Denmark, or out of England in general, are naturally under the direction of the center, not yours. The center in Paris does not have to issue them orders through you as intermediary. This would mean unnecessary loss of time. That is the reason we wrote to Aebersold directly to let him know that his reports should be addressed directly to Paris.

As for the transfer of their baggage from Copenhagen to Klampenborg for which, according to you, M. Bittard refuses to pay, I must remind you that M. Bittard only executes my orders. He cannot himself refuse or grant anything without referring to me for instructions. Therefore I ask you, Mr. Powell, to act accordingly and not to take it upon yourself to pay agent expenses that I myself find unacceptable.

I do not know under what conditions agents of other nationalities perform their travels. Our agents get 15 francs daily for extra expenses when traveling, and that should be ample to cover the charges for baggage. In extraordinary cases the service is of course obliged to pay for more expensive transport. In this case no such need arose. The agents traveled alone by rail and tram which also carried their luggage. Under such conditions and especially in view of the incident you caused, I persist in my decision not to pay the transport fees in this case. If, contrary to my orders, you want to pay them, that is your personal matter of which the service will honor no account.

I remind you on this occasion that your personal approval for the payment of accounts is not sufficient. I have to approve payments also. Moreover, although the expense accounts of your service in England are verified and preliminarily approved by you, that does not apply to your agents on missions in countries outside of England. Such accounts are examined and approved by the center, which has at its disposal the necessary data for verification.

It is most regrettable that Kerr had to abandon his service in Denmark. I consider it more useful if you remain in London to direct your service. I will find an agent to replace Kerr.

Accept, Mr. Powell, my salutations.

Krassilnikov

The external service controlled by Bittard-Monin's office suffered some serious defections, which eventually resulted in its termination

in 1913. The first came in 1910. Maurice Leroi, a friend of Bittard-Monin and Bint, went over to the revolutionary intelligence. He detailed to Burtzev everything he knew about the Okhrana and then became Burtzev's chief aide supervising the French agents who worked for the revolutionaries. The next defector was a young and unimportant Italian agent, Giuseppe Leone, who however knew much about the members of the network in Italy and their interception of letters to and from the revolutionaries there. Still another one was Parisian agent Feuger, who went to Burtzev to tell his story when he was dismissed in 1913.

By the middle of 1913, as a result of these defections, Krassilnikov could read in almost any Parisian or Italian newspaper the names of most of his external agents and their doings. Lengthy explanations to headquarters were required, and there were proposals from both sides. Krassilnikov recommended the complete dissolution of Bittard-Monin's network, the forming of a cover firm for Paris and France, and separate groups of external agents for Italy, Switzerland, and Germany like Powell's *agentura* in London.

Proprietary Setup

Discussions as to how the external service should be reorganized went on for several months. An informal agreement was reached by the end of October 1913, and Bittard-Monin's network was disbanded. All agents were dismissed, and a public announcement was issued to that effect. Although the official headquarters decision on this and other actions did not come until the end of the year, Krassilnikov proceeded with what he was confident would finally be approved. The terminated agents had to sign before a notary public documents attesting to their period of service, their receipt of termination pay, their surrender of all papers, ciphers, photographs, etc. belonging to the service, and their certification that they had no further claims against it.

At the same time, ex-agents Bint and Sambain proceeded with the establishment of a cover firm, a private detective service financed entirely by Krassilnikov. They incorporated their agency in conformity with all legal requirements as to partnership contracts and declarations of purpose. Public announcements gave its address and a statement of capitalization. Somewhat gradually the partners, subject to Krassilnikov's approval, hired back the French agents who had distinguished themselves under Bittard-Monin. The reorganization was

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thus a convenient means to get rid of non-Russian agents considered incompetent or untrustworthy.

The total number of men and women rehired through the firm was no more than fourteen. When the war came this figure was immediately reduced by the draft, and soon thereafter the partnership ceased to function. More pressing new tasks in counterespionage required Bint's presence in Switzerland and the assignment of his partner to several missions in the Scandinavian countries.

Bittard-Monin, after the break-up of his network and his own "dismissal," continued in the role of the Okhrana's most important non-Russian agent. He set up a cover office and a number of accommodation addresses for the service, becoming Krassilnikov's principal agent for the handling of several individual external agents in France. He also assisted in the control of external agencies abroad, as follows:

Italy: based in Genoa from 1914 to 1917 but occasionally managed from Rome, with Invernizzi handling agents Roselli, Vizzardelli, de Carolis, and Frumento;

England: Powell in charge of a team including Aebersold, Kerr, Thompson, Murphy, Thorpe, and Reed;

Germany: up to July 1914, Neuhaus, Woltz, and Tueppinger.

The war and shortage of personnel prevented the establishment of a network in Switzerland reporting to Bittard-Monin, but the area was covered by correspondents, Russians at first, then mostly replaced by non-Russians. These were never used for surveillance or investigations, just placed close to targets to observe and report directly to Krassilnikov. The list of names ran Boquet, Jalong, Trainer, Beaume, Dennis, Mour, and Raphael.

Penetration Agents

A by-product of the reorganization was a new type of internal agent. Before, they all had to be Russian. Whatever their cover, they had to penetrate the target groups as fellow revolutionaries. But now a number of the French external agents, upon dismissal by Bittard-Monin in October of 1913, rushed to Burtzev's revolutionary service, less as a matter of wanting revenge than in search of jobs. Some who had much of interest to tell Burtzev were actually hired, and first among these was Eugene Jollivet—applying at the suggestion, however, of Krassilnikov through Bittard-Monin. Thenceforth, under the code name "Tourist," he served as a penetration agent in the revolu-

tionary intelligence office as long as it lasted. One of his first contributions, we saw above, led to the discovery of Sushkov's treachery. Then ex-agent Mme. LeDavadie, hired by Burtzev, was doubled and controlled by Krassilnikov through Bint.³ The Okhrana exploited several other dismissed agents who turned to Burtzev for employment, but these two, Jollivet and LeDavadie, became the important ones, giving Krassilnikov daily reports on everything that took place in the office of his paramount revolutionary opponent.

Krassilnikov did not make any notable changes in the regular Russian internal service as inherited from his predecessor. Some of the agents were permanently posted and fairly secure within their targets. Mortality was nevertheless heavy, with frequent exposures, dismissals, and wherever the revolutionaries could manage it, liquidations. These losses were generally made up by sending new penetration agents from headquarters. Krassilnikov did succeed in effecting some coordination in the posting of new agents. Provincial branches of the Okhrana were no longer permitted to send their independent agents; all had to be coordinated and approved by headquarters, which in turn kept the Paris office informed.

At the outbreak of the war the total number of internal agents abroad was about sixty, operating mostly in France, Switzerland, Italy, and England, with only a few in Germany and some ten in the United States and Canada. The case officer for North America, then and through the war, was Colonel Litvin, who also handled the agents in England. There is no sign in the records of Litvin's having an assistant for the handling of his great mass of correspondence. The original reports in his own handwriting submitted to Krassilnikov's office and attributed by code to some dozen agents daily are evidence of an amount of work that only a fast, capable, and tireless case officer could accomplish. Case officer Lustig likewise appears to have been a mass producer of reports from agents in other countries of Europe.

The drafting of agents for military service was a serious blow to the Okhrana, at home and abroad. Krassilnikov constantly pleaded for exemptions and frequently got them. The remaining cases of draft, however, along with volunteers, decimated his personnel. No new agent recruits were forthcoming despite appeals. Headquarters was probably impressed by the fact that several revolutionary groups in 1914 ceased their anti-government activities and joined patriotic

³ For her story in full see the author's "The Okhrana's Female Agents, Part II" in *Studies* IX 3, pp. 66-72.

causes, a number even enlisting in the French army. Only a few of the top leaders of the Socialist Revolutionaries remained unswerving in their campaign for the overthrow of Tzarism. In headquarters' view this change of climate reduced the tasks of the Okhrana abroad. It was well known that the Social Democrats (Lenin's Bolsheviks) augmented the peace campaign of the defeatists as the war progressed, but the Okhrana obviously did not consider them as dangerous as the Socialist Revolutionaries.

