that no damage was done to individuals who volunteer for the experiments. Overseas interrogations utilizing a combination of sodium pentothal and hypnosis after physical and psychiatric examinations of the subjects were also part of ARGHAD. The Office of Scientific Intelligence (OSI), which studied scientific advances by hostile powers, initially led BLUEBIRD/ARGHAD efforts. In 1959, overall responsibility for ARGHAD was transferred from OSI to the Inspection and Security Office (IS&O), predecessor to the present Office of Security. The CIA’s Technical Services and Medical Staffs were to be called upon as needed; OSI would retain liaison function with other government agencies. The change in leadership from an intelligence unit to an operating unit apparently reflected a change in emphasis: from the study of actions by hostile powers to the use, both for offensive and defensive purposes, of special interrogation techniques—primarily hypnosis and truth serums.

Representatives from each Agency unit involved in ARGHAD met almost monthly to discuss their progress. These discussions included the planning of overseas interrogations as well as further experimentation in the U.S.

Information about project ARGHAD after the fall of 1953 is scarce. The CIA maintains that the project ended in 1958, but evidence suggests that Office of Security and Office of Medical Services use of "special interrogation" techniques continued for several years thereafter.

3. MKNAOMI

MKNAOMI was another major CIA program in this area. In 1957, the CIA summarized the purposes of MKNAOMI:

(a) To provide for a covert support base to meet clandestine operational requirements.

(b) To stockpile severely incapacitating and lethal materials for the specific use of TSD [Technical Services Division].

(c) To maintain in operational readiness special and unique items for the dissemination of biological and chemical materials.

(d) To provide for the required surveillance, testing, upgrading, and evaluation of materials and items in order to assure absence of defects and complete predictability of results to be expected under operational conditions.

Under an agreement reached with the Army in 1952, the Special Operations Division (SOD) at Fort Detrick was to assist CIA in developing, testing, and maintaining biological agents and delivery systems. By this agreement, CIA acquired the knowledge, skill, and facilities of the Army to develop biological weapons suited for CIA use.

SOD developed darts coated with biological agents and pills containing several different biological agents which could remain potent for weeks or months. SOD also developed a special gun for firing darts coated with a chemical which could allow CIA agents to incapacitate a guard dog, enter an installation secretly, and return the dog to consciousness when leaving. SOD scientists were unable to develop a similar incapacitant for humans. SOD also physically transferred to CIA personnel biological agents in "bulk" form, and delivery devices, including some containing biological agents.

In addition to the CIA’s interest in biological weapons for use against humans, it also studied SOD to study use of biological agents against crops and animals. In its 1967 memorandum, the CIA stated:

Three methods and systems for carrying out a covert attack against crops and causing severe crop loss have been developed and evaluated under field conditions. This was accomplished in anticipation of a requirement which was later developed but was subsequently scrubbed just prior to putting into action.

MKNAOMI was terminated in 1970. On November 25, 1969, President Nixon renounced the use of any form of biological weapons that kill or incapacitate and ordered the disposal of existing stocks of bacteriological weapons. On February 14, 1970, the President clarified the extent of his earlier order and indicated that poisons—chemicals that are not living organisms but are produced by living organisms—were considered biological weapons subject to his previous directive and were to be destroyed. Although instructed to relinquish control of material held for the CIA by SOD, a CIA scientist acquired approximately 11 grams of shellfish toxin from SOD personnel at Fort Detrick which were stored in a little-used CIA laboratory where it went undetected for five years.

4. MKULTRA

MKULTRA was the principal CIA program involving the research and development of chemical and biological agents. It was "concerned with the research and development of chemical, biological, and radiological materials capable of employment in clandestine operations to control human behavior." 11

In January 1973, MKULTRA records were destroyed by Technical Services Division personnel acting on the verbal orders of Dr. Sidney Gottlieb, Chief of TSD. Dr. Gottlieb has testified, and former Director Helms has confirmed, that in ordering the records destroyed, Dr. Gottlieb was carrying out the verbal order of then DCI Helms.

MKULTRA began with a proposal from the Assistant Deputy Director for Plans, Richard Helms, to the DCI, outlining a special

---

*Memorandum from Robert Taylor, O/DD/P to the Assistant Deputy (Inspection and Security) and Chief of the Medical Staff, 3/20/72.


* "Progress Report, Project ARGHAD," 1/12/53.

* Memorandum from Chief, TSD/Biological Branch to Chief, TSD "MKNAOMI: Funding, Objectives, and Accomplishments," 10/16/73, p. 1. For a fuller description of MKNAOMI and the relationship between CIA and SOD, see p. 560 ff.

* Ibid. p. 2.

* Senate Select Committee, 9/10/73, Hearings, Vo. 1.

* Memorandum from the CIA Inspector General to the Director, 7/26/63.
funding mechanism for highly sensitive CIA research and development projects that studied the use of biological and chemical materials in altering human behavior. The projects involved:

Research to develop a capability in the covert use of biological and chemical materials. This area involves the production of various physiological conditions which could support present or future clandestine operations. Aside from the offensive potential, the development of a comprehensive capability in this field of covert chemical and biological warfare gives us a thorough knowledge of the enemy's theoretical potential, thus enabling us to defend ourselves against a foe who might not be as restrained in the use of these techniques as we are.12

MKULTRA was approved by the DCI on April 13, 1953 along the lines proposed by ADDP Helms. Part of the rationale for the establishment of this special funding mechanism was its extreme sensitivity. The Inspector General's survey of MKULTRA in 1963 noted the following reasons for this sensitivity:

a. Research in the manipulation of human behavior is considered by many authorities in medicine and related fields to be 'professionally unethical, therefore the reputation of professional participants in the MKULTRA program are on occasion in jeopardy.

b. Some MKULTRA activities raise questions of legality implicit in the original charter.

c. A final phase of the testing of MKULTRA products places the rights and interests of U.S. citizens in jeopardy.

d. Public disclosure of some aspects of MKULTRA activity could induce serious adverse reaction in U.S. public opinion, as well as stimulate offensive and defensive action in this field on the part of foreign intelligence services.13

Over the ten-year life of the program, many "additional avenues to the control of human behavior" were designated as appropriate for investigation under the MKULTRA charter. These include "radiation, electroshock, various fields of psychology, psychiatry, sociology, and anthropology, graphology, harassment substances, and paramilitary devices and materials."14

The research and development of materials to be used for altering human behavior consisted of three phases: first, the search for materials suitable for study; second, laboratory testing on voluntary human subjects in various types of institutions; third, the application of MKULTRA materials in normal life settings.

