The Directorate of Science and Technology Historical Series

The Office of Scientific Intelligence, 1949-68

VOLUME TWO ANNEXES IV, V, VI, AND VII

OSI-1
June 1972
Copy No. 1 of 2

~~TOP SECRET~~

[redacted]

THE DD/S&T HISTORICAL SERIES

OSI-1

THE OFFICE OF SCIENTIFIC INTELLIGENCE, 1949-68

VOLUME TWO ANNEXES IV, V, VI, AND VII

by

Karl H. Weber

June 1972

[redacted]

for Carl E. Duckett
Director
Science and Technology

HISTORICAL STAFF

CENTRAL INTELLIGENCE AGENCY

~~TOP SECRET~~

Annex IV

The Scientific Intelligence Committee and The Scientific Estimates Committee

CONTENTS

		Page
I.	The First Scientific Intelligence Committee	1
II.	The Scientific Estimates Committee	8
III.	The Second Scientific Intelligence Committee	14
Appendix 1.	Organization of the Scientific Intelligence Committee	19
Appendix 2.	Chairmen of the Scientific Intelligence Committee	23

Annex IV

The Scientific Intelligence Committee and The Scientific Estimates Committee

I. The First Scientific Intelligence Committee

National Security Council Intelligence Directive Number 3 (NSCID # 3) dated 13 January 1948, dealt with the production of intelligence and the coordination of intelligence production activities within the intelligence community. Scientific intelligence was of course a part, and an increasingly important part, of this problem. To deal with the scientific intelligence field the Intelligence Advisory Committee (IAC) in October 1949 approved the issuance of Director of Central Intelligence Directive Number 3/3 (DCID 3/3).[1/] This Directive, dated 28 October 1949, established the Scientific Intelligence Committee (SIC), a permanent interdepartmental body to "plan, support and coordinate the production of scientific intelligence as it affects the national security."

DCID 3/3 provided that the chairman of the SIC should be a representative of CIA with members from the three military departments, the State Department, and the Atomic Energy Commission. The SIC was "to

establish its own methods of procedure and meet on matters pertaining to scientific intelligence" but the determination of the scope of this field was left up to the SIC.

DCID 3/3 was drafted in OSI during the summer of 1949 and, understandably enough, included many of Machle's* concepts of proper roles for CIA and OSI in the national intelligence picture. It was a very sweeping document and put OSI at the hub of U.S. scientific intelligence activities in the broadest sense. Its coordination through ICAPS (Interagency Coordinating and Planning Staff), the staff level of the IAC, was characterized by bitter debates on the intended functions of CIA and OSI. The military representatives were extremely apprehensive of CIA intentions in respect to military intelligence. (These apprehensions later led to the establishment of the Becker Committee and the eventual drastic reduction in the scope of SIC functions.) The DCID authorized permanent and ad hoc working committees in specific substantive fields, terms of reference for which were to be established by the SIC. These working

* Willard Machle, the first AD/SI who led OSI from January 1949 to February 1950.

committees of the SIC were given considerable responsibility in formulating national requirements, preparing interdepartmental production plans, allocating production assignments, and evaluating collection activities.[1/]

In addition to its other responsibilities, the SIC was given the unique task of establishing liaison with the Research and Development Board (RDB) in order to ascertain intelligence requirements of RDB so that scientific intelligence could be used by the Board in formulating its plans. This link between scientific intelligence and military research planning on a national scale did not hitherto exist. This assignment to the SIC stemmed from the failure of the military intelligence agencies to meet RDB's needs for intelligence support. With all its organizational and growing pains, the SIC was unable to concern itself sufficiently with this responsibility. Undoubtedly, however, the RDB support responsibility was one of the reasons why the military departments initially agreed to the establishment of the SIC.

Very early in its existence the SIC undertook to define scientific intelligence, delineate areas of particular interest and establish committees to handle

these areas.[2/] Priority was accorded to atomic energy, biological warfare, chemical warfare, electronics in warfare, guided missiles, aircraft, undersea warfare, and medicine. Other areas of intelligence concern were other new weapons, basic physical sciences, new equipment and material, geophysical sciences, navigation, and scientific resources. Having delineated the areas of interest, the SIC established joint committees to handle certain fields. Thus, atomic energy was covered by the Joint Atomic Energy Intelligence Committee or JAEIC, biological warfare by the JBWIC, chemical warfare by the JCWIC, electronics by the JEIC, guided missiles by the JGMIC and medicine by the JMSIC.

The establishment of the committees and the delineation of areas of interest were all approved by the SIC in November 1949 soon after the SIC began to function. In June of 1950, the establishment of committees on aircraft (JACIC) and antiaircraft (JAAIC) was agreed. The fields of undersea warfare and ordnance were also recognized as important fields at that time but further investigation was felt to be necessary before the establishment of committees in these fields. It is interesting to note here that these two fields were almost exclusively within the realm of responsibility of single

departments; namely, Navy for undersea warfare and Army for ordnance. The issue of the "intrusion" of other agencies, notably CIA, into what was considered to be the unique concern of a single agency or department later became one of the key points of controversy that tumbled the SIC.

Of the various working committees, only those on atomic energy matters and medicine had State Department and Atomic Energy representation. The members of the other working committees were solely from CIA (OSI) and the three military departments. It was apparent that these working committees were handling fields of interest that were for the most part military in nature.

Trouble was not long in coming. The Army member of the SIC in February 1951 questioned the activities of and justification for the working committees. The first question he raised was whether the working committees were aiding the military services in scientific intelligence, since the working committees were devoting their energies to the preparation of SIC studies in fields of departmental concern and, with the exception of the NIS program, were not greatly involved in support of the national estimate program.

The second question raised by the Army member was whether the SIC actually had authority to form working committees which dealt with matters exclusively within the competence of the military agencies. Such a question, he maintained, could be resolved only by the IAC and not by the SIC.

As a follow-up to these questions, the Army member at the March 1951 meeting moved that five of the working committees be abolished. The Air Force member moved that the remaining committees be studied to determine whether or not they also should be abolished. No action was taken at this meeting, but at the April meeting a vote on the abolishment of the committees was taken. The three military members voted for and the three other members opposed the motion. The Chairman then ruled that, because of the divided vote, the matter would be referred to the DCI, pursuant to DCID 3/3.

The subject of working committees came up next in July 1951. The SIC agreed to abolish the aircraft and the antiaircraft committees following assurances from the military services that these fields would receive full coverage within the Department of Defense.

In August 1952 the subject of the abolishment of the working committees was discussed in the IAC and minutes of that meeting were presented to the SIC. It was the contention of the DCI, General Smith, that the SIC could not abolish working committees by its own action but could recommend such action to the IAC. By this time the position of the military services was that the SIC was infringing upon areas which they felt belonged exclusively within their purview.

In the January 1952 SIC meeting the Air Force member reported the formation within the JIC of a Joint Technical Intelligence Subcommittee (JTIS). At the next SIC meeting in February 1952 the Army member announced the formation of working groups within JTIS in the fields of guided missiles, biological warfare, chemical warfare, and military electronics. He presented a statement asserting that unnecessary duplication existed between these working groups and the SIC working committees and moved that the SIC recommend to the IAC that its working committees in those fields be abolished. There is no record on the action taken by the SIC on this move. It is apparent, however, that the Chairman of the SIC, Dr. Chadwell, brought the matter to the attention of the DCI because the latter

referred the matter to an "Ad-Hoc Committee to Survey Existing Arrangements Relating to the Production of Scientific and Technical Intelligence" headed by Loftus Becker, then DDI. The last meeting of the SIC was held in April 1952.

The Becker Committee held a series of meetings in the summer of 1952. Finally, at the 14 August 1952 meeting of the IAC the recommendations of the Becker Committee were adopted in the form of DCID 3/4[3/] of that date. The Scientific Estimates Committee (SEC) was established in place of the SIC which was abolished.

II. The Scientific Estimates Committee

DCID 3/4 sharply curtailed the functions of the SEC as compared with the SIC. Further, it attempted to delineate the interests of the DOD and CIA in the scientific and technical fields.[3/] In essence, the DOD was made responsible for intelligence on research and development in military material and equipment and CIA was responsible for coverage of fundamental research in basic sciences, scientific resources, and medicine. The SEC was designated as the coordinating mechanism to integrate the material but only when necessary for national intelligence purposes. It was only incidentally to assist in the coordination of other production

and was directed to do so by stimulating and guiding inter-agency liaison and working-level conferences. DCID 3/4 removed atomic energy matters, which were previously included in the substantive area of the former SIC, from the purview of the SEC and placed then under the newly created Joint Atomic Energy Intelligence Committee.[3/]

Membership on the SEC was the same as that of the former SIC except for the addition of a JCS member. The Chairman, however, was to be elected by the members annually whereas under the SIC he was to be the CIA member and to be appointed by the DCI.

The primary business of the first meeting of the SEC in September 1952 was to elect John B. Routh of CIA (OSI) as the Chairman. It was at the second meeting the following month that the fight between the military and the civilian sectors of the SEC resumed. While it appeared that the military had won their point in restricting the production of scientific intelligence by the SEC, the Committee's responsibility in stimulating and guiding inter-agency liaison was subject to widely varying interpretations. Moreover, DCID 3/4 left the SEC with considerable stature by reason of its responsibility for contributions for national intelligence purposes. This provision thus

embraced contributions to NIE's which were becoming increasingly important as the final word on intelligence for the policy makers and planners.

Questions soon arose because of the dual responsibilities and overlap of areas of interest in the fields of medicine which the SEC undertook to delineate. Solution of the problem was postponed by establishing an ad hoc medical conference to integrate the medical intelligence contribution to NIE-65 "Soviet Bloc Capabilities" which was then being prepared. Later that year another ad hoc conference was established to integrate a contribution to NIS-15 "Switzerland". From then on, the SEC established ad hoc committees to prepare contributions to NIS's and NIE's when the need arose. Thenceforth, the SEC's main activity was almost entirely the production of contributions to NIE's and NIS's. This pattern was different from that of the SIC which had devoted a considerable amount of time to the production of studies in selected scientific fields.

The SEC did, however, publish annually a catalog of studies which were planned and produced by the member agencies in the scientific and technical fields. In addition, it attempted to guide collection activities by publishing a list of S&T priority objectives based

upon the national priorities list. By way of more specific collection guidance, it undertook to supply requirements

Since the publication of studies or reports by the SEC was barred by DCID 3/4, the Committee resorted to another course of action; namely, to have such studies become NIE's. The first attempt was made in a biological warfare study. It was first published as an SEC Estimate (SEC 2/54) with the hope that it would then be used as the basis for an NIE. However, the IAC concluded that the SEC Estimate fulfilled any requirement for such a study and that a separate NIE was therefore not needed. In 1956 the SEC undertook a study on Soviet Science and Technology. This time the terms of reference were prepared in conjunction with ONE and no SEC Estimate was planned. The final result in which JAEIC and others shared was NIE 11-6-56, "Capabilities and Trends in Soviet Science and Technology".

The guided missile field became increasingly important in terms of national security in the mid-50's. More and more Soviet successes in the field became evident.