On Military Duty

As its counterintelligence work against the revolutionaries thus decreased, the Okhrana in Paris was loaded to capacity with counterespionage and regular intelligence tasks against the enemy. Krassilnikov now used the bulk of his depleted group of external agents for gathering background information for counterespionage. He also sent some of the non-Russian agents into Germany to gather military and political intelligence on the enemy, on the activities of certain Russians who remained in Germany, and on the Russian POWs. He continued to use the diminished force of internal agents against the revolutionaries, but with emphasis on their exploitation by the Germans for intelligence and propaganda against Russia. Lenin, Trotsky, Litvinov, Lunacharsky, and other Bolsheviks became the principal targets, with emphasis no longer on their propaganda for an uprising within Russia (the flow of this propaganda from abroad had virtually stopped because of the war) but on international plotting around the Zimmerwald conference and its sequels and on the defeatist campaign aimed principally against Russia.

Krassilnikov organized extensive intelligence coverage of the Northern Route. From Powell's full coordination with the British on cargo and passenger movements in the port of Newcastle he gathered the intelligence required for operations in Christiania and Stockholm. Agents were constantly en route through the Scandinavian countries, following revolutionaries and their couriers and seeking to detect the activities of the widespread German intelligence networks which were organizing the Finns and other Baltic peoples for operations against Russia.

The loss of personnel and the new military requirements made it imperative to become more flexible. If an external agent could serve in deep-cover assignments, he was so used in spite of established practice to the contrary. Internal agents, on the other hand, could be

employed for investigations and local liaison where expedient. Military intelligence, once prohibited to Okhrana organs, became the order of the day. Counterespionage against foreign nationals in France, Italy, and England was welcomed by the Allies, with whom the Okhrana was in indirect liaison. It passed its reports daily to the Russian military mission for transmittal to the Allied *Section de Centralisation des Renseignements*.

In neutral Switzerland external agents Bint and Woltz, both now in deep-cover capacity, clandestinely engaged the services of a score of local security organs. When the general secretary of the Federation of Russian Seamen's Unions, a Communist front, was reported to have organized on behalf of Germany a network of reporters from the Baltic, Black Sea, and Mediterranean fleets, Krassilnikov engaged both internal and external agents in an operation to destroy that service. When requests were received for intelligence reports on Germany he provided external agent Bint with funds to recruit Swiss agents for journeys into Austria and Germany to collect military, economic, and sociological information, as well as some specific counterespionage data. When an opportunity presented itself to convert a strictly anti-revolutionary agent into a double and counter-sabotage agent employed by German services, Krassilnikov found ways to engage far-flung operational support that fooled his opponents throughout the war.⁴

Krassilnikov's organizational capabilities were most noticeable in wartime. When all government agencies in Paris were evacuating for Bordeaux, he left in Paris only a small unit under the control of Colonel Lustig and entrusted the management of Okhrana affairs in England and the Scandinavian countries to Colonel Litvin. The close liaison with all Allied services which he established at all points made Paris Okhrana appear to be almost a subsidiary of Allied counter-intelligence. The Paris office channeled its daily reports on enemy services, agents, and suspects to the Allies; and in turn it received from the liaison much information for transmittal to headquarters.

⁴ See the author's "Okhrana Agent Dolin" in *Studies X 2*, p. 57 ff.

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No Foreign Dissem

Vigorous push, with still halting progress, toward a centralized intelligence.

WITH VANDENBERG AS DCI

Arthur B. Darling¹

Part I: Some Functions Centralized

Lieutenant General Hoyt S. Vandenberg, installed as Director of Central Intelligence on June 10, 1946, brought to the Central Intelligence Group the prestige of high rank in the Army, prominence before the public, and forthright determination to take responsibility. He and his predecessor Admiral Souers agreed that the time had come when CIG should begin to perform certain operations in the national system of intelligence. The initial organization and planning had been done. It was time to develop the power latent in the duties which the President had assigned to the Director of Central Intelligence.

His experiences of the past six months as Army representative on the Intelligence Advisory Board² had convinced General Vandenberg that to fulfill those duties he must be able to get the necessary personnel without having to wait upon the will of the departments to supply them. He must have operating funds to expend as he chose without dependence upon or accountability to some other agency. He was certain that CIG could not meet its primary obligation to produce strategic intelligence unless it had better arrangements for collecting the raw materials and had means to conduct the initial research and analysis necessary for the production of estimates. It should not have to rely entirely upon contributions from the departments.

DCI and IAB

Vandenberg wished the DCI to be the executive officer of the National Intelligence Authority.³ While the President kept him in

¹ Adapted from a history of the Central Intelligence Agency prepared by the author in 1953. For preceding installments see *Studies* VIII 3, p. 55 ff, X 2, p. 1 ff, and XII 1, p. 55 ff.

² First predecessor of the USIB.

³ Predecessor of the National Security Council.

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the office, he would have command of CIG's functions. This was quite different from thinking of CIG as a "cooperative interdepartmental activity."⁴ We meet again as in the days of the Office of Strategic Services the fundamental concept of individual responsibility in conflict with the principle of collective responsibility. Members of the Intelligence Advisory Board, representing the intelligence services of the departments, were immediately aware of the change.

As Vandenberg expressed it, the IAB had the right to give him advice, either in concurrence or dissent. He would accept such counsel, listen to argument, and consider new facts; but he would make up his own mind and determine the DCI position himself. He would not block a dissenting view, but it could not become the official DCI position even if it were the unanimous opinion of the IAB. Only his superiors in the NIA would have a right to prefer the dissent to his own decision. He was individually responsible, through the NIA, to the President.

There was solid ground in the President's Directive which had set up the CIG on the preceding January 22 for this interpretation of the powers of the DCI. But acceptance of it by the chiefs of intelligence on the IAB was most unlikely. There was the counter-theory of collective responsibility. The CIG was to them a cooperative interdepartmental enterprise in which, for all matters of deliberation and decision, they were the representatives of the departments and therefore the equals of the DCI. If he was not merely their executive secretary, he was no more than their chairman.

A memorandum of June 20 in which Vandenberg set forth his program created such a stir that it was revised before the IAB meeting of June 28. The original text with his signature declared that the DCI "should not be required to rely solely upon evaluated intelligence from the various departments." He should have authority to undertake within CIG such basic research and analysis as in his opinion might be required to produce the necessary strategic and national policy intelligence. This would require the centralization of activities that were the concern of more than one agency; existing organizations of the State, War, and Navy Departments, including their funds, personnel, and facilities, would be "integrated into the Central Intelligence Group as a central service." There was no mention of the IAB.

Reactions ranged from insistence that any IAB member should have virtual veto rights over the DCI's choice of subjects for research

⁴ Cf. Souers' approach, *Studies* XII 1, pp. 55-56.

to a demand that he consult the appropriate members of the IAB whenever he planned central activities of "common, but secondary interest" to two or more departments. The veto right would have destroyed the function of the DCI and ruined the IAB itself. Even the requirement that he consult regarding activities of "common, but secondary" interest would place him at the mercy of the intelligence officers in the departments; there would be very few instances where they thought an activity so secondary that it could be wholly relinquished to CIG. We are to hear more of this requirement later.

Fifth NIA Directive: R&A

Vandenberg well understood the meaning of the turmoil over his proposals. Regretting that the original version had caused it, he accepted revisions designed to treat CIG's research and analysis as supplementary to the work of the departments. He discarded altogether the stipulation that departmental funds, personnel, and facilities be "integrated" into CIG. His primary purpose, he told the IAB on June 28, was to get the staff necessary to do the job of assisting the Departments of State, War, and the Navy. He wished to find where their intelligence activities stopped short; he wanted to meet the deficiencies and fill the gaps. But he did not give up his intention to engage in the initial research and analysis requisite to the production of strategic and national policy intelligence.

William L. Langer, as he spoke for the Department of State, must have had memories of his old Research and Analysis Branch in the Office of Strategic Services, where it had been both guide and customer of Secret Intelligence. But having succeeded Alfred McCormack as head of State's division of Research and Intelligence, he had to present the case for that organization. He doubted that it was necessary for CIG to engage in extensive research and analysis, he said; only when the departments could not do the work might CIG be specifically authorized to do it. It should undertake only such research and analysis as might be necessary to determine what functions were not being performed adequately in the fields of national security intelligence.