The search for suitable materials was conducted through standing arrangements with specialists in universities, pharmaceutical houses, hospitals, state and federal institutions, and private research organi-

zations. The annual grants of funds to these specialists were made under ostensible research foundation auspices, thereby concealing the CIA's interest from the specialist's institution.

The next phase of the MKULTRA program involved physicians, toxicologists, and other specialists in mental, narcotics, and general hospitals, and in prisons. Utilizing the products and findings of the basic research phase, they conducted intensive tests on human subjects.

One of the first studies was conducted by the National Institute of Mental Health. This study was intended to test various drugs, including hallucinogens, at the NIH Addiction Research Center in Lexington, Kentucky. The "Lexington Rehabilitation Center," as it was then called, was a prison for drug addicts serving sentences for drug violations.

The test subjects were volunteer prisoners who, after taking a brief physical examination and signing a general consent form, were administered hallucinogenic drugs. As a reward for participation in the program, the addicts were provided with the drug of their addiction.

LSD was one of the materials tested in the MKULTRA program. The final phase of LSD testing involved surreptitious administration to unwitting nonvolunteer subjects in normal life settings by undercover officers of the Bureau of Narcotics acting for the CIA.

The rationale for such testing was "that testing of materials under accepted scientific procedures fails to disclose the full pattern of reactions and attributions that may occur in operational situations."15 According to the CIA, the advantage of the relationship with the Bureau was that test subjects could be sought and cultivated within the setting of narcotics control. Some subjects have been informers or members of suspect criminal elements from whom the Bureau of Narcotics has obtained results of operational value through the tests. On the other hand, the effectiveness of the substances on individuals at all social levels, high and low, native American and foreign, is of great significance and testing has been performed on a variety of individuals within these categories. [Emphasis added.]16

A special procedure, designated MKDELTA, was established to govern the use of MKULTRA materials abroad. Such materials were used on a number of occasions. Because MKULTRA records were destroyed, it is impossible to reconstruct the operational use of MKULTRA materials by the CIA overseas; it has been determined that the use of these materials abroad began in 1953, and possibly as early as 1950.

Drugs were used primarily as an aid to interrogations, but MKULTRA/MKDELTA materials were also used for harassment, discrediting, or disabling purposes. According to an Inspector General Survey of the Technical Services Division of the CIA in 1957—an inspection which did not discover the MKULTRA project involving the surreptitious administration of LSD to unwitting, nonvolunteer subject—this was seen as a "constructive and necessary part of the battle to gain control over individuals of the world."17

13 Ibid., p. 4.
14 Ibid., p. 21.
15 Ibid., pp. 11-12.
subjects—the CIA had developed six drugs for operational use and they had been used in six different operations on a total of thirty-three subjects. By 1963 the number of operations and subjects had increased substantially.

In the spring of 1963, during a wide-ranging Inspector General survey of the Technical Services Division, a member of the Inspector General’s staff, John Vance, learned about MKULTRA and about the project involving the surreptitious administration of LSD to unwitting, nonvoluntary human subjects. As a result of the discovery and the Inspector General’s subsequent report, this testing was halted and much tighter administrative controls were imposed on the program. According to the CIA, the project was decreased significantly each budget year until its complete termination in the late 1960s.

6. The Testing of LSD by the Army

There were three major phases in the Army’s testing of LSD. In the first, LSD was administered to more than 1,000 American soldiers who volunteered to be subjects in chemical warfare experiments. In the second phase, Material Testing Program EA 1729, 95 volunteers received LSD in clinical experiments designed to evaluate potential intelligence uses of the drug. In the third phase, Projects THIRD CHANCE and DERBY HAT, 16 unwitting nonvolunteer subjects were interrogated after receiving LSD as part of operational field tests.

B. CIA Drug Testing Programs

1. The Rationale for the Testing Programs

The late 1940s and early 1950s were marked by concern over the threat posed by the activities of the Soviet Union, the People’s Republic of China, and other Communist bloc countries. United States concern over the use of chemical and biological agents by these powers was acute. The belief that hostile powers had used chemical and biological agents in interrogations, brainwashing, and in attacks designed to harass, torture, or kill Allied personnel created considerable pressure for a “defensive” program to investigate chemical and biological agents so that the intelligence community could understand the mechanisms by which these substances worked and how their effects could be defeated.

Of particular concern was the drug LSD. The CIA had received reports that the Soviet Union was engaged in intensive efforts to produce LSD; and that the Soviet Union had attempted to purchase the world’s supply of the chemical. As one CIA officer who was deeply involved in work with this drug described the climate of the times: “It is a matter of principle, and I must say that I am deeply involved in this work with this drug. It is a matter of principle.”

But we were never literally terrified, because this was the one material that we had ever been able to locate that really had potential fantastic possibilities if used wrongly.”

But the defensive orientation soon became secondary. Chemical and biological agents were to be studied in order “to perfect techniques . . . for the collection of information from individuals whether willing or not” and in order to “develop means for the control of the activities and mental capacities of individuals whether willing or not.” One Agency official noted that drugs would be useful in order to “gain control of bodies whether they were willing or not” in the process of removing personnel from Europe in the event of a Soviet attack. In other programs, the CIA began to develop, produce, stockpile, and maintain in operational readiness materials which could be used to harass, disable, or kill specific targets.

Reports of research and development in the Soviet Union, the People’s Republic of China, and the Communist Bloc countries provided the basis for the transmutation of American programs from a defensive to an offensive orientation. As the Chief of the Medical Staff of the Central Intelligence Agency wrote in 1962:

There is ample evidence in the reports of innumerable interrogations that the Communists were utilizing drugs, physical duress, electric shock, and possibly hypnosis against their enemies. With such evidence it is difficult not to keep from becoming irritated about our apparent laxity. We are forced by this mounting evidence to assume a more aggressive role in the development of these techniques, but must be cautious to maintain strict inviolable control because of the havoc that could be wrought by such techniques in unscrupulous hands.

In order to meet the perceived threat to the national security, substantial programs for the testing and use of chemical and biological agents—including projects involving the surreptitious administration of LSD to unwitting nonvolunteer subjects “at all social levels, high and low, native American and foreign”—were conceived, and implemented. These programs resulted in substantial violations of the rights of individuals within the United States.