The SEC at first endeavored to handle intelligence coordination in this field through an ad-hoc guided missile subcommittee. The limitations in intelligence production activities placed upon the SEC by DCID 3/4, however, inhibited effective effort, however, and the desire in the community to establish a separate USIB guided missile committee grew. A proposed DCID 3/6 that would establish such a committee was reviewed by the SEC in June of 1955. The SEC concluded that it could itself accomplish the objectives and perform the functions called for in the draft DCID 3/6. Because there was dissension within the Committee, however, recommendations were sent to the IAC. The dissidents included OSI. The IAC established the Guided Missile Intelligence Committee (GMIC) on 31 January 1956.[3/]

Of the three scientific committees of USIB (SEC, JAEIC, and GMIC), the SEC was unique in that its charter prevented it from producing intelligence studies. Notwithstanding the charter, the SEC in its fifth annual report to the IAC listed as an objective of the coming year the proposed production of detailed studies to provide papers in support of national intelligence responsibilities. While there

were no objections to this proposal on the part of the IAC, the SEC members themselves were unable to reach any agreement on the means to produce such studies. This impasse and the lessening of friction in the S&T intelligence community made it apparent that a new DCID on scientific and technical intelligence was needed to give the SEC the freedom and latitude enjoyed by JAEIC and GMIC.

In June 1958 the Chairman submitted to the Committee a draft DCID 3/2 covering the Production of Scientific and Technical Intelligence. In July the draft was approved by the SEC and submitted to the officials who were coordinating new drafts for all three S&T committees as part of a general overhaul of the IAC structure. In February 1959, DCID 3/5 which established the Scientific Intelligence Committee (SIC) to coordinate scientific and technical intelligence (except for atomic energy and guided missiles and astronautics) was approved.[4/] The new SIC was given a charter very similar to that of the original SIC and the restrictions of DCID 3/4 were lifted.

III. The Second SIC

The new, or second, SIC was the third inter-departmental committee in the field of scientific and technical intelligence. It had the same membership as the previous SEC, except for the addition of representatives from the Department of Defense and the National Security Agency. The civilian membership consisted of representatives from CIA, State and AEC; the military members were from DOD, JCS, Army, Navy, Air Force and NSA.

Subsequent to the issuance of DCID 3/5 in February of 1959 the same DCID was revised somewhat and re-issued in July 1963 and in April 1965.[7/] Essentially the only change was the rewriting of the membership section to permit the military services to continue as members. This was necessary since DIA had become the sole military representative on USIB and had DCID 3/5 remained unchanged in this respect the DIA would have become the sole military representative on the SIC. As it now stands each military service has a member on the SIC, in addition to the DIA, giving the SIC a greater range and variety of viewpoint on military matters. How long this will continue remains questionable since it appears that eventually the DIA

would prefer to be the sole military spokesman on the SIC.

At its first meeting in March of 1959 the SIC considered draft terms of reference for Subcommittees in Electronics, Biological and Chemical Warfare, and Medicine. Previously USIB, at its 24 February 1959 meeting, had approved the establishment of these three subcommittees.[5/] These terms were approved by the SIC in April 1959.[6/]

In addition to its contributions to the NIE program, a continuation of the main activity under the SEC, the SIC initiated its own interdepartmental studies in the substantive fields of electronics, biological warfare and chemical warfare. It also investigated the feasibility of studying Soviet activities in anti-submarine warfare and anti-missiles. In the latter field a joint SIC-GMAIC working group was established in October 1961 and later expanded to include representation from JAEIC. Its assignment was to provide an answer to a USIB request on the "Intelligence Aspects of the Soviet ABM Program." The joint SIC-GMAIC anti-missile working group was not successful, probably because of questions of overlapping jurisdiction, and it was discontinued in the spring of 1962.

One of the goals for the SIC set by its Chairman in the early 1960s was to do a better coordination and planning job on the production of S&T intelligence in the community. The annual index put out by the SEC was dropped since it was simply a bibliography and reflected past action. At various times, such attempts have been made to obtain concerted effort in future project planning but have met with little success, primarily because of the weakness of the "allocation by agreement" principle which has to govern such matters. Nevertheless, the concept of allocating production tasks among the participating agencies so as to make greatest use of available assets continued to remain an objective of the Chairman.

In January 1963 the Chairman cited the need for a review of the SIC mission. While the members agreed that there should be greater emphasis on new kinds of weapons systems, there was less agreement that the SIC should set up working groups in such areas as -- scientific resources, aircraft performance, ASW, basic sciences, research methods, ground weapons, industrial technology, and automation. Again, the objection cited was the organizational problems in DOD, especially the organizing of the S&T effort in DIA. It was agreed that further consideration of this matter would be postponed until DIA was fully established and operating.

The subject of working groups came up from time to time during 1963 to 1965. Some progress was made on less outrightly military subjects such as scientific resources and molecular biology. In military matters, however, the DOD members showed their historical reluctance to admit civilian participation, even in the form of working groups. Finally, however, when the Board of National Estimates criticized the SIC for failure to coordinate the community estimates of aircraft performance characteristics, the Air Force member reversed his previous stand and supported creation of an aircraft working group under the SIC. Thus, the Aircraft Working Group was established with an Air Force representative as its Chairman in 1966 and shortly thereafter a Submarine Working Group, under Navy chairmanship, was formed.

Thus, by early 1966 the working groups and subcommittees of the SIC as they now stand had been chartered. During the 1966 and 1967 period the SIC met with the Chairman of each group to review its charter and activities and to determine the suitability of its activity. Objections of the military members of the SIC have largely been overcome and all working groups are supported by all the member agencies.

The primary substantive effort of the SIC has been devoted to the production of contributions to national estimates and the production of two all-encompassing S&T studies on "Soviet Military Research and Development" and "Communist Chinese Science and Technology." Both of these studies have been used as a basis for NIE contributions on the USSR and Communist China. Contributions from JAEIC, GMAIC, and EIC, as well as the SIC sub-groups, were used in compiling the studies which have become standard reference works in their fields.

APPENDIX 1

SCIENTIFIC INTELLIGENCE COMMITTEE

Organization as established by DCID 3/3 of October 1949:

Chairman

Shall be a representative of CIA

Members

State
Army
Navy
Air Force
Atomic Energy Commission

Joint Committees

JAEIC (AE)
JBWIC (BW)
JCWIC (CW)
JEIC (Electronics)
JGMIC (Missiles)
JMSIC (Medicine)
*JACIC (Aircraft)
*JAAIC (Anti-aircraft)

* Added in June 1950 and abolished in July 1951.

SCIENTIFIC ESTIMATES COMMITTEE

Organization as established by DCID 3/4 of August 1952:

Chairman

Elected by members annually

Members

CIA
Joint Staff
State
Army
Navy
Air Force
Atomic Energy Commission

Ad Hoc Committees

Formed to prepare various contributions to NIE's and NIS's

SCIENTIFIC INTELLIGENCE COMMITTEE

Organization as established by DCID 3/5 of February 1959:

Chairman

Designated by DCI

Members (representatives of USIB)

CIA
State
Army
Navy
Air Force
Atomic Energy Commission
National Security Agency
Joint Staff
Office of Secretary of Defense

Subcommittees

Electronics
BW/CW
Medicine

SCIENTIFIC INTELLIGENCE COMMITTEE

Organization as of January 1968 (under DCID 3/5 of 23 April 1965)