With respect to consultations with individual members about R&A, Langer saw danger therein to the "solidarity" of the IAB, which must be maintained to give moral support to the Director. He thought it difficult, if not useless, to try to distinguish between the primary and secondary interests of the departments; CIG should be authorized

to assume what research and analysis might be accomplished better by a central agency. In the end, he had to defer to the individual member; the IAB could not act by majority vote. The decision to undertake R&A would be made by the DCI and the appropriate member or members of the IAB. This was the provision as it was finally adopted and included on July 8 in the fifth directive of the National Intelligence Authority.

There were decided opinions for and against this compromise between the DCI and the IAB. One extreme view was that he should have left research and evaluation entirely with the departments. But if he had done so, any office which he might have created to bring their products together would have been no more than a stapling device to put the departmental papers in one bundle. There would have been no analysis, no synthesis into a national estimate.

Another view was that he should have insisted upon taking over the whole function from the Department of State and performing it as a common service for all departments and agencies as well as producing "strategic and national policy intelligence." But even if State had been willing to allow this, which was most unlikely, it would have required a staff and equipment beyond any that CIG could hope to obtain from the departments for some time to come. Though possessed of the right, General Vandenberg would not have been able to use it.

Being a practical man inclined to action, he thus withdrew the provisions in his first draft which seemed so obnoxious that they might defeat his purpose and accepted changes to mollify the IAB. But he retained the principle: there was to be within the Central Intelligence Group the research and analysis which it had to have, regardless of any duplication or overlapping with the departmental services. He took what he could get; if that were established, more would come in time.

Coordination; Espionage; Support

Following this check by the State Department, the representatives of the Army and Navy also made reservations which were adopted by the IAB and included in the draft fifth NIA directive. Vandenberg had asked that the DCI be authorized to act as the "executive agent of this Authority in coordinating and supervising all federal foreign intelligence activities related to the national security." As

changed by the IAB on June 28, the directive stipulated merely that he should act as the agent of the NIA in coordinating such activities.

The two significant omissions were the adjective "executive" agent and the participle "supervising." Vandenberg's original phrasing had seemed to infringe upon the responsibility of the IAB members, who were each supposed to be responsible for executing within their own departments the recommendations of the NIA. The DCI might engage in coordinating, but not in supervising the intelligence activities of the departments. His right of inspection was also involved; how to coordinate departmental activities without inspecting and supervising them was a question of dispute between the DCI and IAB for months. Admiral Hillenkoetter had not yet resolved it in 1949 when the Dulles report called for leadership without the power to coerce.

Vandenberg's draft provided that all espionage and counterespionage abroad be conducted by the DCI. But as revised by the IAB on June 28 it carefully stated that he should conduct only "organized Federal" operations and only those outside the United States and its possessions. This change was of course designed to assure that the military intelligence services might continue incidental operations for their own purposes and to protect the FBI's jurisdiction within the United States.

The fifth section of Vandenberg's draft dealt with funds, personnel, and facilities for CIG. The departments upon his request were to provide such funds and facilities to the extent of available appropriations and within the limits of their capabilities. He would submit a supplemental budget at the earliest practicable date. The IAB revision in this section provided that the departments should continue to have the decision in regard to such funds apportioned to the CIG.

The proposed directive as thus amended by the IAB went to the members of the National Intelligence Authority individually on June 29. The Secretaries of State, War, and the Navy approved it without change. But Admiral Leahy, representing the President, objected to the description of the DCI as "agent" of the NIA in the paragraph concerning the coordination of foreign intelligence on the grounds that it might imply unwarranted freedom for him. General Vandenberg agreed that the possibility of such an interpretation was not desirable, and the paragraph was reworded to authorize the DCI to "act for" the NIA. With this last change, Vandenberg's proposal became on July 8 the fifth directive of the National Intelligence Authority and took its place next to the President's Directive of the

preceding January 22 as the most important of the instructions to the Director of Central Intelligence.

General Vandenberg had not obtained all that he sought in this first endeavor to strengthen the CIG. But he did have authority now to determine what R&A activities were not being performed adequately and to centralize these in CIG with the consent of the department concerned. He could act for the NIA in coordinating all departmental intelligence activities. He could perform two services of common usefulness—all organized federal espionage and counterespionage abroad for the collection of foreign intelligence, and all federal monitoring of the press and broadcasts of foreign powers. He had a clearer statement regarding the allotment of funds from the departments and the supplemental budget which he desired.

Funding

On July 17, Vandenberg went before the National Intelligence Authority in its first meeting since he had taken office to argue that the DCI must have independent funds and the right to hire his own people. Citing the conclusions of Admiral Souers' final report,⁵ he said it was extremely difficult to secure the necessary personnel by requisition from the departments. The DCI should have independent hiring power. Eventually, he knew, this would mean that central intelligence should become an agency established by act of Congress.

Secretary Byrnes demurred on the ground that the NIA had been created intentionally to avoid any need for an independent budget. The statement was historically inaccurate. The governing body composed of the departmental secretaries and the President's representative had been conceived as a better institution than a single director reporting to the President as proposed in Donovan's plan. The conception was not concerned with the budget. Nor was the question of the budget uppermost when the Army and Navy pushed the NIA concept in order to keep the State Department from taking charge under McCormack's plan. But Secretary Patterson now agreed with Byrnes, explaining that the amount of money spent on central intelligence should be concealed for reasons of security.

General Vandenberg interposed that such considerations ought to be balanced against the administrative difficulties they caused. For him the important thing was to have an effective and efficient organization. At this point Admiral Leahy, representative of the President,

⁵ See *Studies* XII 1, p. 73 f.

remarked that it had always been understood that CIG would eventually broaden its scope. He was about convinced, he said, that the NIA should now endeavor to obtain appropriations. They should be small, of course, as the three departments would continue to furnish the bulk of the funds.

Patterson still thought that the administrative problems might be solved under the existing arrangement. Byrnes too thought that the departments might find a way to give the CIG whatever money it had to have. There was further discussion, in which Langer endorsed a suggestion from Admiral Leahy that funds might be separated from personnel actions. The money might be allotted from the funds of the departments without an independent appropriation for CIG, but the DCI, for reasons of security as well as efficiency, be given full charge of selecting and directing his personnel.

The discussion went on to consider the relationship with Congress and its eventual legislation. General Vandenberg stressed that CIG was not an agency authorized to disburse funds. Even if it had sufficient funds from the departments, it would be obliged to maintain disbursing officers and auditors in all three departments besides the necessary accounting staff in CIG. Thus four fiscal operations were required where one really would suffice. All of this pointed to the necessity for making central intelligence an agency authorized to control its own purse. Secretary Byrnes undertook to discuss the matter with officials in the Bureau of the Budget and report back to the NIA.

General Vandenberg meanwhile made a brief report on his progress to date. CIG was about to take over the Foreign Broadcast Intelligence Service and all clandestine activities in foreign intelligence. He had set up an Office of Special Operations to direct them. He expected soon to have other offices in good working order—Collection, Dissemination, and Research and Evaluation. CIG was receiving requests almost daily to assume other functions being performed by various committees of the State, War, and Navy Departments. For one, it was asked to consider handling codes and ciphers. Another was the concern of the War Department over exchanging information with the British. He was establishing an Interdepartmental Coordinating and Planning Staff.

This significant meeting of the National Intelligence Authority came to an end with the feeling expressed by Secretary Patterson that all of General Vandenberg's immediate problems would be solved if the

Secretary of State could obtain help from the Bureau of the Budget. Vandenberg put it more explicitly: he needed money and the authority to spend it, the authority to hire and fire. But he must have left the meeting with his mind turning over a remark Admiral Leahy had made about the intent of the President.

Leahy said he was convinced that CIG should have funds for which it did not have to account in detail. The President, however, had authorized him to "make it clear" that the DCI was "not responsible further than to carry out the directives" of the National Intelligence Authority. The President would hold the Cabinet officers in the NIA "primarily responsible for coordination of intelligence activities." Were the secretaries then to see to it that their decisions in the NIA were obeyed in their departments whether or not those decisions were popular? General Vandenberg, anyhow, was to know that he should not become another General Donovan seeking an independent directorate.