“Testimony of CIA officer, 11/21/75, p. 33.

Memorandum from the Director of Security to ARTICHOKE representatives, Subject: “ARTICHOKE Restoration of Program.”

ARTICHOKE memorandum, 7/30/53.

Memorandum for the Chief, TSD, Biological Branch to the Chief, TSD, 10/18/67, described two of the objectives of the CIA’s Project MKNAOMI as: “to stockpile severely incapacitating and lethal materials for the specific use of TSD” and “to maintain in operational readiness special and unique items for the dissemination of biological and chemical materials.”

Memorandum from the Chief of the Medical Staff, 1/25/52.


“Thus an officer in the Office of Security of the CIA stressed the urgency of the discovery of techniques and method that would permit our personnel, in the event of their capture by the enemy, to resist or defeat enemy interrogation.” (Minutes of the ARTICHOKE conference of 10/22/53.)
Although the CIA recognized these effects of LSD to unwitting individuals within the United States, the project continued.24 As the Deputy Director for Plans, Richard Helms, wrote the Deputy Director of Central Intelligence during discussions which led to the cessation of unwitting testing:

While I share your uneasiness and distaste for any program which tends to intrude upon an individual's private and legal prerogatives, I believe it is necessary that the Agency maintain a central role in this activity, keep current on enemy capabilities, the manipulation of human behavior, and maintain an offensive capability.25

There were no attempts to secure approval for the most controversial aspects of these programs from the executive branch or Congress. The nature and extent of the programs were closely held secrets; even DCI McCone was not briefed on all the details of the program involving the surreptitious administration of LSD until 1963. It was deemed imperative that these programs be concealed from the American people. As the CIA's Inspector General wrote in 1957:

Precautions must be taken not only to protect operations from exposure to enemy forces but also to conceal these activities from the American public in general. The knowledge that the Agency is engaging in unethical and illicit activities would have serious repercussions in political and diplomatic circles and would be detrimental to the accomplishment of its mission.26

2. The Death of Dr. Frank Olson

The most tragic result of the testing of LSD by the CIA was the death of Dr. Frank Olson, a civilian employee of the Army, who died on November 27, 1953. His death followed his participation in a CIA experiment with LSD. As part of this experiment, Olson unwittingly received approximately 70 micrograms of LSD in a glass of Cointreau he drank on November 19, 1953. The drug had been placed in the bottle by a CIA officer, Dr. Robert Lashbrook, as part of an experiment he and Dr. Sidney Gottlieb performed at a meeting of Army and CIA scientists.

Shortly after this experiment, Olson exhibited symptoms of paranoia and schizophrenia. Accompanied by Dr. Lashbrook, Olson sought psychiatric assistance in New York City from a physician, Dr. Harold Abramson, whose research on LSD had been funded indirectly by the CIA. While in New York for treatment, Olson fell to his death from a tenth story window in the Statler Hotel.

Even during the discussions which led to the termination of the unwitting testing, the DDP turned down the option of halting such tests within the U.S. and continuing them abroad despite the fact that the Technical Services Division had conducted numerous operations abroad making use of LSD. The DDP made this decision on the basis of security noting that the past efforts overseas had resulted in “making an inordinate number of foreign nationals witless of our role in the very sensitive activity.” (Memorandum for the Deputy Director of Central Intelligence from the Deputy Director for Plans, 12/17/63, p. 2.)

24 Ibid., pp. 2-3.
25 Ibid., p. 217.
26 Staff summary of Vincent Ruwet Interview, 8/13/75, p. 3.
27 Memorandum of Col. Vincent Ruwet, To Whom It May Concern, no date, p. 2.
28 Ruwet Memorandum, p. 3.
30 Memorandum for the Record from Lyman Kirkpatrick, 12/1/83, p. 1.
31 Ruwet (staff summary), 8/13/75, p. 6.
32 Inspector General Diary, 12/2/63.
33 Ibid. Dr. Gottlieb has testified that he does not remember either the meeting with Helms nor the Wisner memorandum. (Gottlieb, 10/18/75, p. 16.)
proval of his immediate supervisor. Neither the Chief of TSS nor the DDP specifically authorized the experiment in which Dr. Olson participated. According to Gottlieb, a "very small dose" of LSD was placed in a bottle of Cointreau which was served after dinner on Thursday, November 19. The drug was placed in the liqueur by Robert Lashbrook. All but two of the SOD participants received LSD. One did not drink; the other had a heart condition. About twenty minutes after they finished their Cointreau, Gottlieb informed the other participants that they had received LSD.

Dr. Gottlieb stated that "up to the time of the experiment," he observed nothing unusual in Olson's behavior. Once the experiment was underway, Gottlieb recalled that "the drug had a definite effect on the group to the point that they were boisterous and laughing and they could not continue the meeting or engage in sensible conversation." The meeting continued until about 1:00 a.m., when the participants retired for the evening. Gottlieb recalled that Olson, among others, complained of "wakefulness" during the night. According to Gottlieb on Friday morning "aside from some evidence of fatigue, I observed nothing unusual in [Olson's] actions, conversation, or general behavior." Ruwet recalls that Olson "appeared to be agitated" at breakfast, but that he "did not consider this to be abnormal under the circumstances."

c. The Treatment.—The following Monday, November 23, was waiting for Ruwet when he came in to work at 7:30 a.m. For the next two days Olson's friends and family attempted to reassure him and help him "snap out" of what appeared to be a severe depression. On Tuesday, Olson again came to Ruwet and, after an hour con-

*Dr. Gottlieb testified that "given the information we knew up to this time, and based on a few of our own self-administration, we thought it was a fairly benign substance in terms of potential harm." This is in conflict not only with Mr. Helms' statement but also with material which had been supplied to the Technical Services Staff. In one long memorandum on current research with LSD which was supplied to TSD, Henry Beebe, a psychiatrist at the Technical Services Staff, wrote that Professor Rothland, who had been subject to depression to some extent took LSD-25 in an experiment and became severely and suddenly depressed and committed suicide three weeks later. While the connection is not definite, common knowledge of this could hardly have allowed the positive statement Rothland permitted himself. This case is a warning to us to avoid engaging subjects who are depressed, or who have been subject to depression." Dr. Gottlieb testified that he had no recollection of either the report or that particular section of it. (Sidney Gottlieb testimony, 10/19/75, p. 78.)