Chairman

Designated by DCI

Members

CIA
State
DIA
Army
Navy
Air Force
AEC
NSA

Subcommittees

Electronics
BW/CW
Medicine

Working Groups

Aircraft
Submarine
Scientific Resources
Priorities

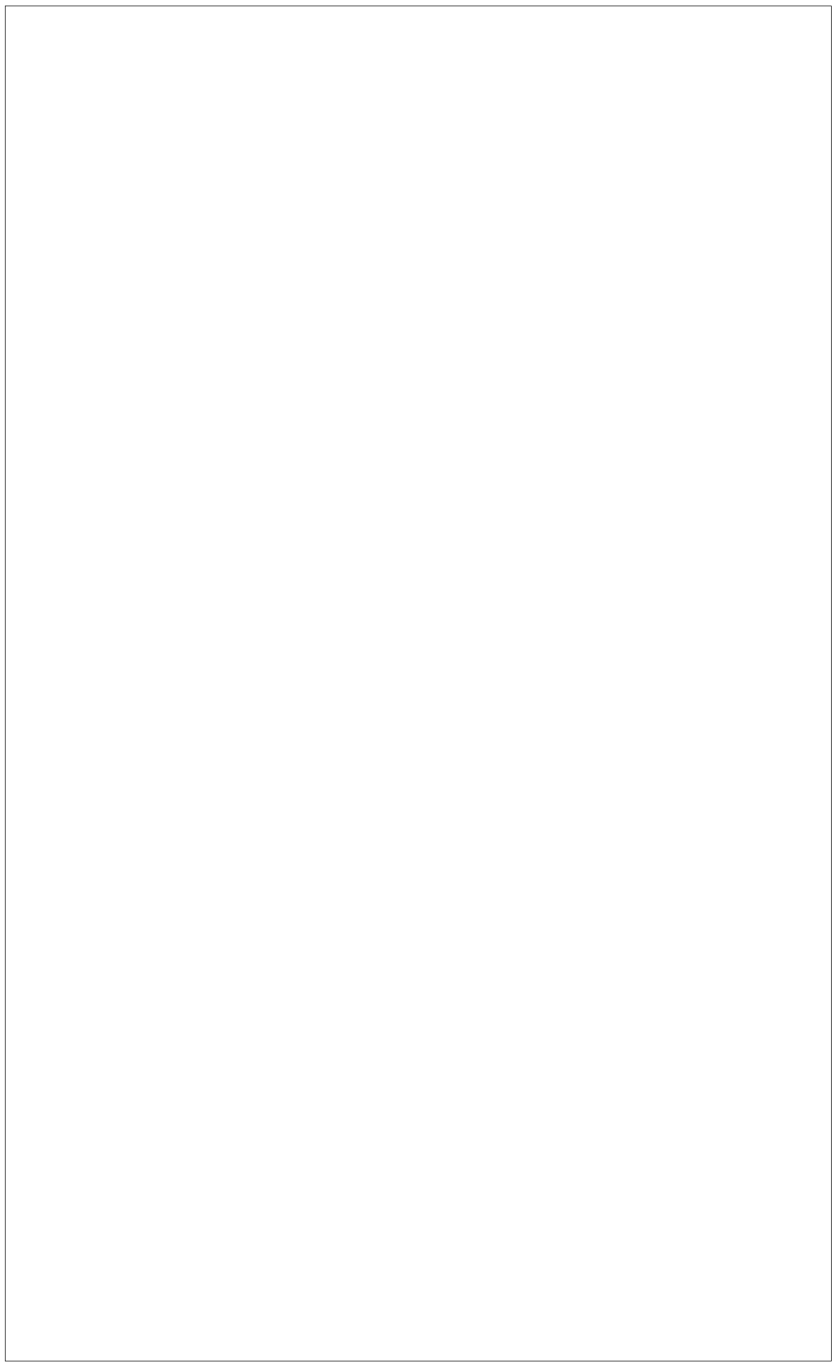
APPENDIX 2

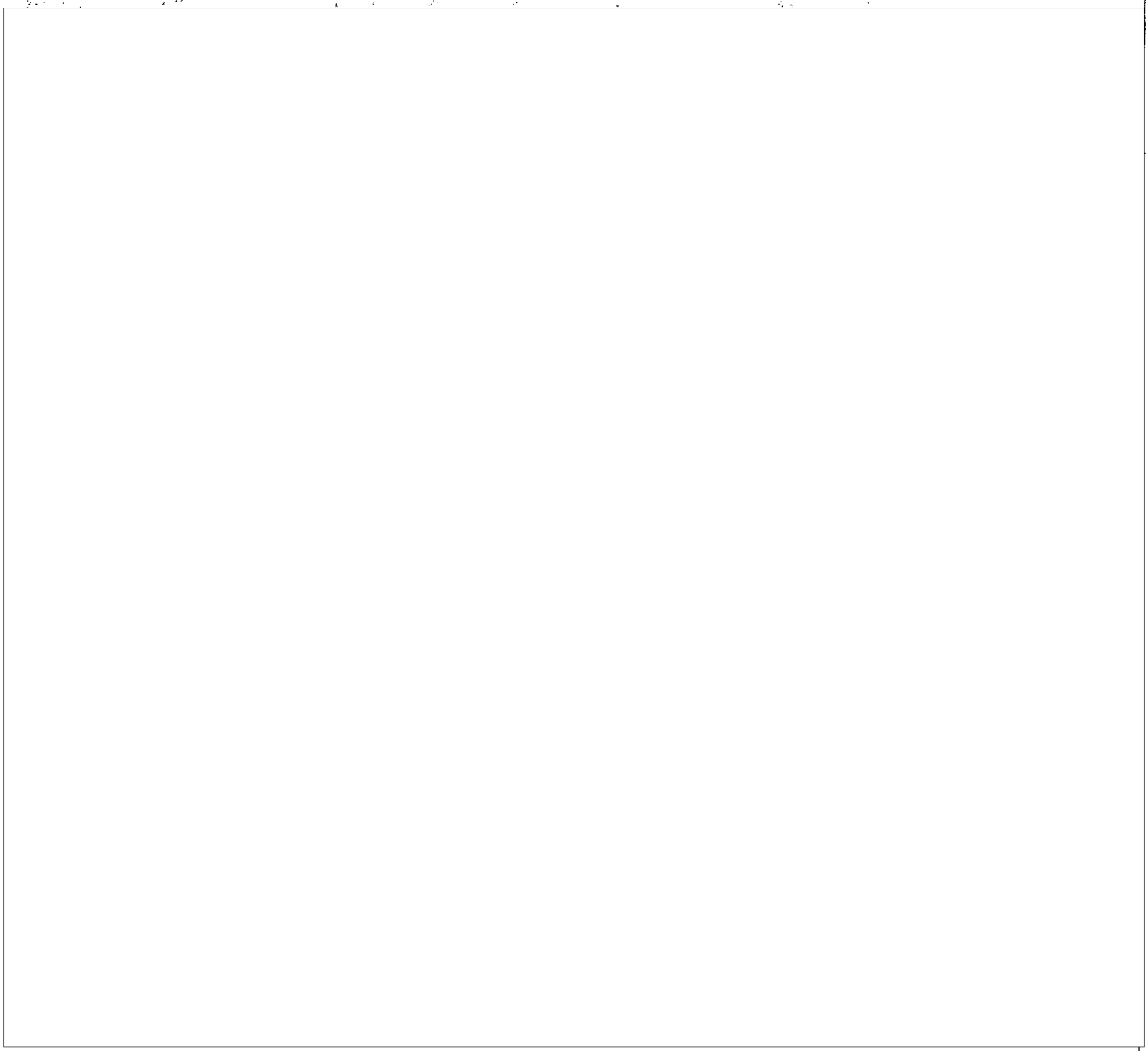
Chairmen of the Scientific Intelligence Committee

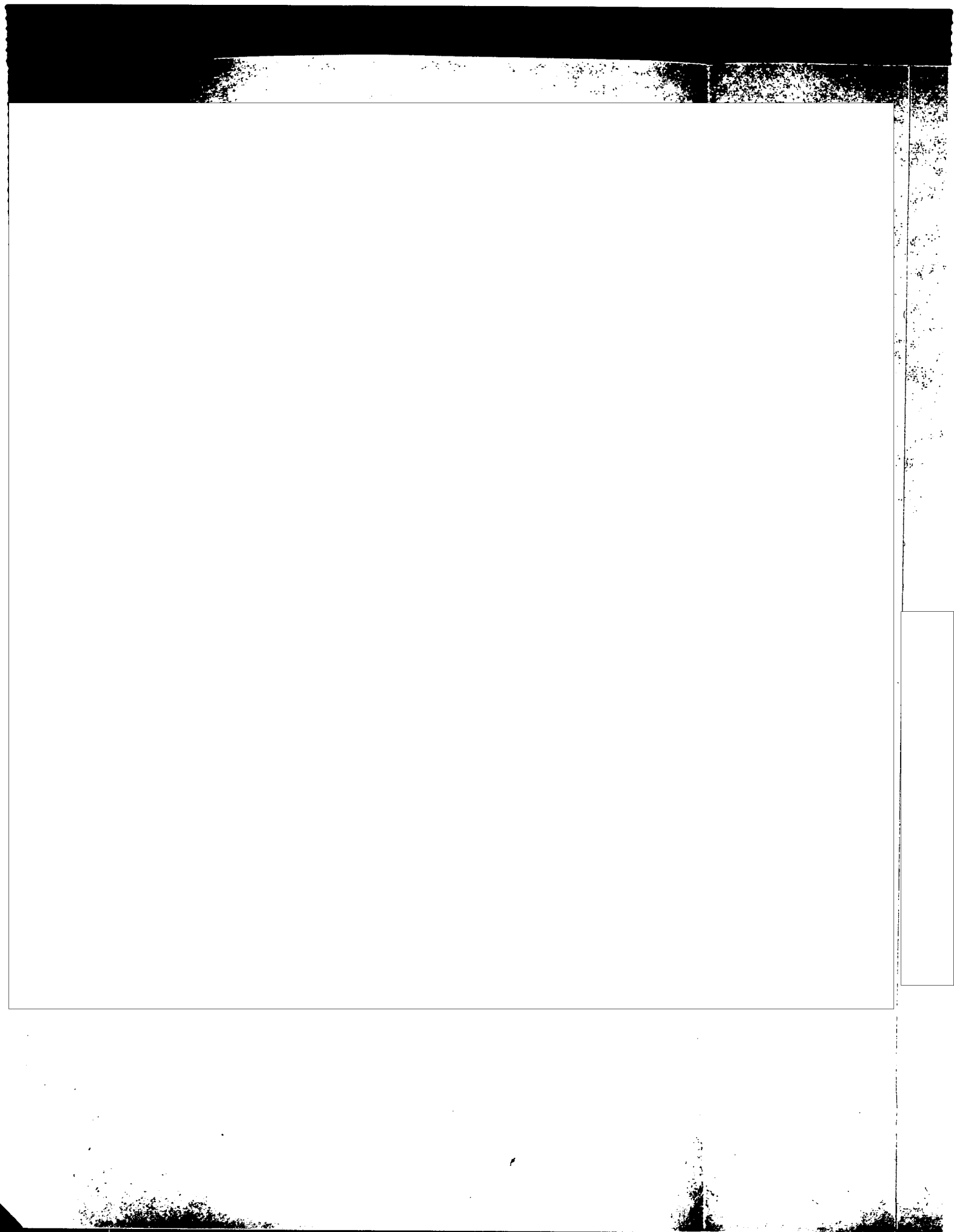
OCT 1949 - MAR 1950	Dr. Willard Machle, CIA/OSI
MAR 1950 - AUG 1952	Dr. H. Marshall Chadwell, CIA/OSI
AUG 1952 - JUN 1954	Mr. John B. Routh, CIA/OSI*
JUN 1954 - FEB 1959	Dr. Karl H. Weber, CIA/OSI*
FEB 1959 - Present	Dr. Karl H. Weber, CIA/OSI

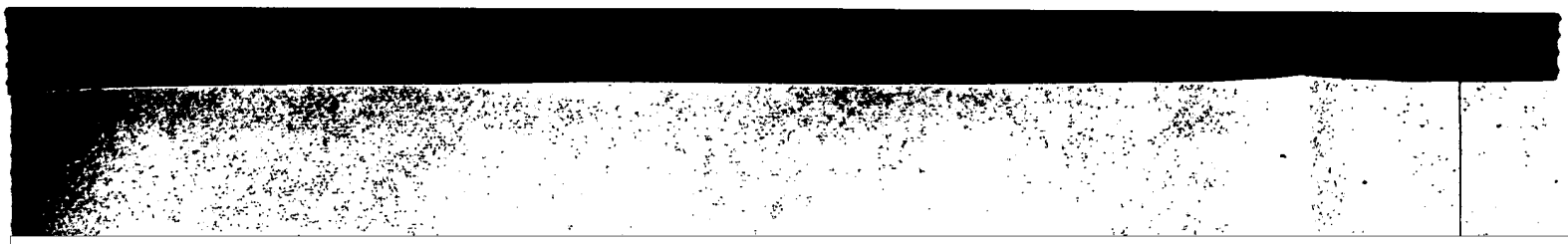
* SEC

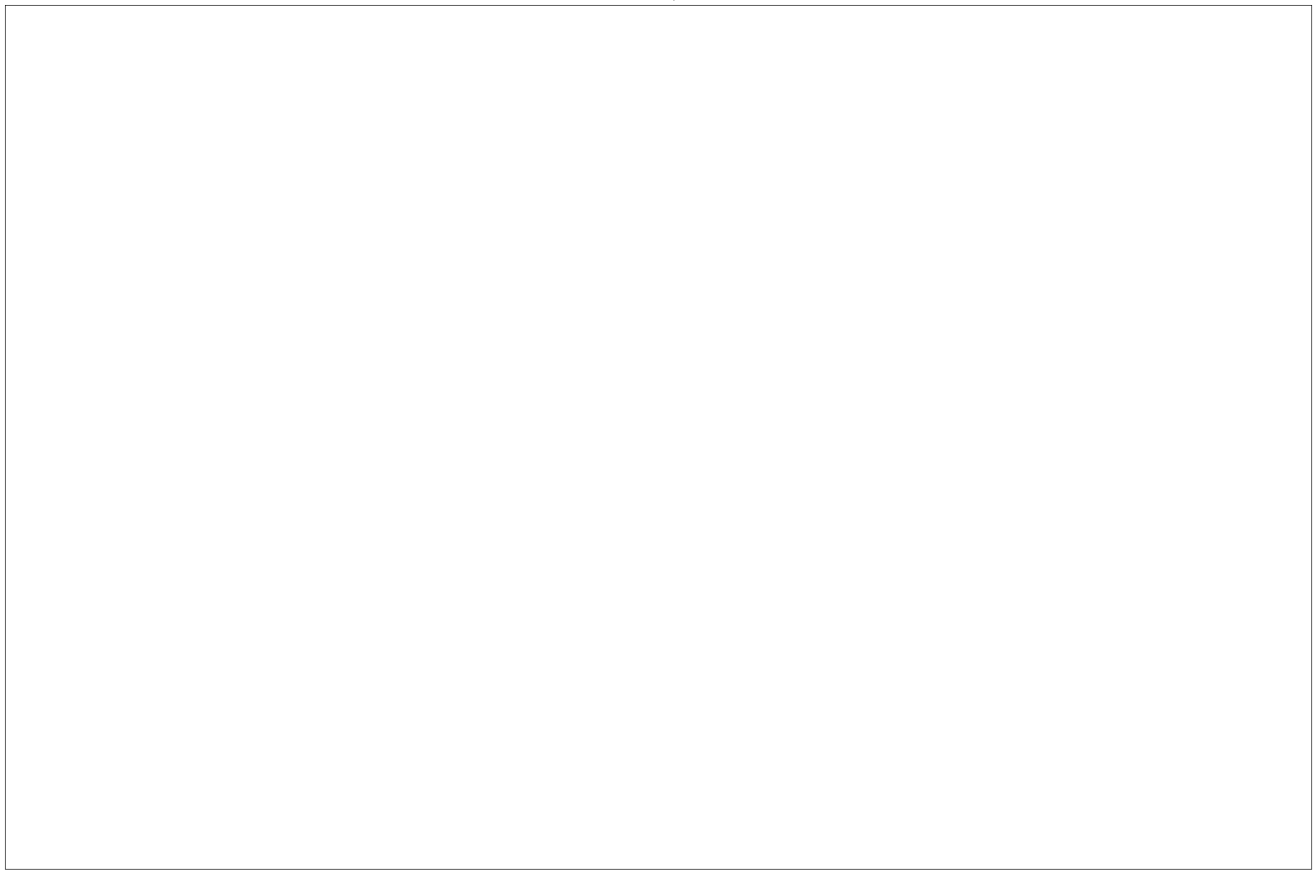
EXEC. SECRETARY (CIA)