In immediate consequence of Vandenberg's urging, a letter of July 30 from the National Intelligence Authority to the Secretary of the Treasury and the Comptroller General requested the establishment of a "working fund" for CIG. This fund, containing the allotments from State, War, and the Navy, was to be subject to the administration of the DCI or his authorized representative for paying personnel, procuring supplies and equipment, and the certification of vouchers.

The establishment of the fund was approved, and a second letter to the Comptroller General, signed by each member of the National Intelligence Authority, gave on September 5 the authorization to administer it. The DCI now had "full powers" to determine the "propriety of expenditures" from the working fund under the policies established by the NIA. He was to arrange with the Comptroller General the procedures and controls necessary for proper accounting. Once the allotments from the departments were in the working fund, Vandenberg had authority and the resources to maintain a staff and facilities for CIG on his own responsibility as DCI. But he still could not be sure that his allotment from a department would not be cut. He protested to congressional committees that CIG should have an independent budget.

New Broom

CIG had taken on a military character in spite of Admiral Souers' efforts to include State representation in the "cooperative activity."

He had been successful in obtaining some men who had had experience as civilians before going into uniform during the war, but for the most part he was obliged to rely upon those who thought of the Army or Navy as a career. The distinction between regular and reserve officers, if seldom expressed, was always present. Seven years later CIA still echoed with talk of the colonels who arrived with General Vandenberg and took over from others who for one reason or another did not measure up to his standards.

One must not overstress the military-civilian conflict; there doubtless were varied reasons for changing personnel. But neither should it be ignored altogether. It entered as a fact into the deliberations of Congress on the legislative provisions for the future of central intelligence, just as it had embittered the argument between the State Department and the armed services prior to the establishment of the CIG.

Colonel Fortier was relieved as Assistant Director and Acting Chief of Operational Services on July 11, and Colonel Donald H. Galloway became Assistant Director for Special Operations. Captain Goggins was moved from his post at the head of the Central Planning Staff to be Galloway's deputy. Kingman Douglass, no longer Acting Deputy Director of Central Intelligence, became "B" Deputy and Chief of Foreign Commerce under Colonel Galloway. On the understanding that there should be no one between them, Colonel E. K. Wright had moved with Vandenberg, as his Executive, from G-2 to CIG. Colonel John A. Dabney accompanied Wright as his Assistant. There was no Deputy Director of Central Intelligence until Colonel Wright was so appointed on January 20, 1947.

Colonel William W. Quinn, who had succeeded General Magruder as Director of the Strategic Services Unit, was also placed under Colonel Galloway as Executive for Special Operations, perhaps to facilitate the liquidation of the SSU. The SSU's Secret Intelligence and Counterespionage branches had been consolidated in a temporary organization of the War Department named the Foreign Security Reports Office, and the head of this office, Stephen B. L. Penrose, now became "A" Deputy under Galloway to take charge of secret intelligence and counterespionage in the new Office of Special Operations.

Clandestine Operations

Colonel Galloway admonished his subordinates in OSO that they were to reduce to the minimum their associations with people from

State, War, and the Navy and handle this minimum through a Control Officer. They were to carry on nothing but official business with other offices of CIG. Vandenberg, Wright, and Galloway wanted OSO to be as free as possible from connections which might expose its affairs. They believed that its operations should be kept apart from the observation and influence of the departmental chiefs of intelligence in the IAB; these were different from other "services of common concern" to the departments. OSO had to keep in touch with agencies which used its product, and it was authorized on October 25 to receive requests for information or action from those agencies through its Control Officer. But if Vandenberg and his assistants could prevent it, their operation of collecting foreign intelligence by clandestine means was not to gain the reputation for free wheeling and self-exposure which he ascribed to the Office of Strategic Services.

Schedules were established in July and arrangements made for taking over SSU staff personnel, agents, and foreign stations during the fall. On September 12 Vandenberg notified the Secretary of War that all activities of SSU would end as of October 19. This date was not met because of delays in security clearances and a shortage of persons to do the clerical work; but by April 11, 1947, the services of all civilians had been terminated, military personnel had been reassigned, and foreign stations had ceased to be SSU installations. There were funds adequate to meet outstanding obligations. Some claims and inquiries would continue, a few indefinitely, but officers on duty with CIG would be familiar with them.

Colonel Galloway applied himself to European affairs as the United States and Britain joined economically their zones in Germany. Captain Goggins concentrated on the Far East; he left soon for Tsingtao, where he arranged with the commander of the Seventh Fleet to support the old OSS mission known as External Survey Detachment No. 44. General Vandenberg had been anxious to keep this going for the Army in China. Its usefulness for both overt and clandestine intelligence in China, Manchuria, and the hinterland which it could penetrate was greater now than ever as the Communist Chinese increased their Manchurian operations in the summer of 1946 and tension over Korea grew.

Stopping in Tokyo on the way home, Captain Goggins reached tentative agreement for cooperation between CIG and General MacArthur, who, we will recall, once had no room in his plans for the Office of Strategic Services.



[Redacted]

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Captain Goggins had to postpone for discussion with Vandenberg the issue whether these CIG installations should be under the command of General MacArthur and Admiral Cooke of the Seventh Fleet. Vandenberg, when the matter came before him, declined on the grounds that these were not military activities. He was responsible to the National Intelligence Authority and could not take orders from MacArthur and Cooke.

[Redacted]

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Douglass and Jackson were also to find out if General Edwin L. Sibert, chief of intelligence on General McNarney's staff, could be assigned to CIG. The thought was that General Sibert should become Deputy Director under Vandenberg and eventually might succeed him as DCI. He was to have charge of all collection, both clandestine and overt.

[Redacted]

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[Redacted] During the course of his stay he had conversations which added meaning to the report by Douglass and Jackson.

[Redacted]

[Redacted]

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[REDACTED]

25X1

The full results of the Douglass-Jackson mission of August 1946 did not come until later, when Bedell Smith was DCI. But the report at the time had value for General Vandenberg. It showed the difficulties SSU had had [REDACTED] while it was in competition with the intelligence services of the Army, Navy, and FBI. There was need for a single collecting agency [REDACTED]

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Douglass and Jackson returned with a careful description of the [REDACTED] which had been organized since Jackson's 1945 report. It has been called the first institution of its kind actually to administer services of common usefulness to other departments and governmental agencies, and as such has influenced similar institutions here. Divided into geographic and functional sections, it was to engage in economic, political, geographic, and scientific intelligence research. It would farm some work out to the universities and professional organizations. The intention was that ultimately the [REDACTED] military organizations should each retain only the intelligence work related "clearly and almost exclusively" to the particular service.

25X1

25X1

The collection of intelligence, however, would not be centralized [REDACTED] [REDACTED] Military, naval, and air attachés were to be maintained as before, and secret intelligence handled separately. [REDACTED] would undertake collection from overt sources—[REDACTED] business firms, engineering experts—and would then collate and distribute the materials to the appropriate users. [REDACTED]

25X1

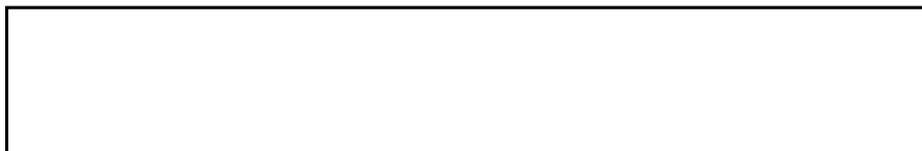
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Latin America

As his lieutenants were negotiating [redacted] General Vandenberg himself undertook to settle with J. Edgar Hoover and the FBI the matter of operations in this hemisphere. OSS had been excluded from operating in the western hemisphere and the area reserved for the FBI on the grounds that the primary concern there had been protection of the United States against subversive activities. It was a field for counterespionage and security intelligence.