*Lashbrook (staff summary), 7/19/75, p. 3.
*Gottlieb memorandum, 12/7/63, p. 2.
*Edwards memorandum, 11/29/63, p. 3.
*Gottlieb memorandum, 12/7/63, p. 3.
*Ruwet memorandum, p. 3.

versation, it was decided that medical assistance for Dr. Olson was desirable. Lashbrook then called Lashbrook and informed him that "Dr. Olson was in serious trouble and needed immediate professional attention." Lashbrook agreed to make appropriate arrangements and told Ruwet to bring Olson to Washington, D.C. Ruwet and Olson proceeded to Washington to meet with Lashbrook, and the two left for New York at about 2:30 p.m. to meet with Dr. Harold Abramson.

At that time Dr. Abramson was an allergist and immunologist practicing medicine in New York City. He held no degree in psychiatry, but was associated with research projects supported indirectly by the CIA. Gottlieb and Dr. Lashbrook both followed this work closely in the early 1960s. Since Olson needed medical help, they turned to Dr. Abramson as the doctor closest to Washington who was experienced with LSD and cleared by the CIA.

Ruwet, Lashbrook, and Olson remained in New York for two days of consultations with Abramson. On Thursday, November 26, 1963, the three flew back to Washington so that Olson could spend Thanksgiving with his family. En route from the airport Olson told Ruwet that he was afraid to face his family. After a lengthy discussion, it was decided that Olson and Lashbrook would return to New York, and that Ruwet would go to Frederick to explain these events to Mrs. Olson.

Lashbrook and Olson flew back to New York the same day, again for consultations with Abramson. They spent Thursday night in a Long Island hotel and the next morning returned to the city with Abramson. In further discussions with Abramson, it was agreed that Olson should be placed under regular psychiatric care at an institution close to his home. 

d. The Death.—Because they could not obtain air transportation for a return trip on Friday night, Lashbrook and Olson made reservations for Saturday morning and checked into the Statler Hotel. Between the time they checked in and 10:00 a.m.; they watched television, visited the cocktail lounge, where each had two martinis, and dinner. According to Lashbrook, Olson "was cheerful and appeared to enjoy the entertainment." He "appeared no longer particularly depressed, and almost the Dr. Olson I knew prior to the experiment."

After dinner Lashbrook and Olson watched television for about an hour, and at 11:00, Olson suggested that they go to bed, saying that "he felt more relaxed and contented than he had since [they] came to New York." Olson then left a call with the hotel operator to wake him in the morning. At approximately 2:30 a.m. Saturday, November 28, Lashbrook was awakened by a loud "crash of glass." In his report on the incident, he stated that Olson "had crashed through the closed window blind and the closed window and he fell to his death from the window of our room on the 10th floor."
Immediately after finding that Olson had leapt to his death, Lashbrook telephoned Gottlieb at his home and informed him of the incident. Gottlieb called Ruwet and informed him of Olson's death at approximately 2:45 a.m. Lashbrook then called the hotel desk and reported the incident to the operator there. Lashbrook called Abramson and informed him of the occurrence. Abramson told Lashbrook he "wanted to be kept out of the thing completely," but later changed his mind and agreed to assist Lashbrook. Shortly thereafter, uniformed police officers and some hotel employees came to Lashbrook's rooms. Lashbrook told the policemen that he didn't know why Olson had committed suicide, but he did know that Olson "suffered from ulcers.

e. The Aftermath.—Following Dr. Olson's death, the CIA made a substantial effort to ensure that his family received death benefits, but did not notify the Olsons of the circumstances surrounding his death. The Agency also made considerable efforts to prevent the death being connected with the CIA, and supplied complete cover for Lashbrook so that his association with the CIA would remain a secret.

After Dr. Olson's death the CIA conducted an internal investigation of the incident. As part of his responsibilities in this investigation, the General Counsel wrote the Inspector General, stating:

I'm not happy with what seems to be a very casual attitude on the part of TSS representatives to the way this experiment was conducted and the remarks that this is just one of the risks running with scientific experimentation. I do not eliminate the need for taking risks, but I do believe, especially when human health or life is at stake, that at least the prudent, reasonable measures which can be taken to minimize the risk must be taken and failure to do so was a culpable negligence. The actions of the various individuals concerned after effects of the experiment on Dr. Olson become manifest also revealed the failure to observe normal and reasonable precautions.

As a result of the investigation DCI Allen Dulles sent a personal letter to the Chief of Technical Operations of the Technical Services Staff who had approved the experiment criticizing him for "poor judgment in authorizing the use of this drug on such an unwitting basis and without proximate medical safeguards." Dulles also sent a letter to Dr. Gottlieb, Chief of the Chemical Division of the Technical Services Staff, criticizing him for recommending the "unwitting application of the drug" in that the proposal "did not give sufficient emphasis for medical collaboration and for the proper consideration of the rights of the individual to whom it was being administered."

The letters were hand carried to the individuals to be read and returned. Although the letters were critical, a note from the Deputy Director of Central Intelligence to Mr. Helms instructed him to inform the individuals that: "These are not reprimands and no personnel file notation are being made."

Thus, although the Rockefeller Commission has characterized them as such, these letters were explicitly not reprimands. Nor did participation in the events which led to Dr. Olson's death have any apparent effect on the advancement within the CIA of the individuals involved.

3. The Suppressive Administration of LSD to Unwitting Non-Volunteer Human Subjects by the CIA After the Death of Dr. Olson

The death of Dr. Olson could be viewed, as some argued at the time, as a tragic accident, one of the risks inherent in the testing of new substances. It might be argued that LSD was thought to be benign. After the death of Dr. Olson the dangers of the suppressive administration of LSD were clear, yet the CIA continued or initiated a project involving the suppressive administration of LSD to non-volunteer human subjects. This program exposed numerous individuals in the United States to the risk of death or serious injury without their informed consent, without medical supervision, and without necessary follow-up to determine any long-term effects.

Prior to the Olson experiment, the Director of Central Intelligence had approved MKULTRA, a research program designed to develop a "capability in the covert use of biological and chemical agent materials." In the proposal describing MKULTRA Mr. Helms, then ADDP, wrote the Director that:

we intend to investigate the development of a chemical material which causes a reversible non-toxic aberrant mental state, the specific nature of which can be reasonably well predicted for each individual. This material could potentially aid in disciplining individuals, eliciting information, and implanting suggestions and other forms of mental control.