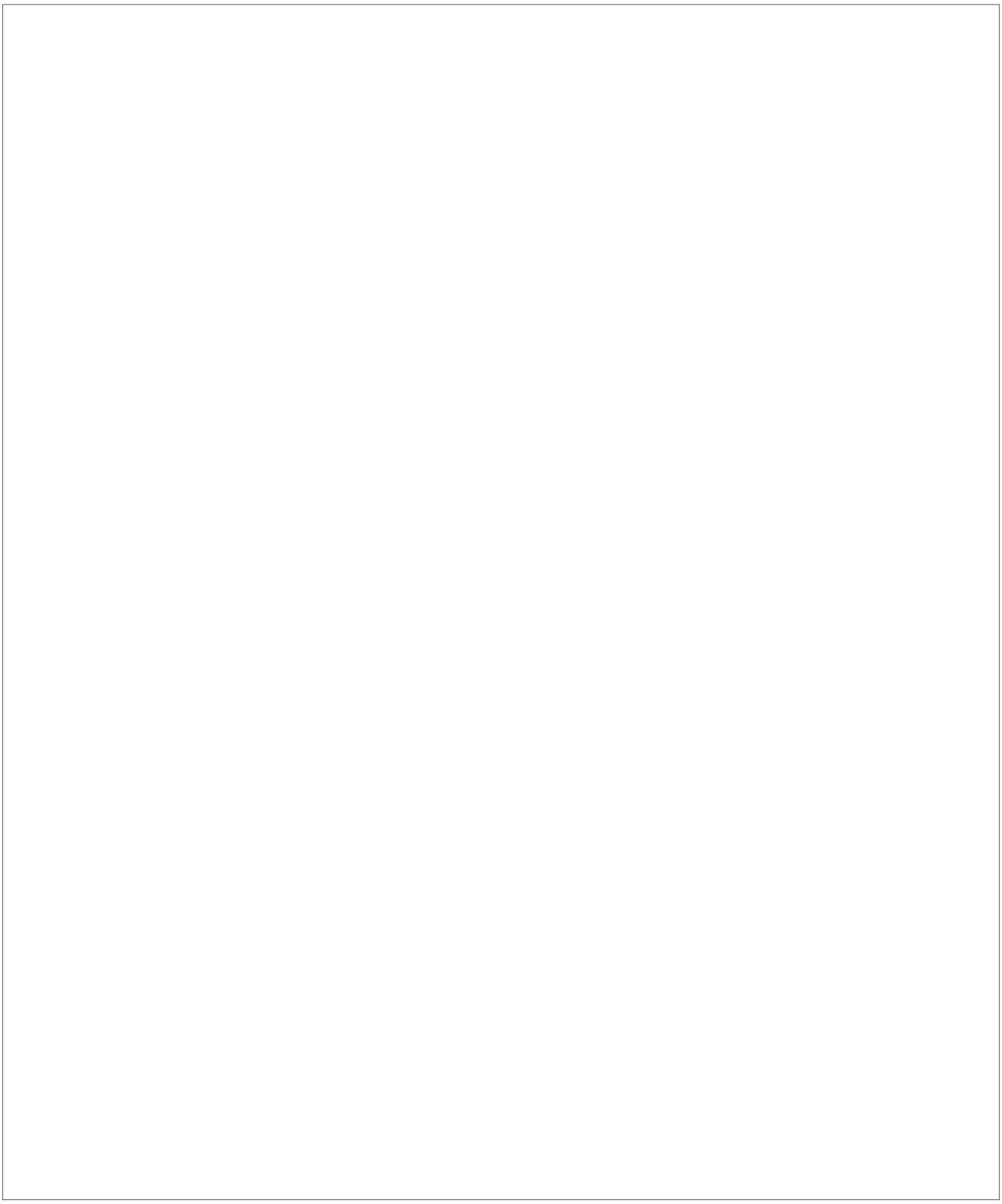


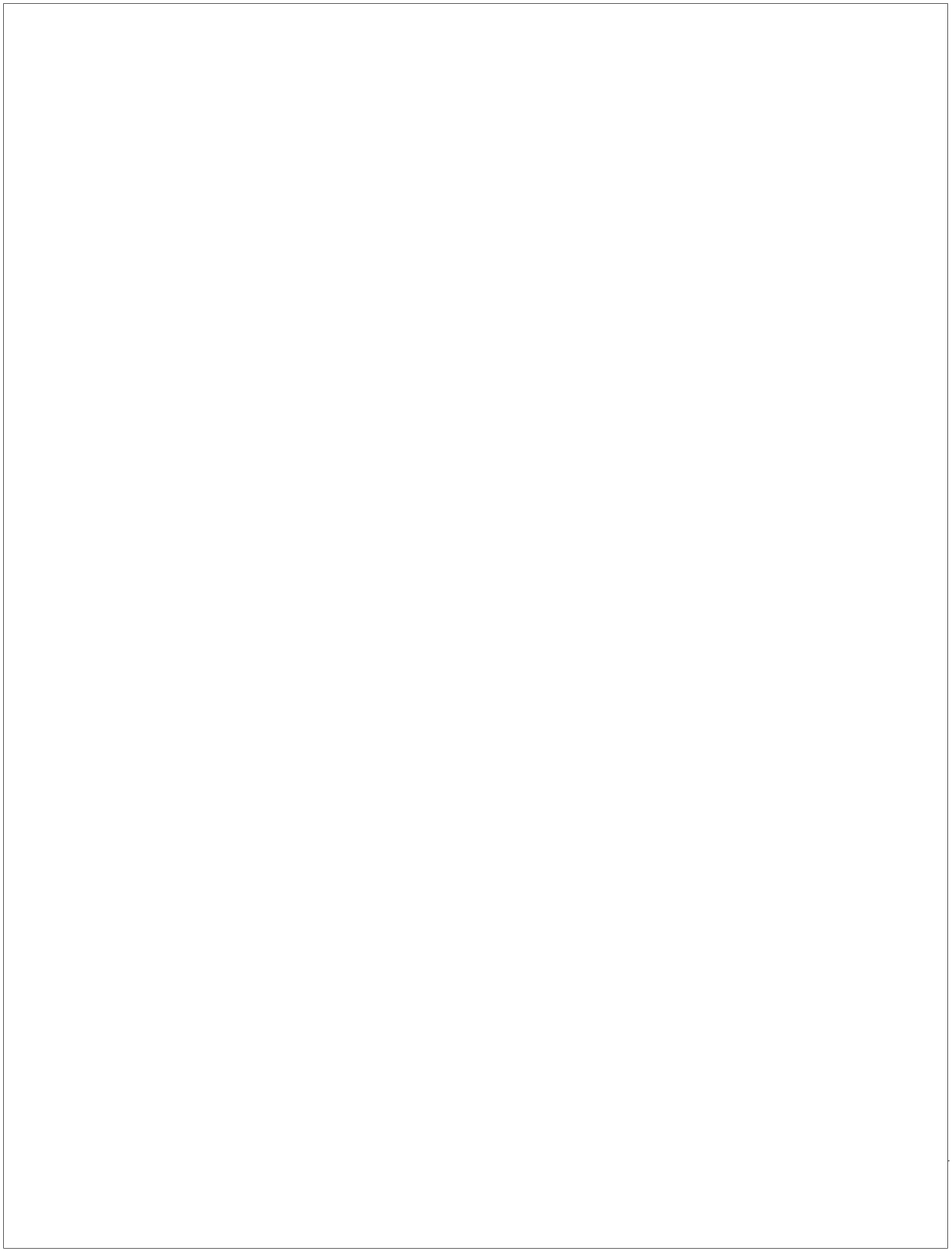


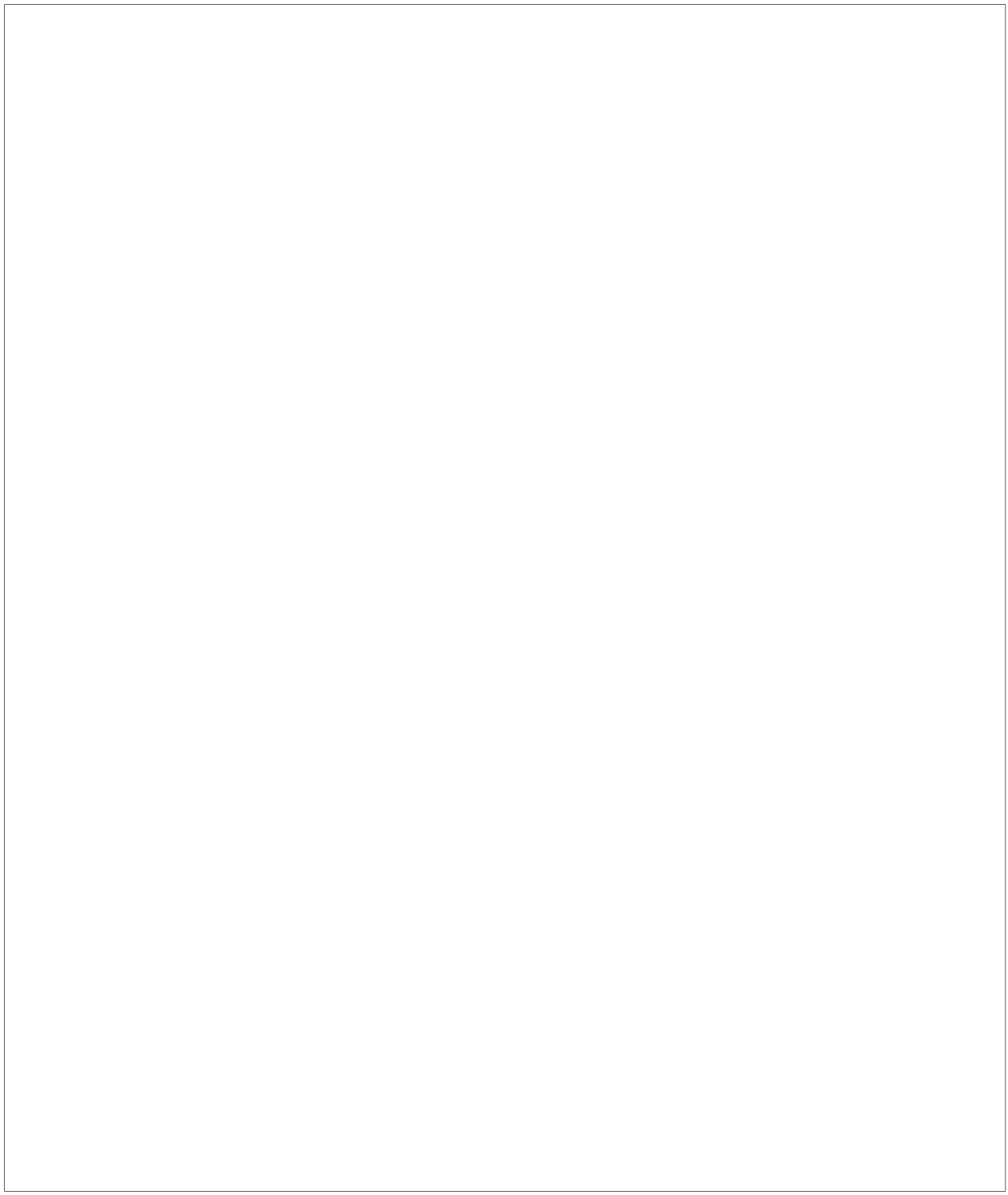