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[redacted] Counterespionage was thought of as a defensive measure quite distinct from aggressive positive intelligence, a safety device rather than a weapon of attack. To those accustomed to think of it in such terms, counterespionage or security intelligence should continue to be the business of the FBI, especially in geographical areas where it already had agents established.

25X1

General Vandenberg did not think so. It was his conviction that he could not do his job as head of the national intelligence agency if other organizations were engaged in the same work. One was likely to expose the other. Hitler's system of intelligence had been easy to penetrate, he believed, because the parts of it so often interfered with each other. Either he or Hoover should withdraw from the field, and since the fifth NIA directive had assigned the DCI all organized federal espionage and counterespionage abroad, the Bureau should give way.

Mr. Hoover yielded to the request that the Bureau withdraw from Latin America. It would confine its activities to security intelligence within the United States and possessions, in line with the fifth directive of the National Intelligence Authority issued on July 8. In order to insure continuity in the takeover the NIA, meeting on August 7 with Acting Secretary of State Dean Acheson in the chair, decided that a letter should be sent to the Attorney General asking him to keep the personnel of the Bureau on duty in Latin America until replaced by CIG representatives, and such a letter went out over the signatures of the four NIA members. Hoover complied, insisting only that CIG could not employ the Bureau's Latin American staff.

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Vandenberg as DCI

Domestic Collection

The value of information about foreign countries in the hands of American businesses, institutions, and individuals with connections abroad had long been recognized. The problem of correlating and reducing the overlapping efforts of government agencies with real or fancied interests in the information had not been persistently attacked. And not all investigators took the most productive approach to U.S. citizens seeking to do the government a favor. The attitude of policing rather than inquiry to obtain help has often characterized this activity.

General Vandenberg took up a report from the Central Planning Staff on the subject. His directive as drafted on July 22, five days after his first meeting with the National Intelligence Authority, provided that the DCI should maintain a "central contact control register" of persons and groups interviewed or to be approached as domestic sources of intelligence regarding other countries. This was an obvious service of common concern; yet it gave rise to objections.

The word "control" applied to the register already seemed to give the DCI undue power. Then it was further provided that field offices of CIG would do the work of collecting this particular kind of foreign intelligence information. The Departments of State, War, and the Navy were to make available whatever persons and facilities the DCI might require and take with him the steps necessary to carry out the operations. Through this first draft of the directive ran the idea that the DCI should supervise as well as direct and coordinate the activities.

Much in the way the Department of State had restricted Vandenberg's direction and control over research and analysis, War and Navy now insisted upon revising the directive on overt collection. The Navy had a register of its own. The Army, when Vandenberg had been its chief of intelligence, had appeared to favor a central control of contacts that would eliminate the confusion, annoyance, and embarrassment resulting when two or more agencies tried to use a source of information simultaneously. But now the Military Intelligence Division opposed the idea that CIG should control such a central register.

Kingman Douglass summed up the points of contention for Vandenberg on August 26 as they prepared to meet the Intelligence Advisory Board. The Army and Navy had not liked the powers of direction and supervision delegated to the DCI; these were functions of the secretaries and the Chiefs of Staff. The words "direct," "super-

vise," and "control" had therefore been taken from the directive, leaving "coordination" alone and untrammelled. The services had to be satisfied too that the DCI would not have final authority in requisitioning military and naval personnel and facilities; the departments should still determine "availability." The Navy had to be assured, said Douglass, that there would be no interference with its own Special Observer Plan.

Douglass expected that the chief opposition in the IAB meeting would be to the establishment of inter-agency field offices and to the monopoly on briefing and interrogation of travelers which CIG sought for reasons of security and coordination. The field offices, with CIG officers in liaison with local headquarters of the Army, Navy, and Air Forces, would be objectionable because the participating agencies would lose control over their personnel to some degree. On the other hand, Douglass pointed out, they were not as well equipped as CIG to do the work. He expected to have a staff of 25 or 30 in New York "to exploit American business on a full-time basis." Neither the Army nor the Air Forces could furnish such numbers; the Navy might be able to supply only one.

The armed services had more to gain than to lose, Douglass said, by cooperating in the enterprise, but he was none too hopeful. He expected "various other unrelated objections for no other reason than to defeat the general purpose." There were officers in the Army who had plans for "a G-2 exploitation in this field" which did not include coordination with any other department.

At the IAB meeting on August 26 there was some discussion of the central register, now separated into two parts. One was to be the depository of all foreign intelligence acquired by the government, a tremendous undertaking even in prospect, and the other a careful record of the companies and persons interviewed by the intelligence agencies. An exchange of views on whether the "contacts" should be registered led to the opinion that they should be unless they insisted upon secrecy. Then William A. Eddy, Langer's successor, suggested and the IAB agreed that the briefing of private persons about to go abroad should not be performed "only by representatives of the Central Intelligence Group" but "by the agency making the contacts." If agreeable to the person interviewed, however, a CIG representative could be present and, upon request by a participating agency, CIG technical specialists as well.

Thus the chance of eliminating competition in this field among the intelligence services was gone for the time being. The departments were not yet ready to give up their own facilities and rely on CIG for such a service of common concern. On the other hand, CIG was not deprived of the right to have a Contact Branch with field offices for domestic collection. Although the directive as finally accepted by the IAB on October 1 did not mention CIG collection, it provided for CIG field representatives to maintain liaison with intelligence officers in local headquarters of the Army, Navy, and Air Forces "through the medium of local inter-agency offices" and to effect for the DCI the coordination of such overt collection.

It was a loose and indirect statement, but it meant that any intelligence which the Director's field representatives obtained in liaison with the local officers of the services would be the legitimate by-product of the coordination. All intelligence acquired by the Government was to be deposited in the central register maintained by CIG. Vandenberg could proceed with developing the office of Galloway's "B" Deputy and Chief of Foreign Commerce as soon as he had overcome the more serious objections of the Federal Bureau of Investigation.

"Investigations"

Vandenberg had sent his proposals to Hoover on August 21 and received a reply two days later by special messenger. At the same time Hoover expressed his opinions to Admiral Leahy, personal representative of the President in the NIA. He called Vandenberg's attention to section nine in the President's Directive of January 22 which specifically withheld "investigations inside the continental limits of the United States and its possessions," from the province of the DCI. Hoover would accept uniform procedures established by the DCI and would engage to transmit promptly any foreign intelligence gathered by the FBI in the course of its investigations of American businesses; but he would not accept control by the Central Contact Register. Instead, CIG should obtain clearance from the Bureau for its "investigations" within the country.

To Admiral Leahy, Hoover described Vandenberg's proposal as an "invasion of domestic intelligence coverage" assigned by law to the "sole responsibility" of the Bureau. If the proposed directive should go into effect, he said, it would lead inevitably to "confusion, duplication of effort, and intolerable conditions to the detriment

of the national well-being." Subsequent negotiation, however, softened this position.

James S. Lay, Secretary to the CIG, the IAB, and the NIA, submitted a memorandum to the DCI on September 3 to show the current FBI position and provide answers to Hoover's remaining objections. His representative on the IAB had now indicated that he would agree to the activities of the CIG domestic field offices if they confined themselves to "business concerns"; he would still object to the inclusion of other groups and persons for fear of conflict with the operations of the Bureau. The answer to Mr. Hoover in all cases, Lay suggested, was that the "investigations" he had in mind were for internal security, while what CIG was talking about were normal methods of collecting intelligence which the Army and Navy had employed within the country and out of it for years. If Hoover were assured that CIG would consult with the Bureau on the advisability of contacts with other than American business concerns any danger of conflict should be precluded.

The next letter from Hoover to Vandenberg, on September 5, narrowed the anxiety of the Bureau to foreign language groups and other organizations and persons in whom it was "primarily interested because of its responsibility in covering Communistic activities within the United States." The issue was beginning to clear. Mr. Hoover would be satisfied if the reference to "other non-governmental groups and individuals with connections abroad" were eliminated from the directive. The conflict now rapidly subsided. Mr. Hoover approved on September 23 the changes which General Vandenberg made at his request. There was no need even to stipulate that the Bureau had the primary interest in foreign nationality groups within the United States; this statement was stricken from the draft.