On February 12, 1954, the Director of the Central Intelligence Agency wrote TSS officials criticizing them for "poor judgment" in administering LSD on "an unwitting basis and without proximate medical safeguards" to Dr. Olson and for the lack of "proper consideration of the rights of the individual to whom it was being administered." On the same day, the Inspector General reviewed a report on Subproject Number 3 of MKULTRA, in which the same TSS officers who had just received letters from the Director were quoted as stating that one of the purposes of Subproject Number 3 was to

---

* CIA Field Office Report, 12/3/53, p. 3.
* Ruwet Memorandum, p. 11.
* CIA Field Office Report, 12/3/53, p. 3.
* Ibid.
* Memorandum from the General Counsel to the Inspector General, 1/4/54.
* Memorandum from DCI to Chief, Technical Operations, TSS, 2/12/54.
* Memorandum from DCI to Sidney Gottlieb, 2/12/54.
"observe the behavior of unwitting persons being questioned after having been given a drug."  

There is no evidence that Subproject Number 3 was terminated even though these officers were unequivocally aware of the dangers of the surreptitious administration of LSD and the necessity of obtaining informed consent and providing medical safeguards. Subproject Number 3, in fact, used methods which showed even less concern than did the OLSON experiment for the safety and security of the participants. Yet the evidence indicates the project continued until 1963.5

In the project, the individual conducting the test might make initial contact with a prospective subject selected at random in a bar. He would then invite the person to a "safehouse" where the test drug was administered to the subject through drink or food. CIA personnel might debrief the individual conducting the test, or observe the test by using a one-way mirror and tape recorder in an adjoining room.

Prior consent was obviously not obtained from any of the subjects. There was also, obviously, no medical prescreening. In addition, the tests were conducted by individuals who were not qualified scientific observers. There were no medical personnel on hand either to administer the drugs or to observe their effects, and no follow-up was conducted on the test subjects.

As the Inspector General noted in 1983:

A significant limitation on the effectiveness of such testing is the infeasibility of performing scientific observation of results. The [individuals conducting the test] are not qualified scientific observers. Their subjects are seldom accessible beyond the first hours of the test. The testing may be useful in perfecting delivery techniques, and in identifying surface characteristics of onset, reaction, attribution, and side-effect.5

This was particularly troublesome as in a number of instances, the test subject has become ill for hours or days, including hospitalization in at least one case, and the agent could only follow up by guarded inquiry after the test subject's return to normal life. Possible sickness and attendant economic loss are inherent contingent effects of the testing."

Paradoxically, greater care seems to have been taken for the safety of foreign nationals against whom LSD was used abroad. In several cases medical examinations were performed prior to the use of LSD."

Moreover, the administration abroad was marked by constant observation made possible because the material was being used against prisoners of foreign intelligence or security organizations. Finally, during certain of the LSD interrogations abroad, local physicians were present, though these physicians had had no experience with LSD and would not be told that hallucinogens had been administered."

The CIA's project involving the surreptitious administration of LSD to unwitting human subjects in the United States was finally halted in 1963, as a result of its discovery during the course of an Inspector General survey of the Technical Services Division. When the Inspector General learned of the project, he spoke to the Deputy Director for Plans, who agreed that the Director should be brief. The DDP made it clear that the DCI and his Deputy were generally familiar with MKULTRA. He indicated, however, that he was not sure it was necessary to brief the DCI at that point.

On May 24, 1963, the DDP advised the Inspector General that he had briefed the Director on the MKULTRA project and in particular had covered the question of the surreptitious administration of LSD to unwitting human subjects. According to the Inspector General, the DDP said that "the Director indicated no disagreement and therefore the 'testing' will continue."

One copy of an "Eyes Only" draft report on MKULTRA was prepared by the Inspector General who recommended the termination of the surreptitious administration project. The project was suspended following the Inspector General's report.

On December 17, 1963, Deputy Director for Plans Helms wrote a memo to the DCI, who with the Inspector General and the Executive Director-Comptroller had opposed the covert testing. He noted two aspects of the problem: (1) "for over a decade the Clandestine Services has had the mission of maintaining a capability for influencing human behavior;" and (2) "testing arrangements in furtherance of this mission should be as operationally realistic and yet as controllable as possible." Helms argued that the individuals must be "unwitting" as this was "the only realistic method of maintaining the capability, considering the intended operational use of materials to influence human behavior as the operational targets will certainly be unwitting. Should the subjects of the testing not be unwitting, the program would only be "pro forma" resulting in a "false sense of accomplishment and readiness.""

"Helms continued:

"Memorandum to Inspector General from Chief, Inspection and Review, on Subproject #3 of MKULTRA, 2/10/54.
"Ibid., p. 12.
"Ibid. According to the IG's survey in 1963, physicians associated with MKULTRA could be made available in an emergency.
"The Technical Services Division which was responsible for the operational use of LSD abroad took the position that "no physical examination of the subject is required prior to administration of (LSD) by TSS trained personnel. A physi-
If one grants the validity of the mission of maintaining this unusual capability and the necessity for unwitting testing, there is only then the question of how best to do it. Obviously, the testing should be conducted in such a manner as to permit the opportunity to observe the results of the administration on the target. It also goes without saying that whatever testing arrangement we adopt must afford maximum safeguards for the protection of the Agency's role in this activity, as well as minimizing the possibility of physical or emotional damage to the individual tested.\(^6\)

In another memo to the Director of Central Intelligence in June, 1964, Helms again raised the issue of unwitting testing. At that time General Carter, then acting DCI, approved several changes in the MKULTRA program proposed by Mr. Helms as a result of negotiations between the Inspector General and the DDP. In a handwritten note, however, Director Carter added that “unwitting testing will be subject to a separate decision.”\(^6\)

No specific decision was made then or soon after. The testing had been halted, and, according to Walter Elder, Executive Assistant to DCI McCone, the DDP was not likely to take the positive step of authorizing a resumption of the testing. At least through the summer, the DDP did not press the issue. On November 9, 1964, the DDP raised the issue again in a memo to the DCI, calling the Director's attention to what he described as “several other indications during the past year of an apparent Soviet aggressiveness in the field of covertly administered chemicals which are, to say the least, inexplicable and disturbing.”\(^6\)

Helms noted that because of the suspension of covert testing, the Agency’s “positive operational capability to use drugs is diminishing, owing to a lack of realistic testing. With increasing knowledge of the state of the art, we are less capable of staying up with Soviet advances in this field. This in turn results in a waning capability on our part to restrain others in the intelligence community (such as the Department of Defense) from pursuing operations in this area.”\(^6\)

Helms attributed the cessation of the unwitting testing to the high risk of embarrassment to the Agency as well as the “moral problem.” He noted that no better covert situation had been devised than that which had been used, and that “we have no answer to the moral issue.”\(^6\)

Helms asked for either resumption of the testing project or its definitive cancellation. He argued that the status quo of a research and development program without a realistic testing program was causing the Agency to live “with the illusion of a capability which is becoming minimal and furthermore is expensive.”\(^6\) Once again no formal action was taken in response to the Helms’ request.