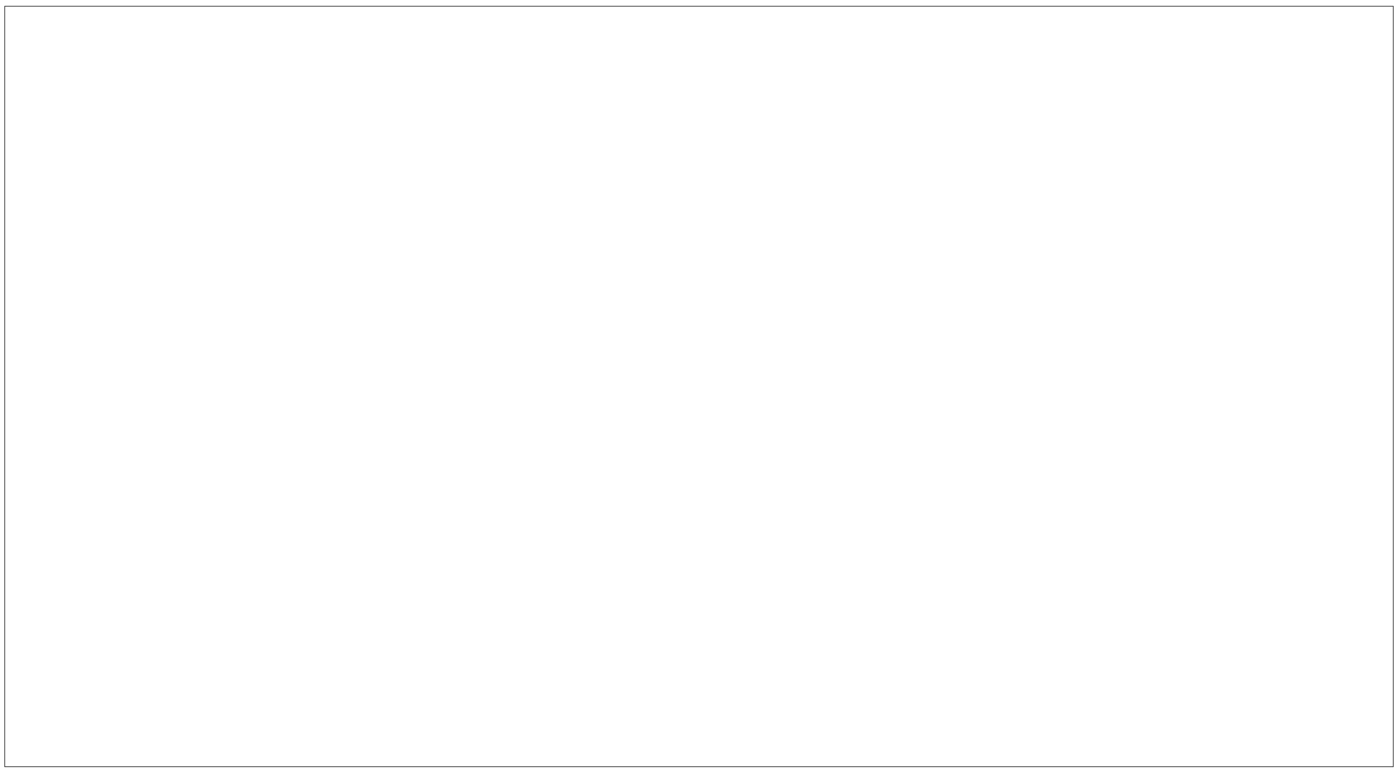


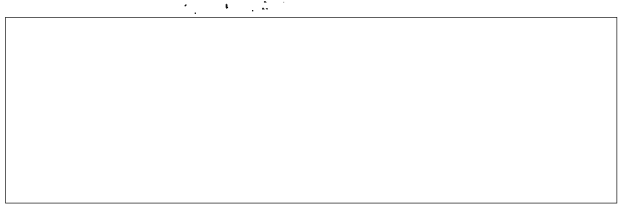


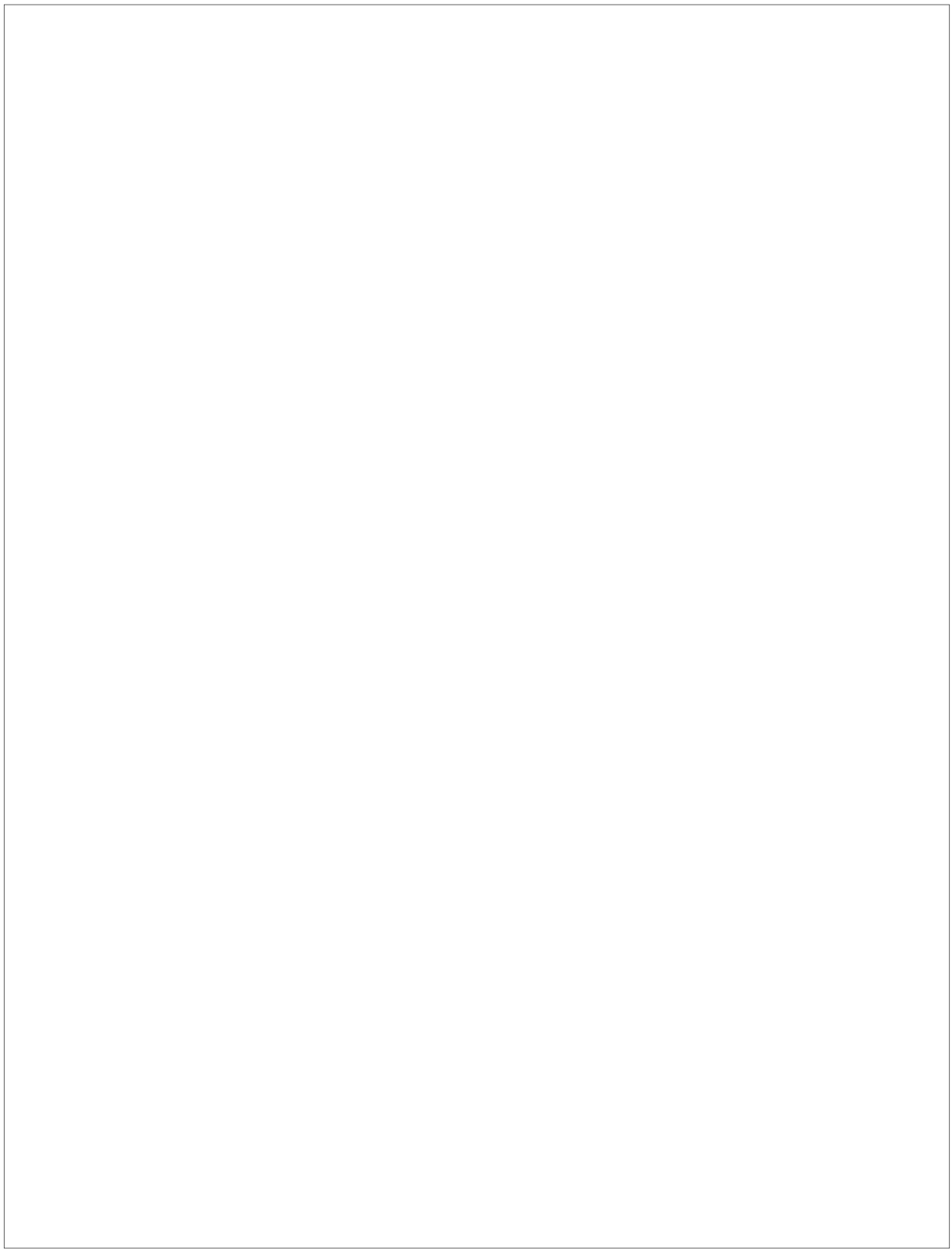


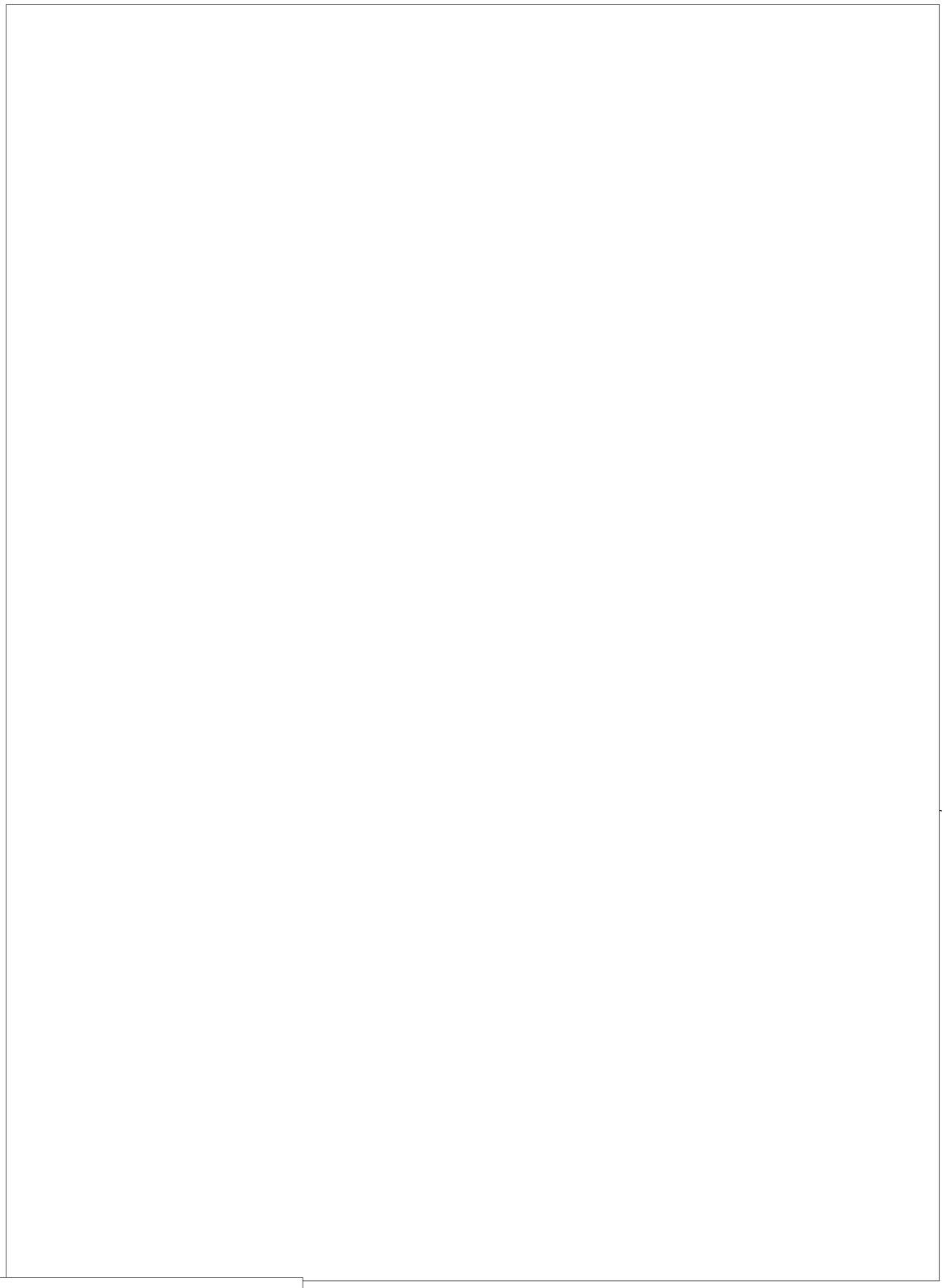