Vandenberg reported to the IAB on October 1 that he had reached agreement with Director Hoover of the FBI. CIG would not interfere with the Bureau's control over subversive activities in this country. And so the directive with regard to overt collection of foreign intelligence within the United States was adopted that day by unanimous consent. General Vandenberg, in a change of plan, proceeded to organize an Office of Operations to carry it out.

Kingman Douglass meanwhile had withdrawn from the CIG, and General Sibert was to take charge of all collection, clandestine and overt. As he arrived to do so, however, Vandenberg listened to the plea that secret collection should be kept separate under Colonel

Galloway in the Office of Special Operations. The staff of his "B" Deputy and Chief of Foreign Commerce, renamed the Commercial Contact Branch, was placed in the new Office of Operations to do the work of collecting foreign intelligence in this country. With it there was joined a Foreign Broadcast Information Branch to take over that service from the Army. A Foreign Documents Branch was added later, in December. General Sibert became Assistant Director for Operations on October 17, 1946.

Toward Estimates

By the President's Directive of January 22, 1946, the DCI was to accomplish the correlation and evaluation of intelligence relating to the national security, and he was to disseminate the resulting "strategic and national policy intelligence" within the Government. The first NIA directive, on February 8, spelled out this function, specifying that he was to utilize all available intelligence and note in his reports any substantial dissent by a participating agency. The second NIA directive, of the same date, stipulated that the departments were to assign personnel to the CIG, including members of a Central Reports Staff to assist him in that function. The fifth NIA directive, of July 8, authorized him to undertake such research and analysis as the departments were not performing adequately and might better be accomplished centrally.

By this time Vandenberg had the nucleus of his analytic organization already at work in the Central Reports Staff, producing current intelligence in Daily and Weekly Summaries. Its chief, L. L. Montague, had had wartime experience in strategic intelligence under the Joint Chiefs of Staff and was prepared to establish a national estimating board of representatives from the intelligence agencies of the departments as soon as qualified persons could be obtained to give their full time. In expanding this staff to a new Office of Research and Evaluation, however, Vandenberg deferred to the Department of State's particular interest in producing intelligence for national policy and asked it to choose a Foreign Service officer to head the activity. State selected Mr. J. Klahr Huddle to be the Assistant Director in charge of Research and Evaluation. Huddle's deputy, selected according to custom from a different department, was Captain A. H. McCollum of the Navy.

Montague would remain as Chief of the Intelligence Staff to carry on the production of estimates, but for the time being would also act

as Assistant Director to set up the new ORE in accordance with Vandenberg's order of July 19. He issued an administrative instruction on August 7 with a program of enlargement as funds and personnel became available. There were to be added a Library, an Information Center, and a Plans and Requirements Staff. The latter would do further organizing in consultation with the other units of the Office. The Information Center was to receive intelligence materials for the Office and send out the products of its research and evaluation. The Library, first established in ORE where its resources would be handy to the persons with the most use for them, was moved later to the Office of Collection and Dissemination. The geographic branches for Eastern Europe and the Middle East were temporarily consolidated in one. Montague's administrative order expressly stated that the Reports Staff, to be renamed the Intelligence Staff, would direct and coordinate the activities of the regional branches in producing strategic and national policy intelligence. There was to be trouble over this disposition.

Vandenberg had no sooner created ORE than he ordered it to produce its first estimate, a crash assessment of Soviet worldwide intentions and capabilities. Montague received Vandenberg's request on Friday, with a deadline for the following Tuesday morning. There was no staff to produce it; Central Reports had not been able to get from the departments the personnel to put its Estimates Branch into operation. There were not enough people available even to assign the editorial assistants needed by the Defense Project.⁶ Montague himself was the only one in ORE with extensive experience in estimating. Fortunately there was material available in reports and papers from the Joint Intelligence Staff of the Joint Chiefs (on which Montague had represented the Army during the war) and brought up to date in connection with the Defense Project.

Montague spent Saturday until 9 P.M. and Sunday into Monday at 3 A.M. studying the reports and papers, reading cables from Ambassador Kennan in Moscow, drawing the determinant factors together, and formulating the conclusions which on Monday afternoon at two he submitted to representatives of the departments and the Joint Chiefs of Staff. Following their comments, he spent the rest of Monday until midnight revising his paper and checking it with the

⁶ Predecessor of the NIS on the USSR; see *Studies* XII 1, p. 63 ff.

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report of an ad hoc committee working on the same question for the JCS. The clerical work was finished and the estimate delivered to Vandenberg Tuesday afternoon.

*Part II, "Coordination in Practice," will
be carried in a future issue.*

INTELLIGENCE IN RECENT PUBLIC LITERATURE

Cryptology

THE CODEBREAKERS: The Story of Secret Writing. By *David Kahn*. (New York: Macmillan. 1967. 1164 pp. \$14.95.)

The journalist-author of this massive, richly informative, and eminently readable book has been an amateur cryptologist since 1943, when he was thirteen, and for many years President of the American Cryptogram Association. He has largely succeeded in the undertaking set forth in his preface, to write a serious history of cryptology—the development of the various methods of making and breaking codes and ciphers and how these have affected human events—using primary sources wherever possible and not fictionalizing or exaggerating the influence of cryptologic successes, although “codebreaking is the most important form of secret intelligence in the world today.” Certain deficiencies from an unqualified success of the work will be noted at the end of this review.

The preface is followed by a helpful few pages on the vocabulary of cryptology, and then the reader is launched into the 965 pages of main text.

The opening chapter, “One Day of Magic,” is a dramatic presentation of the role of cryptology in connection with the attack on Pearl Harbor. The story begins with Herbert O. Yardley’s cryptologic section of military intelligence in World War I and “Black Chamber” of the 1920s. The events of the period between the wars are woven into a coherent narrative leading to the American success in breaking Japanese codes as war came closer. Kahn tells what was done, how it was done, and what the effect of those achievements was on the “day of infamy.” The lengthy cast of people cited in these 67 pages is widely varied and generally pertinent. The standout star is William F. Friedman, “the world’s greatest cryptologist,” in his role in the attack on the Purple crypto-system of the Japanese.

The real conclusion to this chapter appears early in “Notes to Text,” which occupy 156 pages at the back of the book. In the first few of these pages Kahn gives a cogent summary of his views on the responsibility for the Pearl Harbor disaster, paralleling closely such authoritative and well-reasoned opinions as those of the congressional investigative committee, Roberta Wohlstetter, and Samuel E. Morison.

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After this dramatic opening the reader is treated to a pageant of cryptography through the centuries, beginning with the earliest known deliberate transformation of a writing about 1900 B.C., found in the tomb of Khnumhotep II. Cryptographic developments of the ensuing 3,000 years are traced through India, Mesopotamia, Babylonia, and Assyria, in Greek and Roman writings, in Persia, Egypt, Anglo-Saxon Britain, and Scandinavia.

To this point the story is simply of cryptography, the rendering of a message unintelligible by some transformation of the plain text. The cryptanalysis side of cryptology begins with the Arabs, who in the seventh century were the first to discover and record methods of analyzing the frequency and juxtaposition of letters. The author describes with examples and anecdotes the developments from this beginning to the sudden rise of secret writing with the Renaissance in western civilization and the work of Geoffrey Chaucer and Roger Bacon. Thirty centuries is a long period to cover in some thirty pages of text, but seven pages of notes on this chapter indicate that Kahn has rather thoroughly plowed the field.

Next the spread of political cryptography is pursued from rudimentary beginnings in the early 13th century through Venice, Rome, the Vatican, the secular principalities of Italy, and throughout Europe. The growth of cryptology paces evenly the flowering of modern diplomacy. Kahn's examples range from the well to the little known and from the simple to the recondite in each period and stage of development.

The development of the modern system of polyalphabetic substitution, described in a chapter called "On the Origin of a Species," began in the 17th century with the work of four amateurs who adopted a mixed alphabet, the principle of letter-by-letter encipherment, and an easily changed key. A further improvement came in the use of grilles and tableaux to govern the enciphered sequence. These successes were not achieved without pitfalls and pratfalls, which Kahn recounts with clarity and gaiety, including an example of Casanova's use of cryptanalysis as a key to seduction.