\(^{6}\) Memorandum from DDP Helms to DDCI Carter, 12/17/63.
\(^{6}\) Memorandum from DDP Helms to DCI, 6/9/64, p. 3.
\(^{6}\) Ibid., p. 1.
\(^{6}\) Ibid., pp. 1-2.
\(^{6}\) Ibid., p. 2.

From its beginning in the early 1950's until its termination in 1963, the program of surreptitious administration of LSD to unwitting non-volunteer human subjects demonstrates a failure of the CIA's leadership to pay adequate attention to the rights of individuals and to provide effective guidance to CIA employees. Though it was known that the testing was dangerous, the lives of subjects were placed in jeopardy and their rights were ignored during the ten years of testing which followed Dr. Olson's death. Although it was clear that the laws of the United States were being violated, the testing continued. While the individuals involved in the Olson experiment were admonished by the Director, at the same time they were also told that they were not being reprimanded and that their "bad judgment" would not be made part of their personnel records. When the covert testing project was terminated in 1963, none of the individuals involved were subject to any disciplinary action.

4. Monitoring and Control of the Testing and Use of Chemical and Biological Agents by the CIA

The Select Committee found numerous failures in the monitoring and control of the testing and use of chemical and biological agents within the CIA.\(^{14}\) An analysis of the failures can be divided into four sections: (a) the waiver of normal regulations or requirements; (b) the problems in authorization procedures; (c) the failure of internal review mechanisms such as the Office of General Counsel, the Inspector General, and the Audit Staff; and (d) the effect of compartmentation and competition within the CIA.

a. The Waiver of Administrative Controls.—The internal controls within any agency rest on: (1) clear and coherent regulations; (2) clear lines of authority; and (3) clear rewards for those who conduct themselves in accord with agency regulations and understandable and immediate sanctions against those who do not. In the case of the testing and use of chemical and biological agents, normal CIA administrative controls were waived. The destruction of the documents on the largest CIA program in this area constituted a prominent example of the waiver of normal Agency procedures by the Director.

These documents were destroyed in early 1973 at the order of then DCI Richard Helms. According to Helms, Dr. Sidney Gottlieb, then Director of TSD:

... came to me and said that he was retiring and that I was retiring and he thought it would be a good idea if these files were destroyed. And I also believe part of the reason for our thinking this was advisable was there had been relationships with outsiders in government agencies and other organizations and that these would be sensitive in this kind of a thing but that since the program was over and finished and done with, we thought we would just get rid of the files as
well, so that anybody who assisted us in the past would not be subject to follow-up or questions, embarrassment, if you will."

The destruction was based on a waiver of an internal CIA regulation, CSI 70-10, which regulated the "retirement of inactive records." As Thomas Karamessines, then Deputy Director of Plans, wrote in regulation CSI 70-10: "Retirement is not a matter of convenience or of storage of records of conscious judgment in the application of the rules established by the Office of Individual Component needs. The heart of this judgment is to ensure that the complete story can be reconstructed in later years and by people who may be unfamiliar with the events."

The destruction of the MKULTRA documents made it impossible for the Select Committee to determine the full range and extent of the largest CIA research program involving chemical and biological agents. The destruction also prevented the CIA from locating and providing medical assistance to the individuals who were subjects in the program. Finally, it prevented the Committee from determining the full extent of the operations which made use of materials developed in the MKULTRA program.

From the inception of MKULTRA normal Agency procedures were waived. In 1965, Mr. Helms, then Assistant Deputy Director for Plans, proposed the establishment of MKULTRA. Under the proposal, six percent of the research and development budget of TSD would be expended "without the establishment of formal contractual relations" because contracts would reveal government interest. Helms also noted that qualified individuals in the field are most reluctant to enter into signed agreements of any sort which connect them with this activity since such a connection would jeopardize their professional reputations."

Richard Helms testimony, 9/11/75, p. 5.

Many Agency documents recording confidential relationships with individuals and organisations are retained without public disclosure. Moreover, in the case of MKULTRA the CIA had spent millions of dollars developing both materials and delivery systems which could be used by the Clandestine Services; the reconstruction of the records and development program would be difficult if not impossible, without the documents, and at least one assistant to Dr. Gottlieb protested against the document destruction on those grounds.

"Clandestine Services Institution (CSI) 70-10. When asked by the Select Committee about the regularity of the procedure by which he authorized Dr. Gottlieb to destroy the MKULTRA records, Helms responded:

"Well, that's hard to say whether it would be part of the regular procedure or not, because the record destruction program is conducted according to a certain pattern. There's a regular record destruction pattern in the Agency monitored by certain people and done a certain way. So that anything outside of that, I suppose, would have been unusual. In other words, there were documents being destroyed because somebody had raised this specific issue rather than because they were incorporated in the regular records destruction program. So I think the answer to your question is probably yes." (Helms testimony, 9/11/75, p. 6.)

Even prior to the destruction of documents, the MKULTRA records were far from complete. As the Inspector General noted in 1963:

"Files are notably incomplete, poorly organized, and lacking in evaluative statements that might give perspective to management policies over time. A substantial portion of the MKULTRA record appears to rest in the memories of the principal officers and is therefore almost certain to be lost with their departures."

(IG Report on MKULTRA, p. 23.)

Memorandum from ADDP Helms to DCI Dulles, 4/3/63, Tab. A, p. 2.

Memorandum from IG to Chief, TSD, 11/8/63, as quoted in memorandum from Chief, Audit Branch.

The memorandum suggested that administrative exclusions, because of the importance of such decisions, should require the personal approval of the Deputy Director of Central Intelligence on an individual case basis. Present CIA policy is that only the DCC can authorize certain exemptions from regulations.