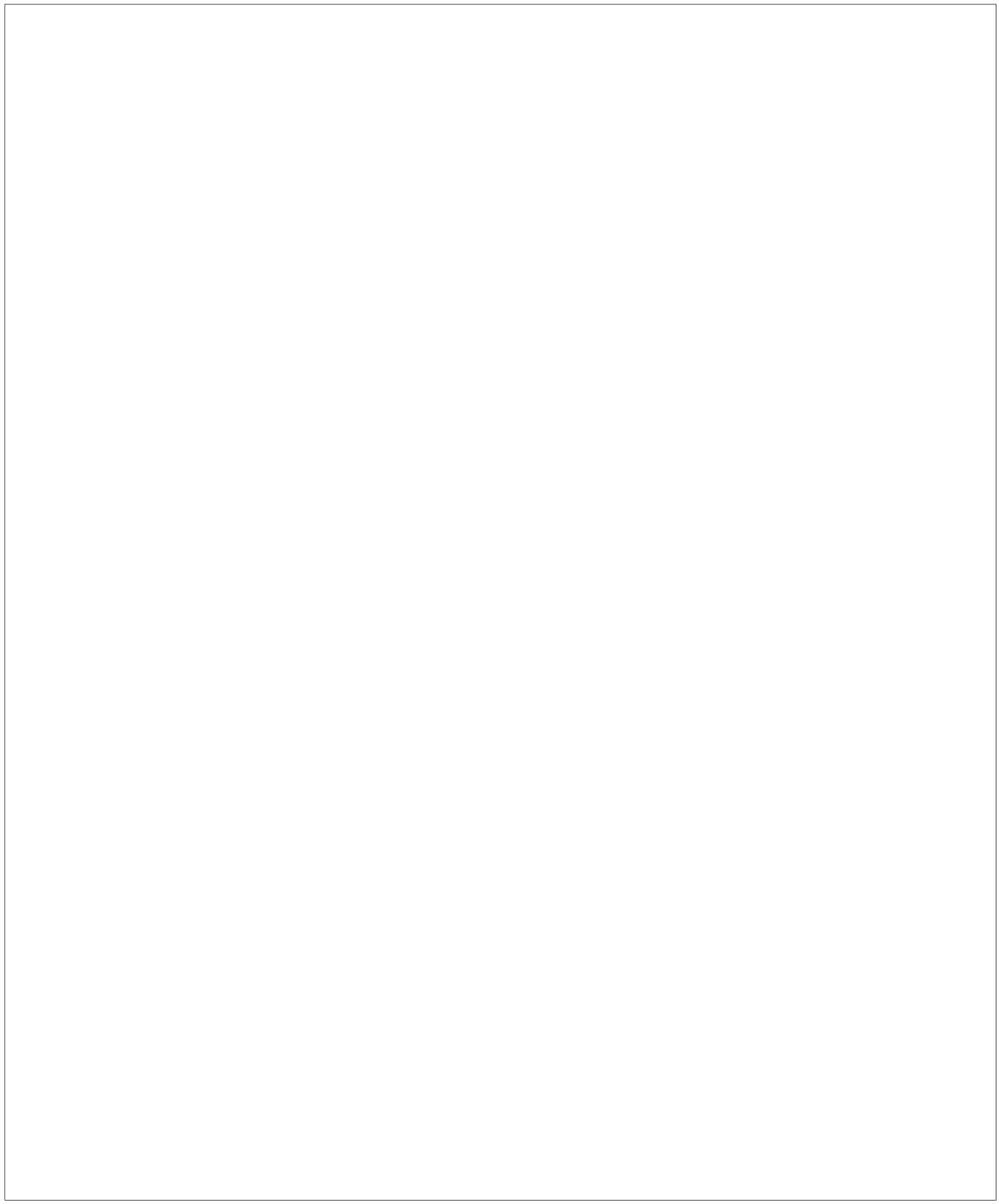


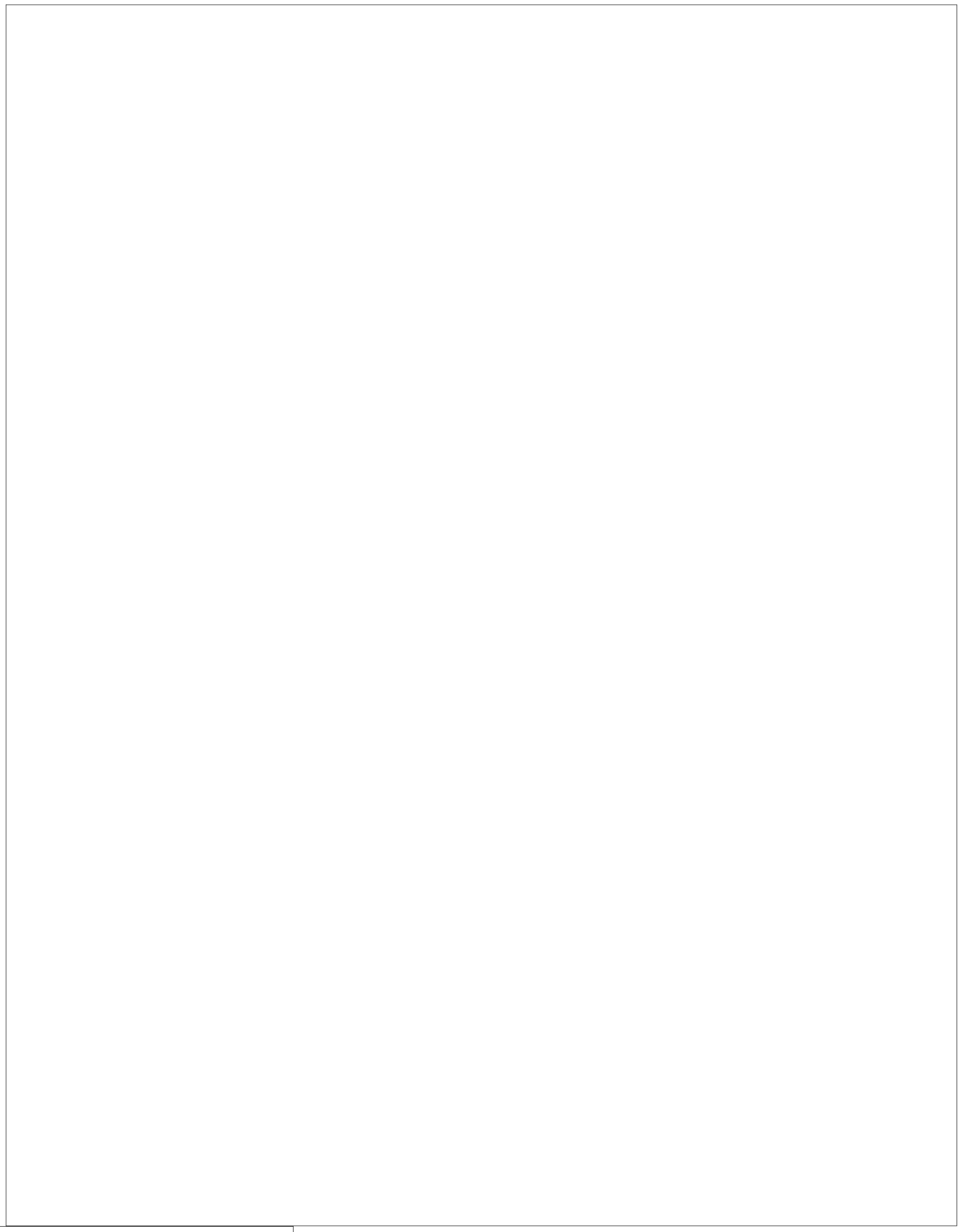


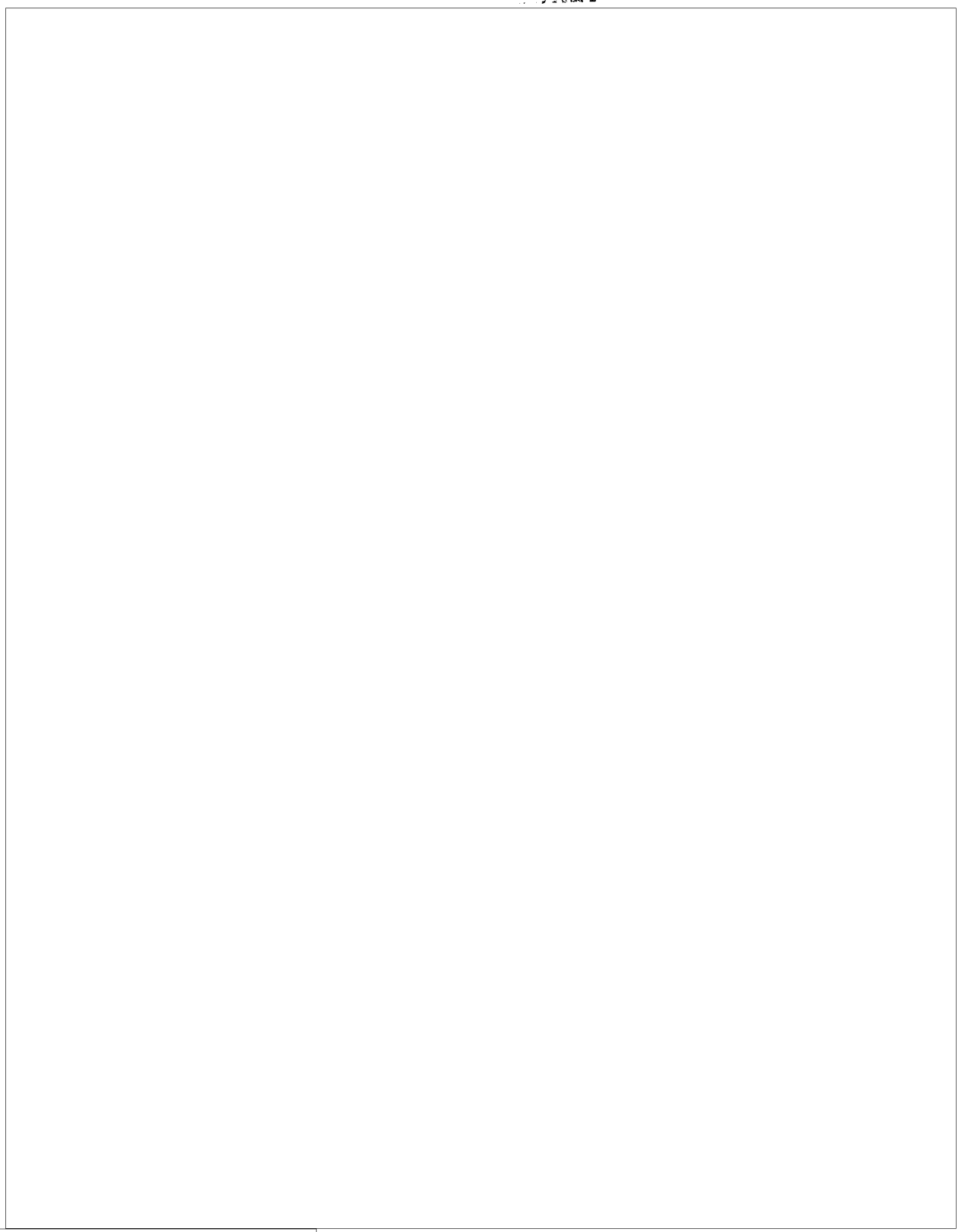