In spite of the advance to polyalphabetic substitution, the nomenclators system of cryptography first developed for Pope Clement II in the late 14th century continued to flourish in Europe. Kahn at-

tributes its continued use to a legend of unbreakability nourished by writings of inferior cryptologists, whose books

. . . have a certain air of unreality about them. There is good reason for this. The authors borrowed their knowledge from earlier volumes and puffed it out with their own hypothesizing, which seems never to have been deflated by contact with the bruising actuality of solving cryptograms that they themselves had not made up. The literature of cryptology was all theory and no practice.

"The Era of the Black Chambers" begins with the work of "France's first full-time cryptologist: the great Antoine Rossignol," under Richelieu, Louis XIII and XIV, and Mazarin. Kahn goes on to describe the almost unbelievably efficient *Geheime Kabinets-Kanzlei* of Vienna in the 18th century, and in England the work of John Wallis for William and Mary and later of Edward Willes and his descendants, who dominated the English field for nearly a century.

Across the Atlantic cryptology was making its way informally into the life of the American colonies. In 1775 the solution of a mono-alphabetic substitution cipher showed George Washington that a Boston Tory was sending military information to British commander Gage. James Lovell, of the Continental Congress, may be called the father of American cryptanalysis for his prompt solutions of some intercepted redcoat cryptograms. There was cryptographic involvement in the case of Benedict Arnold and later that of Aaron Burr. Thomas Jefferson invented a "wheel cypher," far and away the most advanced of its day, but he seems to have filed and forgotten it. It was rediscovered among his papers in the Library of Congress in 1922, the year the U.S. Army adopted an almost identical device invented independently.

Kahn stresses how telegraphy made cryptography what it is today, principally by creating a new instrument for war—the signal communications that enabled commanders for the first time in history to exert instantaneous and continuous control over great masses of men spread over large areas. The telegraph broke the 450-year reign of the nomenclator and brought acceptance of the need for polyalphabetic substitution—the adoption of which was, however, followed shortly by its solution. The role of ciphers in the Civil War and postwar politics is described in a brief chapter called "Crises of the Union."

Of cryptologic events before World War I perhaps the most sensational involvement occurred in the Dreyfus case, which was not finally closed until 1906. Less than a decade later the war engulfed most of

the principal nations of the world, and communications—now by radio as well as cable—took on a new importance. British and French cryptology had an early lead; Germany had no cryptanalysts on the Western Front for the first two years of the war. In the United States, Hitt's *Manual for the Solution of Military Ciphers*, selling for thirty-five cents, served as the textbook to train cryptanalysts of the American Expeditionary Forces.

In "A War of Intercepts" Kahn covers the episodes of the war in which cryptology was involved, that of the Zimmermann telegram being the outstanding one. This war "marks the great turning point in the history of cryptology." From an infant science it had become big business. Radio made all the difference, but cryptanalysis had matured, too.

"Two Americans" are introduced in chapter 12—Herbert O. Yardley, who "owes his fame less to what he did than to what he said—and to the sensational way in which he said it," and William Frederick Friedman, "uncontestably the greatest," whose eminence is due "most emphatically to what he did." Of the latter:

His theoretical studies, which revolutionized the science, were matched by his actual solutions, which astounded it. Both are complemented by his peripheral contributions. He straightened out the tangled web of cipher systems and introduced a clarifying terminology for his arrangement. Words he coined gleam upon more than one page of today's dictionaries. His textbooks have trained thousands. His historical articles have shed light in little-known corners of the study, and the Shakespeare book has done much to quash one major area of a perennial literary nuisance. Singlehandedly, he made his country preeminent in his field.

The work of private individuals and corporations in developing new machines and new aspects of cryptology in the period between the wars is told in convincing and sometimes intimate detail in the chapter entitled "Secrecy for Sale." The principal names are Vernam, Hebern, and Hagelin. Kahn seems to have something of an obsession for his belief that "the armed forces had adopted the rotor principle from Hebern and used it without just compensation in hundreds of thousands of high-security machines in World War II and in the cold war."

Kahn missed, incidentally, an interesting anecdote about the testing of the Hebern machine at the Navy building. There were continuing electrical problems—fuses blowing and solenoids burning out—although other tests which the Director of Naval Communications had suggested be carried out at his home on Kalorama Road gave no such trouble. It was finally discovered that the Navy building was

still using direct current in 1926, while the Kalorama Road neighborhood was provided with AC power.

The cryptography of World War II is delineated in four chapters covering 136 pages. Numerous anecdotes and episodes and some epic stories are interestingly told, many in good perspective. It is clear that Kahn found several ready European sources of information about allied, enemy, and neutral cryptology in the war. The detail sometimes appears exhaustive. The sources he names are never the top experts, for the most part entirely unknown; and his narratives consequently depend upon surface and low-level detail. But the stories are well told.

The one great exception to his European coverage is Britain, and the gap shows. Probably British cryptologists, under the constraints of their Official Secrets Acts, are less likely to talk than those from countries with less severe protective laws. In any case, Kahn has stated that he excised from his text at the request of the Defense Department the material he had on British cryptologic activities.

In narrating events of the Pacific war Kahn sometimes violates his prefatory promise not to credit cryptanalysis unduly, or at least he fails to credit other factors. After telling, dramatically and in detail, the story of the interception and death of Admiral Isoroku Yamamoto, for example, he concludes, "Cryptanalysis had given America the equivalent of a major victory," thus ignoring his own reminder that "Knowledge alone is not power. To have any effect it must be linked to physical force."

A chapter of 62 pages devoted to the history and structure of the National Security Agency tells of publicized successes and failures in which it has been involved. Descriptions of scandals and defections, most notably that of Martin and Mitchell, are derived from news accounts and lead to an endorsement for Congressional surveillance of intelligence agencies. This chapter reports on military communications generally, along with those of the Department of State and other parts of the government, including the hot line to Moscow. Most of the material is based upon news releases, news accounts, and speculation. Kahn seeks to validate the latter by a sedate notice in his "Notes to Text" that he has used "the word 'probably' or the verb 'may' to indicate that the statement is my own supposition"—rather too inconspicuous flags of warning, it seems to this reviewer.

The book's last section is a collection of heterogeneous addenda that can be taken or left. There is a psychoanalytic treatment of

cryptology in which cryptanalysis is equated with voyeurism and it is implied "that cryptography may come ultimately from the infantile sexual pleasure that Freud says children obtain from the muscle tension of retaining the feces." There is a catch-all chapter discussing miscellaneous motives, purposes, and media for cryptologic activity. "Rumrunners, Businessmen, and Makers of Nonsecret Codes" offers well-told stories about these subjects and introduces a lady code expert of the war against rumrunners in the prohibition era—Mrs. William F. Friedman. There is a collection of historical oddities, the most intriguing of which is probably the still unsolved Voynich manuscript. The problem of Roger Bacon and the Shakespeare writings is treated not uninterestingly. Finally we go way out with paracryptology to "Ancestral Voices" and "Messages from Outer Space."

In sum, this reviewer learned a lot from *The Codebreakers*, found many parts and sections to be of great interest, and considers it a monumental work. The shortcomings I mentioned above derive from a careless and somewhat cavalier attitude toward factual detail in matters not strictly cryptologic. One detail is the meaning of the word interview. A number of the people whom the author "interviewed" told me they had no idea their conversations with him were related to the writing or publication of a book. One man assured me that his "interview" consisted of a 15-minute telephone conversation devoted mostly to reasons why Kahn should not try to write about this subject.

As to historical detail: there are anachronisms in military rank; a 5'8" commander is called "tall"; Ellis M. Zacharias is mistakenly treated as a cryptanalyst; the "Manchu laws" requiring the rotation of Army officers to the field are foolishly applied to the Navy; Vladivostok is cited as having a U.S. legation when there was never more than a consulate there; the distance from Navy building to State is called 8 or 10 blocks; the United States is said to have had in World War II 1,350 days of conflict, three too many; Yamamoto is said to have lost two fingers of his right, rather than left, hand; Magic is given as the source of a report on Japanese shipping which actually came from ONI agents along the Chinese coast; a Japanese ship is misnamed; it is claimed that the creation of the USAFFE command was a "direct" result of intercept information about German pressures on the Japanese.