Sidney Gottlieb testimony, 10/18/75, Hearings, Vol. 1, p. 61.
result was that the Agency had no way of determining what materials were on hand, and could not be certain whether delivery systems such as dart guns, or deadly substances such as cobra venom had been issued to the field.

b. Authorizations.—The destruction of the documents regarding MKULTRA made it difficult to determine at what level specific projects in the program were authorized. This problem is not solely a result of the document destruction, however. Even at the height of MKULTRA the IG noted that, at least with respect to the surreptitious administration of LSD, the "present practice is to maintain no records of the planning and approval of test programs." 82

While it is clear that Allen Dulles authorized MKULTRA, the record is unclear as to who authorized specific projects such as that involving the surreptitious administration of LSD to unwitting non-volunteer human subjects. Even given the sensitive and controversial nature of the project, there is no evidence that when John McCone replaced Allen Dulles as the Director of the Central Intelligence Agency he briefed the Director on the details of this project and asked whether it should be continued. 83 Even during the 1963 discussions on the propriety of unwitting testing, the DDP questioned whether it was "necessary to brief General Carter," the Deputy Director of Central Intelligence and the Director's "alter ego," because CIA officials felt it necessary to keep details of the project restricted to an absolute minimum number of people. 84

In March 1963, DDP Helms told the Inspector General that the covert testing program was authorized because he had gone to the Director, briefed him on it and "the Director indicated no disagreement, but said that the testing will continue." 85 Such authorization even for noncontroversial matters is clearly less desirable than explicit authorization; in areas such as the surreptitious administration of drugs, it is particularly undesirable. Yet according to testimony

---

83 According to an assistant to Dr. Gottlieb, there were annual briefings of the DCI and the DDP on MKULTRA by the Chief of TSDB or his deputy. However, a May 15, 1963 Memorandum for the Record from the Inspector General noted that Mr. McCone had not been briefed in detail about the program. Mr. McCone's Executive Officer, Walter Elder, testified that it was "perfectly apparent to me" that neither Mr. McCone nor General Carter, then the DDCI, was aware of the surreptitious administration project "or if they had been briefed they hadn't understood it." (Elder, 12/18/75, p. 13.) Mr. McCone testified that he "did not know" whether he talked to anyone about the project but that no one had told him about it in a way that "would have turned on all the lights." (John McCone testimony, 2/3/76, p. 10.)
84 According to Elder's testimony, "no Deputy Director, to my knowledge, has ever been briefed or was it ever thought necessary to brief them to the extent which you would brief the Director."
85 IG Memorandum for the Record. 5/15/63.
86 On the question of authorization of the covert testing program, Elder testified as follows: "My reasonable judgment is that this was considered to be in the area of continuing approval, having once been approved by the Director."
87 The theory of authorization carrying over from one administration to the next seems particularly inappropriate for less visible, highly sensitive operations which, unless brought to his attention by subordinates, would not come to the attention of the Director.

---

before the Committee, authorization through lack of agreement is even more prevalent in sensitive situations. 86

The unauthorized retention of chemical toxin by Dr. Nathan Gordon and his subordinates, in violation of a Presidential Directive, may have resulted from the failure of the Director to issue written instructions to Agency officials. The retention was not authorized by senior officials in the Agency. The Director, Mr. Helms, had instructed Mr. Karamseines, the Deputy Director of Plans, and Dr. Gottlieb, the Chief of Technical Services Division, to relinquish control to the Army of any chemical or biological agents being retained for the CIA at Fort Detrick. Dr. Gottlieb passed this instruction on to Dr. Gordon. While orders may be disregarded in any organization, one of the reasons that Dr. Gordon used to defend the retention was the fact that he had not received written instructions forbidding it. 87

In some situations the existence of written instructions did not prevent unauthorized actions. According to an investigation by the CIA's Inspector General TSD officers had been informed orally that Mr. Helms was to be "advised at all times" when LSD was to be used. In addition TSD had received a memo advising the staff that LSD was not to be used without the permission of the DDP, Frank Wisner. The experiment involving Dr. Olson went ahead without notification of either Mr. Wisner or Mr. Helms. The absence of clear and immediate punishment for that act must undercut the force of other internal instructions and regulations.

One last issue must be raised about authorization procedures within the Agency. Chemical agents were used abroad until 1963 for discrediting or disabling operations, or for the purpose of interrogations with the approval of the Chief of Operations of the DDP. After the approval of the Deputy Director for Plans was required for such operations. Although the medical staff sought to be part of the approval process for these operations, they were excluded because, as the Inspector General wrote in 1957:

Operational determinations are the responsibility of the DD/P and it is he who should advise the DCI in these respects, just as it is he who is responsible for the results. It is completely unrealistic to consider assigning to the Chief, Medical Staff, (what, in effect, would be authority over clandestine operations.) 88

Given the expertise and training of physicians, participation of the Medical Staff might well have been useful.

Questions about authorization also exist in regard to those agencies which assisted the CIA. For instance, the project involving the surreptitious administration of LSD to unwitting non-volunteer human subjects was conducted in coordination with the Bureau of Narcotics and Dangerous Drugs. There is some question as to the Commissioner of Narcotics' knowledge about the project.

---

86 Mr. Elder was asked whether the process of bringing forward a description of actions by the Agency in getting approval through the absence of disagreement was a common one. He responded, "It was not uncommon. . . . The more sensitive the project the more likely it would lean toward being a common practice, based on the need to keep the written record to a minimum."
88 1957 IG Report
In 1963, the Inspector General noted that the head of the BNDD had been briefed about the project, but the IG's report did not indicate the level of detail provided to him. Dr. Gottlieb testified that "I remember meeting Mr. Anslinger and had the general feeling that he was aware." Another CIA officer did not recall any discussion of testing on unwitting subjects when he and Dr. Gottlieb met with Commissioner Anslinger.

In a memorandum for the record in 1967 Dr. Gottlieb stated that Harry Giordano, who replaced Mr. Anslinger, told Dr. Gottlieb that when he became Commissioner he was "only generally briefed on the arrangements." He gave it his general blessing, and said he didn't want to know the details. The same memorandum states, however, that there were several comments which indicated to Dr. Gottlieb that Mr. Giordano was aware of the substance of the project. It is possible that the Commissioner provided a general authorization for the arrangement without understanding what it entailed or considering its propriety. A reluctance to seek detailed information from the CIA, and the CIA's hesitancy to volunteer it, has been found in a number of instances during the Select Committee's investigations. This problem is not confined to the executive branch but has also marked congressional relationships with the Agency.