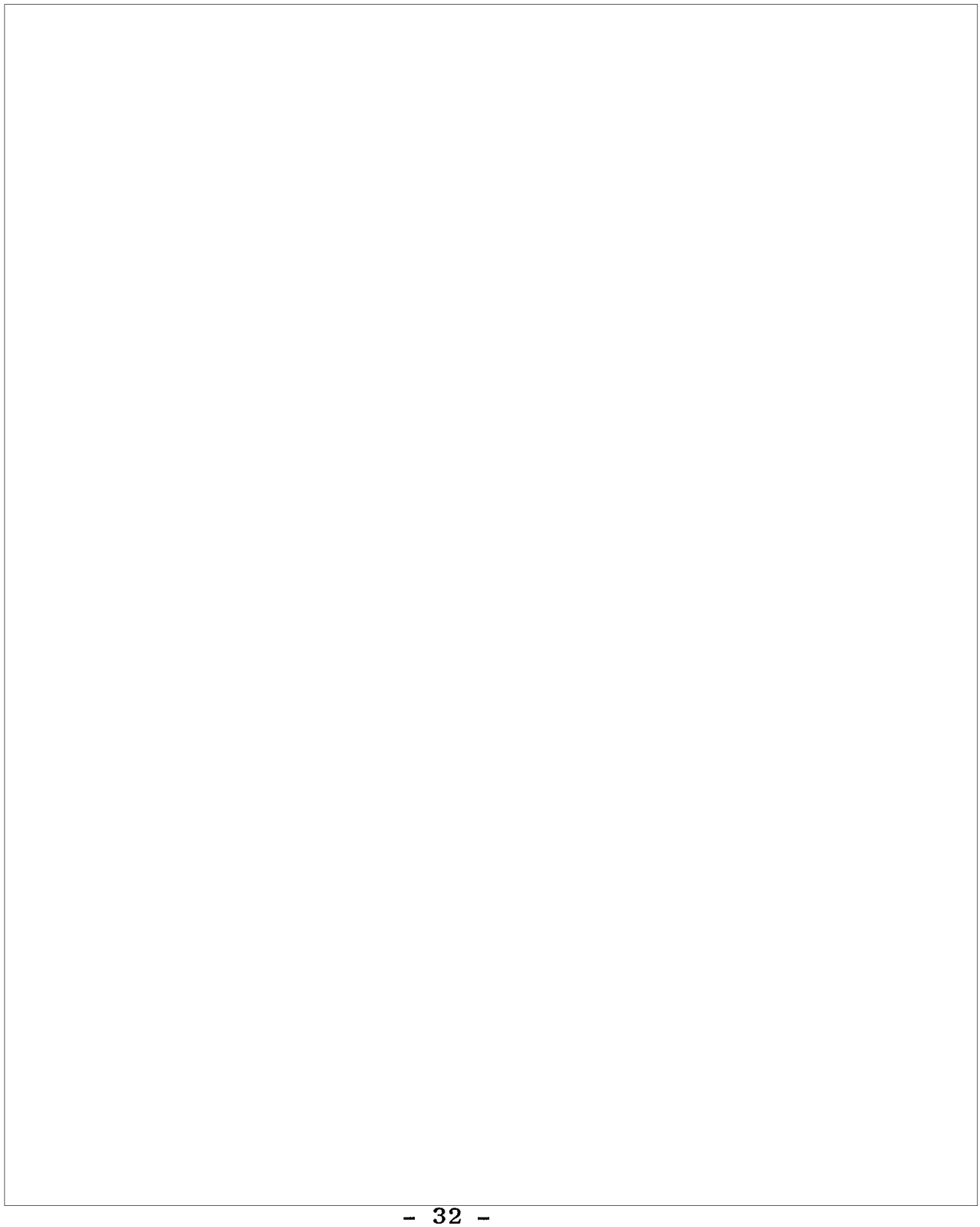


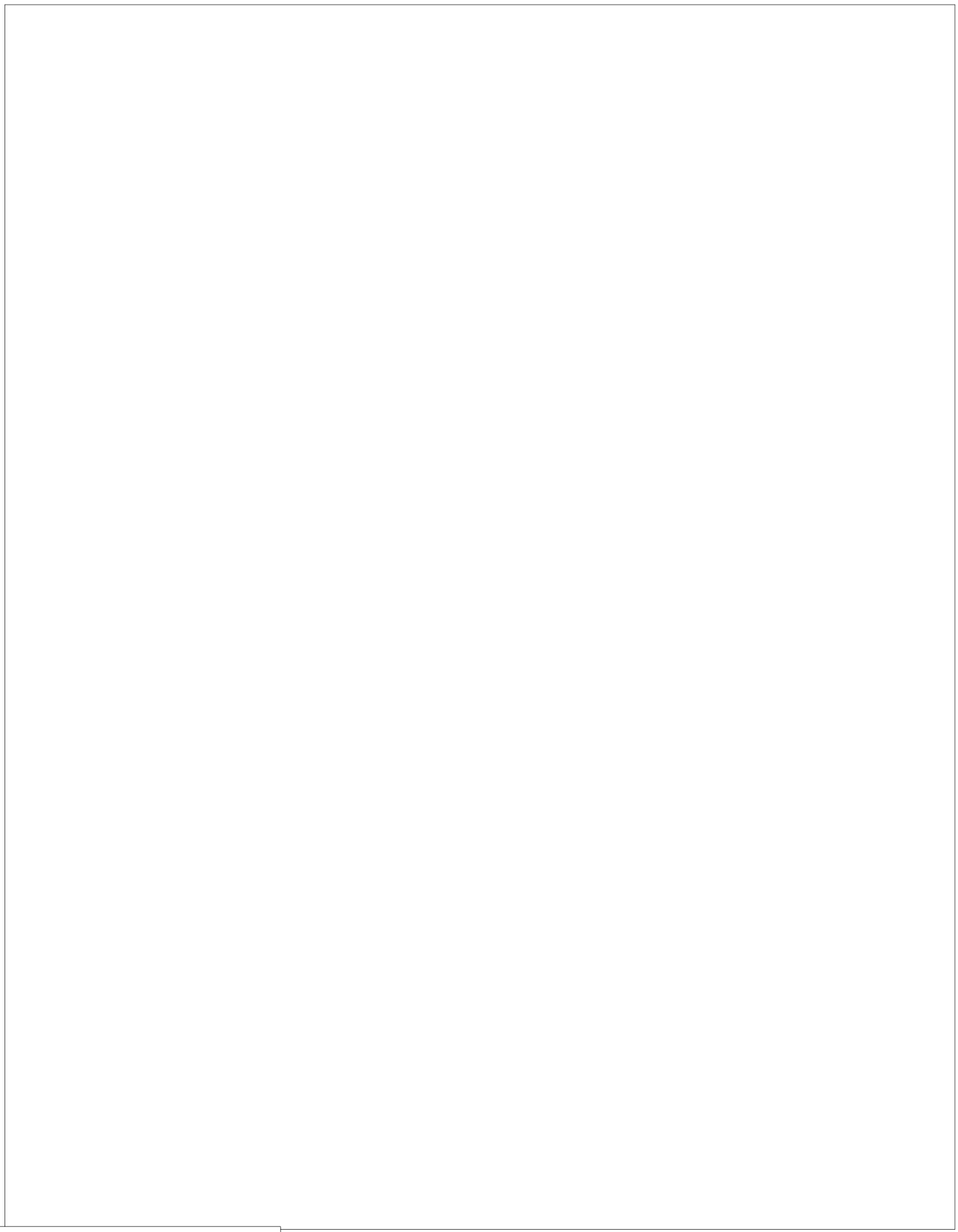


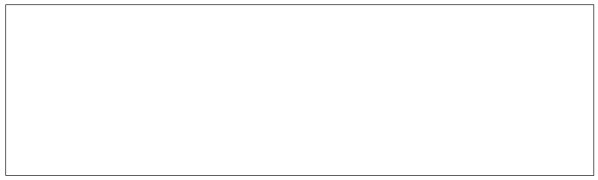


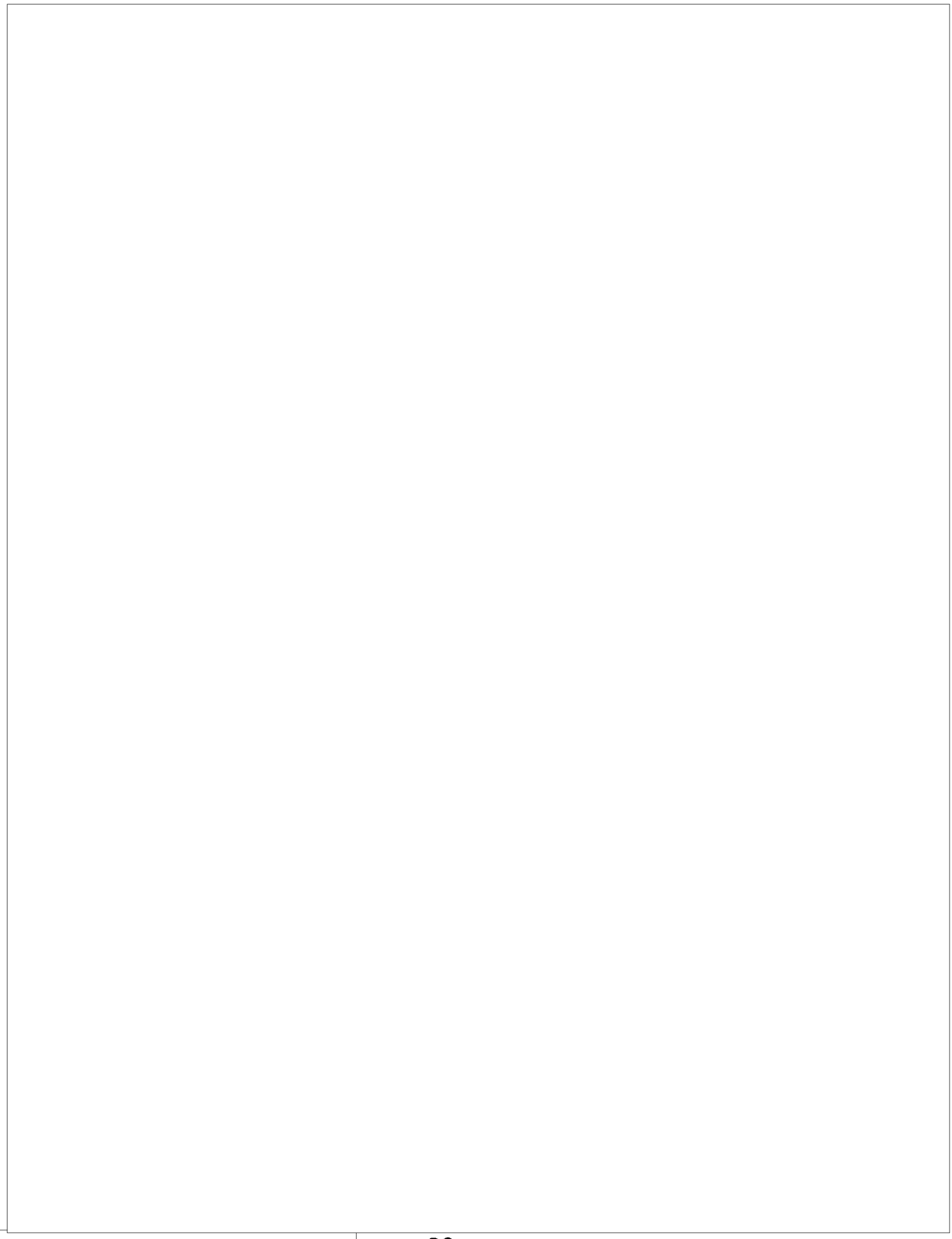