As this review was nearing completion I had occasion to talk with Kahn and mentioned some of these errors; he brushed them aside as too

minute to be concerned about. It is more understandable that his lack of experience in any kind of wartime office leads to some gaucheries and misinterpretations of the relationships among offices, functions, people, and intelligence reports; nowhere were organizational arrangements so precise and neat as he describes them.

Roger Pineau

Miscellaneous

THE MARCH TO TUNIS. By *Alan Moorehead*. (New York: Harper & Row. 1965. 592 pp. \$8.50.)

The North African war, 1940-1943, was one of the most fascinating stories of World War II. It had tremendous drama and a sort of intimate aspect which the far larger operations in other theaters could not project in the same way. Names like Wavell, Rommel, and Montgomery carried a note of almost personal engagement. Great things depended on the outcome, and the final result was one of the first great successes for the allied cause.

Moorehead's book is a republication, with apparently some slight editing, of articles he wrote while he was with the British troops in North Africa during the campaign. They are extremely good reports, well informed, graphic, and fascinating to read. He spends little time on the intelligence aspects, but he has one very interesting description of the role intelligence played in the British advance in December 1940 at Benghazi, which was one of the first and most heartening British successes.

The Italians, in far greater numbers, had taken up static positions in the western desert and normally would patrol between these to provide what looked like an almost impenetrable defensive line. The British were constantly sending out long-range patrols to probe the Italian positions and gain intelligence on enemy movements and plans. According to Moorehead, it was a British intelligence colonel who began to notice, reading the reports which the British patrols were constantly bringing in, that those scouts who went into the area between two Italian posts called Nibeiwa and Sofafi invariably returned with no news at all. The colonel then went with a driver into the desert night after night, going deeper each time, and still struck nothing. Improbable as it seemed, he was forced to the conclusion that there was a gap which the Italians had not fortified and were not even patrolling. Furthermore, it was likely that the Italians, with their static strategy, had not fortified on the inward, western side of their chain of camps and that their artillery would be facing the British. This raised the possibility of a British drive through the gap with a turn thereafter to the north to attack the other camps from

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the unfortified western side. Obviously, as Moorehead says, surprise was essential. Wavell took all the normal precautions not to tip his hand; and the move was a success.

Moorehead has another interesting intelligence analysis with respect to achieving the surprise. He says the most valuable aid to secrecy was misjudgment on the part of the enemy. The Italians did not expect the British, who had been retreating constantly in Europe and Africa and must be on the defensive now, to mount an attack. But beyond this there was an internal rottenness in Italian intelligence growing out of the national weakness for exaggeration. The average Italian officer was boastful and the war had made him more so. When Graziani destroyed a dozen vehicles he claimed 2,000; an exchange of shots became a skirmish, a raid was an engagement, and an engagement was reported as a major action or a battle. Moorehead claims that with the constant flow of such erroneous information GHQ, even if it discounted what it heard by half, was still left in the dark, not knowing where to draw the line between truth and fiction. He therefore gives the Italian intelligence failure as well as the British intelligence success a very large role in the spectacular advance at Benghazi.

Lawrence R. Houston

TURNCOAT. By *Morris R. Wills* as told to J. Robert Moskin. (Englewood Cliffs, N.J.: Prentice-Hall. 1968. 186 pp. \$5.95.)

Morris R. Wills, one of the 21 Americans who refused repatriation at the end of the Korean War, was at the time politically naive and emotionally immature; he had little understanding of the aims and methods of his captors. Even now he does not seem to know more than a bare minimum about communism. The main lesson to be learned from this first I-was-there book to appear from the group is that Wills and others like him were not warped, incomprehensible traitors with alien motives and ideas who turned their backs on clearly defined American values to accept the equally clear and well-understood values of communism. The choice was not so clean-cut nor the dividing line so obvious.

Wills was captured 18 May 1951 through a classic spur-of-the-moment deception operation of the enemy:

Suddenly a man stepped out of the bushes, I could see he was Oriental and from his uniform I thought he was a South Korean. He came up to me

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and offered me his hand. I thought: Everything is alright; only a South Korean would do that . . . So I slung my M1 on my shoulder . . . Another man stepped out from the other side and grabbed my rifle . . . And that was that.

From then on Wills so accepted the fact of his capture that less than eight hours later he volunteered to fix a truck so that "We'll get to drive all the way north and won't have to walk."

After a period of intensive but ridiculous indoctrinations which had no effect even on Wills, the Chinese left all PWs alone with nothing to do at all—except read in a library and participate in a "discussion" group. Boredom, frustration at the U.S. "no-win policy," a vague desire to visit China, and budding awareness of social problems within the United States all led to Wills' being drawn into discussions and reading under Chinese tutorship. He was totally unable, he says, to see communism as antithetical to the American way. "Marx had never been mentioned in our school [at home] . . . There is absolutely no way of combatting an argument in his favor unless you know something about him." He did not have any particular values that seemed to be threatened by communism. His mental vacuum with respect to political philosophy was filled for the first time by the communists. Force was not used nor needed.

The life of the group of turncoats in Panmunjon featured a constant purposeful effort to keep each other from reconsidering their decision and even from looking back at what they were leaving. Intensive periods of self-criticism throughout Wills' stay in Korea and China provided him means to purge away all self-doubts and unanswered questions about life in America and the inconsistencies of communism.

The Chinese were interested in the turncoats not as converts to communism but for their propaganda value. Once in China, Wills slowly began to realize that his worth as an individual was nil in that environment. The callous treatment now given him and his wife, not ideological disillusionment, was the reason for his decision to leave China.

His view of China vis-a-vis the United States is quite interesting as supporting those Sinologists who see the communist revolution and the present Red Guard actions as more reflective of Chinese social characteristics than facets of doctrinaire Marxism-Leninism. He is presently studying to become a professional librarian in order to work with Chinese research materials at Columbia.

Arthur Dushane

DOUBLE AGENT. By *John Huminik*. (New York: New American Library. 1967. 181 pp. \$4.95.)

This is an autobiographical account of the Soviet recruitment of a young engineer under FBI control. Professional interest in it centers on the modus operandi of the Soviet officers under legal (official) cover with whom the author had contact.

A comparison of the activities, techniques, and objectives of the Soviets as described here with previously known Soviet doctrine regarding the recruitment of Americans in the United States shows that the Soviets in this case were consistent with doctrine but were using only one of the possible lines of approach, one based on their evaluation of their target, the author. During the lengthy period of development and assessment—the first five years of the six-year period of contact—it was clear to the Soviets that Huminik could not be induced to cooperate with them on an ideological basis or by intimidation through pressures against his distant relatives in the USSR. This evaluation caused them to restrict their tactics to financial inducements.

They spent an unusual length of time developing the target for two reasons. First, there were few clear indications that he had or could develop access to sufficiently significant items among their intelligence collection requirements. Second, there was constant concern that the target had reported his association with the Soviets to the FBI, as indeed he had, and that consequently he was being “dangled” before them. This latter was the primary reason for the extended developmental period. They were waiting to see if certain telltale actions would confirm their suspicions, for example contrived meetings on the target’s initiative or unsolicited offers to furnish information of obvious interest to them.

During the last year of the association it appears that the relatively young and inexperienced Soviet officer Revin prevailed upon his superiors to take a calculated risk, and Huminik was finally paid modest sums of money for photographed documents. It was obvious to the FBI, clearing these documents to be passed to the Soviets, that sooner or later the operation would cease because the Soviets must evaluate the information as give-away junk.

The techniques employed by the Soviets for clandestine communications and contacts were consistent with their doctrine. Dead drops, signal sites, and concealment devices were all used in a professional manner. But the value of the book is limited to illustrating the specific techniques used by the Soviets in this particular case—a small

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segment of their overall operational doctrine for recruiting Americans in the United States.

The adventures of the author in the Dominican Republic and his subjective romanticizing of his role as an FBI informant are of no help. The literary style of the book is not much above that of an average high school essay. For realistic professional reading one can do much better in fiction, say with *The Spy Who Came in From the Cold*.

C. D. Hartsfield

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