**Internal Review—**The waiver of regulations and the absence of documentation make it difficult to determine now who authorized which activities. More importantly, they made internal Agency review mechanisms much less effective. Controversial and highly sensitive projects which should have been subject to the most rigorous inspection lacked effective internal review.

Given the role of the General Counsel and his reaction to the surreptitious administration of LSD to Dr. Olson, it would have seemed likely that he would be asked about the legality or propriety of any subsequent projects involving such administration. This was not done. He did not learn about this testing until the 1970's. Nor was the General Counsel's opinion sought on other MKULTRA projects, though these had been characterized by the Inspector General in the 1957 Report on TSD as "unethical and illicit." **81**

There is no mention in the report of the 1957 Inspector General's survey of TSD of the project involving the surreptitious administration of LSD. That project was apparently not brought to the attention of the survey team. The Inspector who discovered it during the IG's 1963 survey of TSD recalls coming upon evidence of it inadvertently.

---

**81** Gottlieb, 10/18/78, p. 20.

**82** The IG's report on MKULTRA in 1963 stated: "The original charter documents specified that TSD maintain exercising control of MKULTRA activities. In so doing, however, TSD has pursued a philosophy of minimum documentation in keeping with the high sensitivity of some of the projects. Some files were found to present a reasonably complete record, including most sensitive matters, while others with parallel objectives contained little or no data at all. The lack of consistent records precluded use of routine inspection procedures and raised a variety of questions concerning management and fiscal controls." CIA, Inspector General's report on TSD, 1957, p. 217.

rather than its having been called to his attention as an especially sensitive project.**83**

Thus both the General Counsel and the Inspector General, the principal internal mechanisms for the control of possibly improper actions, were excluded from regular reviews of the project. When the project was discovered, the Executive Director-Controller voiced strong opposition to it; it is possible that the project would have been terminated in 1957 if it had been called to his attention when he then served as Inspector General.

The Audit Staff, which also serves an internal review function through the examination of Agency expenditures, also encountered substantial difficulty with MKULTRA. When MKULTRA was first proposed the Audit Staff was to be excluded from any function. This was soon changed. However, the waiver of normal "contractual procedures" in MKULTRA increased the likelihood of "irregularities" as well as the difficulty in detecting them. The head of the Audit Branch characterized the MKULTRA procedures as "having allowed practices that produced gross administrative failures," including a lack of controls within outside contractors which would "cause proper accountability in use of government funds." It also diminished the CIA's capacity to verify the accountings provided by outside firms.

**d. Compartmentation and Jurisdictional Conflict within the Agency.**—As has been noted, the testing and use of chemical and biological agents was treated as a highly sensitive activity within the CIA. This resulted in a high degree of compartmentation. At the same time substantial jurisdictional conflict existed within the Agency between the Technical Services Division and the Office of Medical Services and the Office of Security.

This compartmentation and jurisdictional conflict may well have led to duplication of effort within the CIA and to Agency policymakers being deprived of useful information.

During the early 1960's the first BLUEBIRD Committee and then the ARTICHOKE Committee were instituted to bring together representatives of the Agency components which had a legitimate interest in the area of the alteration of human behavior. By 1957 both these committees had fallen into disuse. No information went to the Technical Services Division (a component supposedly represented on the ARTICHOKE Committee) about ARTICHOKE operations being conducted by the Office of Security and the Office of Medical Services.

The Technical Services Division which was providing support to the Clandestine Services in the use of chemical and biological agents, but provided little or no information to either the Office of Security or the Office of Medical Services. As one TSD officer involved in these programs testified: "Although we were acquainted, we certainly didn't share experiences." **84**

**83** Even after the Inspector came upon it the IG did not perform a complete investigation of it. It was discovered at the end of an extensive survey of TSD and the Inspector was in the process of being transferred to another post within the Agency.

**84** Testimony of CIA officer, 11/21/78, p. 14.
stantial negative impact on policymaking in the Agency. As the Deputy Chief of the Counterintelligence Staff noted in 1958, due to the different positions taken by TSS, the Office of Security, and the Office of Medical Services on the use of chemical or biological agents, it was possible that the individual who authorized the use of a chemical or biological agent could be presented with “incomplete facts upon which to make a decision relevant to its use.” Even a committee set up by the DDP in 1958 to attempt to rationalize Agency policy did not have access to records of testing and use. This was due, in part, to excessive compartmentation, and jurisdictional conflict.

C. COVERT TESTING ON HUMAN SUBJECTS BY • GROUPE: MATERIAL TESTING PROGRAM EA CHANGE, AND PROJECT DERBY HAT

EA 1729 is the designator used in the Army for lysergic acid diethylamide (LSD). Interest aroused at the Army’s Chemical Warfare Laboratory on the unusual effects of the compound and counterintelligence potential envisaged LSD, and suspected Soviet interest in such a development of an American military capability was conducted jointly by the U.S. Army the Chemical Warfare Laboratories.

These experiments, designed to evaluate po of LSD, were known collectively as “Materia 1729.” Two projects of particular interest were experiments, “THIRD CHANCE” and “DIF administration of LSD to unwitting sub J Far East.

In many respects, the Army’s testing program which had already been conducted by the CIA. They certainly involved the risks inherent in the early phases of drug testing. In the Army’s tests, as with those of the CIA, individual rights were also subordinated to national security considerations; informed consent and follow-up examinations of subjects were neglected in efforts to maintain the secrecy of the tests. Finally, the command and control problems which were apparent in the CIA’s programs are paralleled by a lack of clear authorization and supervision in the Army’s programs.

**USINTC staff study, “Material Testing Program, EA 1729,” 10/15/59, p. 4.

**This same USINTC study cited “A 1952 (several years prior to initial U.S. interest in LSD-25) report that the Soviets purchased a large quantity of LSD-25 from the Sandos Company in 1951, reputed to be sufficient for 50 million doses.” (Ibid., p. 16).

**Generally accepted Soviet methods and counterintelligence concerns were also strong motivating factors in the initiation of this research:

“A primary justification for field experimentation in intelligence with EA 1729 is the counter-intelligence or defense implication. We know that the enemy philosophy condones any kind of coercion or violence for intelligence purposes. There is proof that his intelligence service has used drugs in the past. There is strong evidence of keen interest in EA 1729 by him. If for no other purpose than to know what to expect from enemy intelligence’s use of the material and if, thus, be prepared to counter it. Field experimentation is justified.” (Ibid., p. 34)