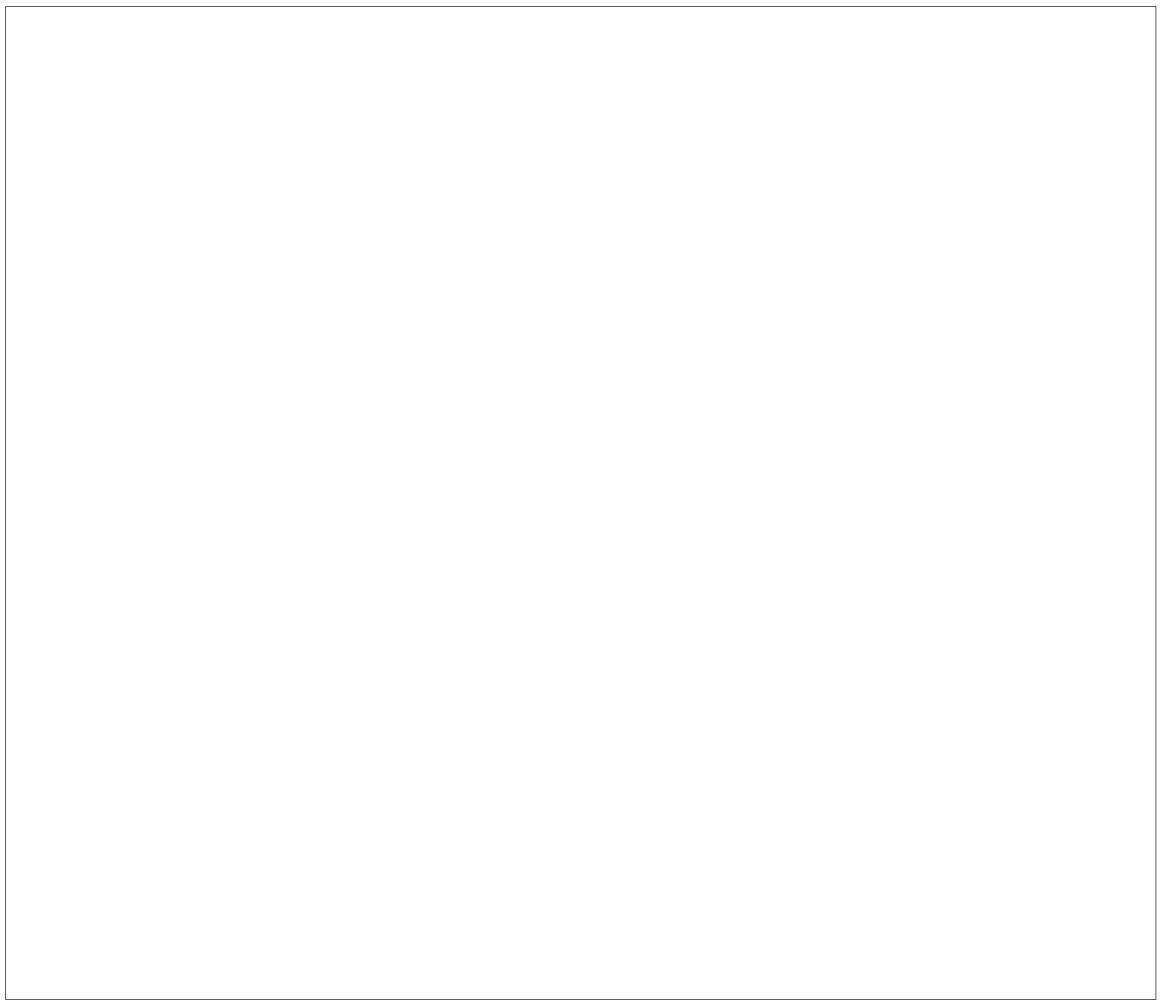


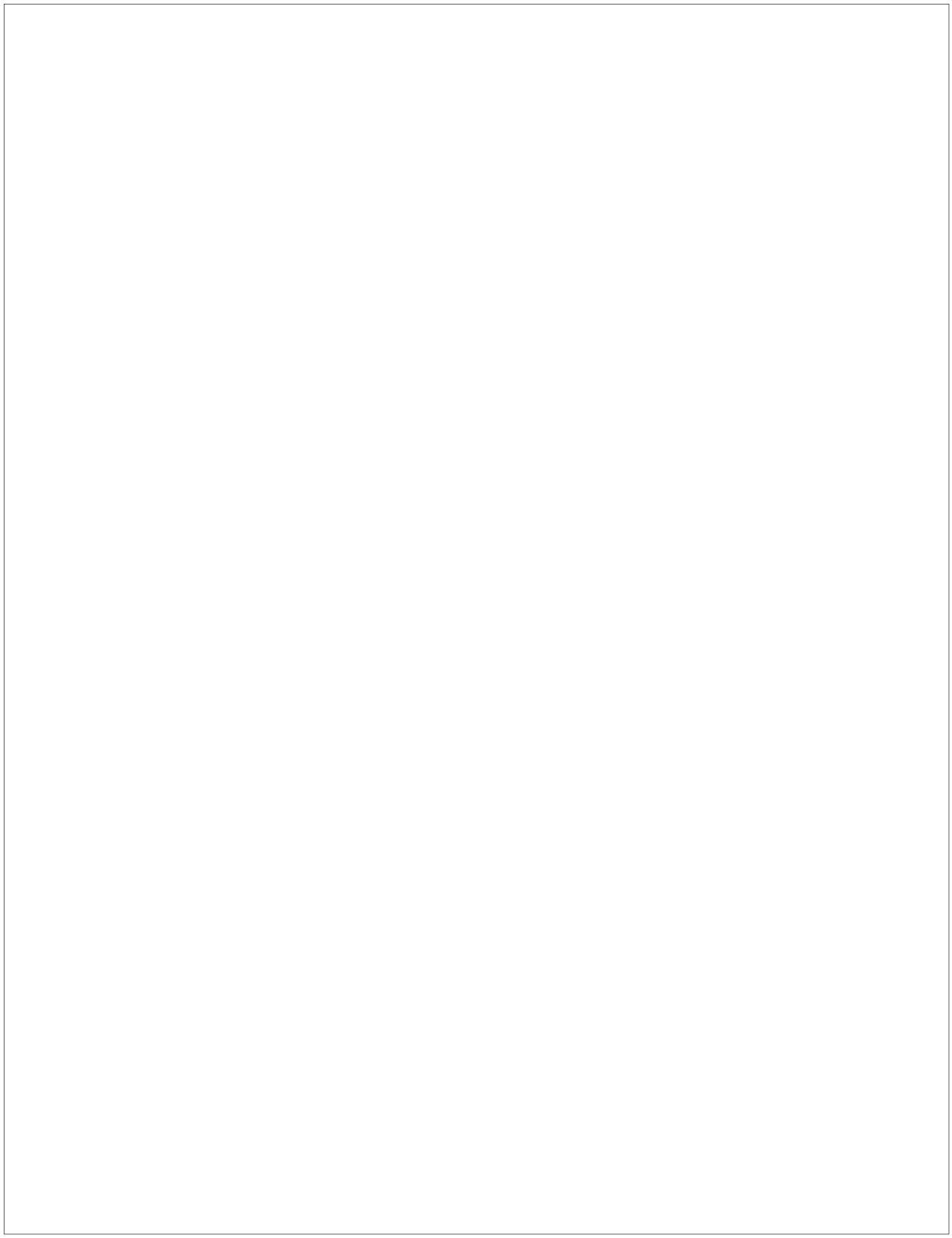


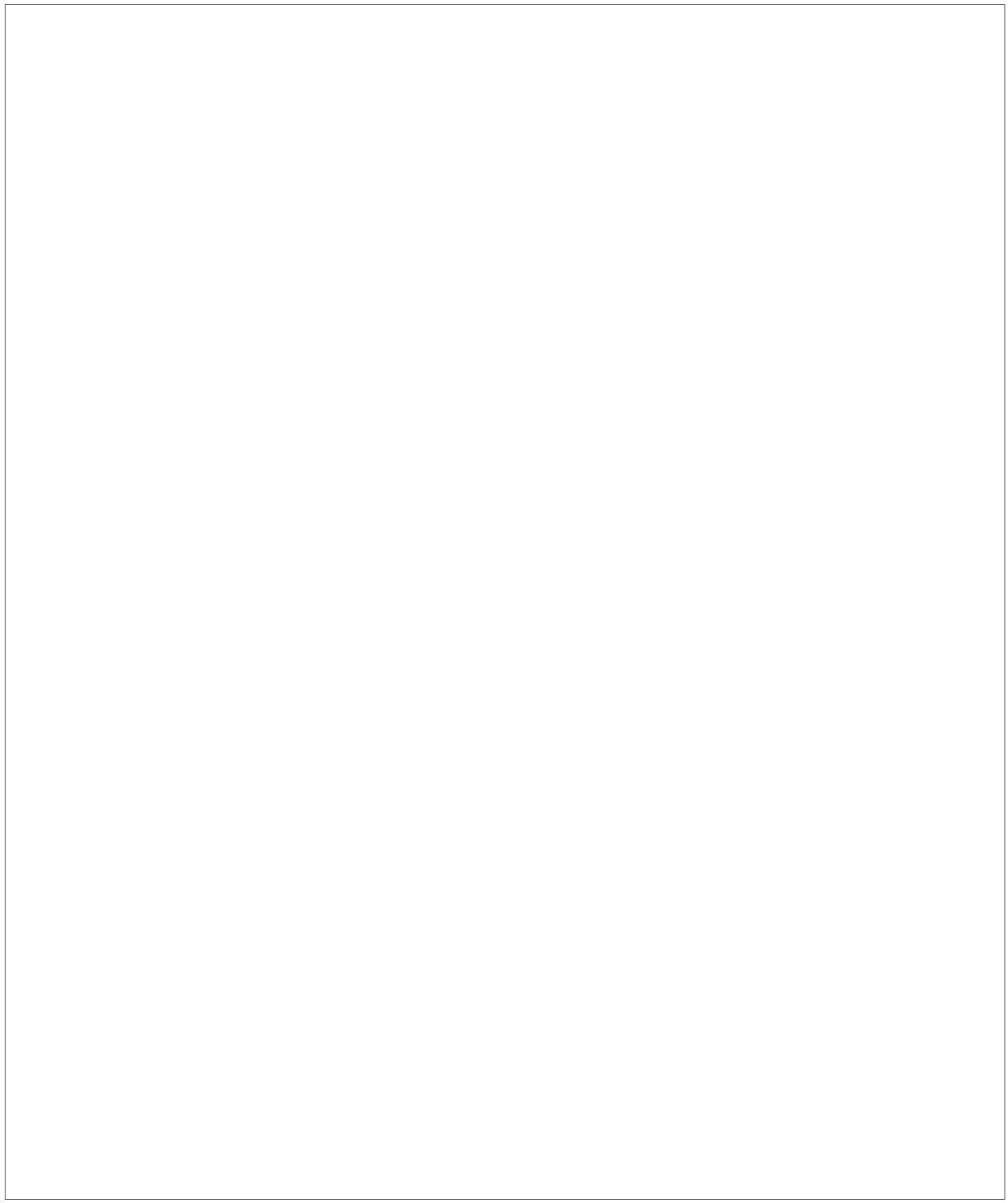


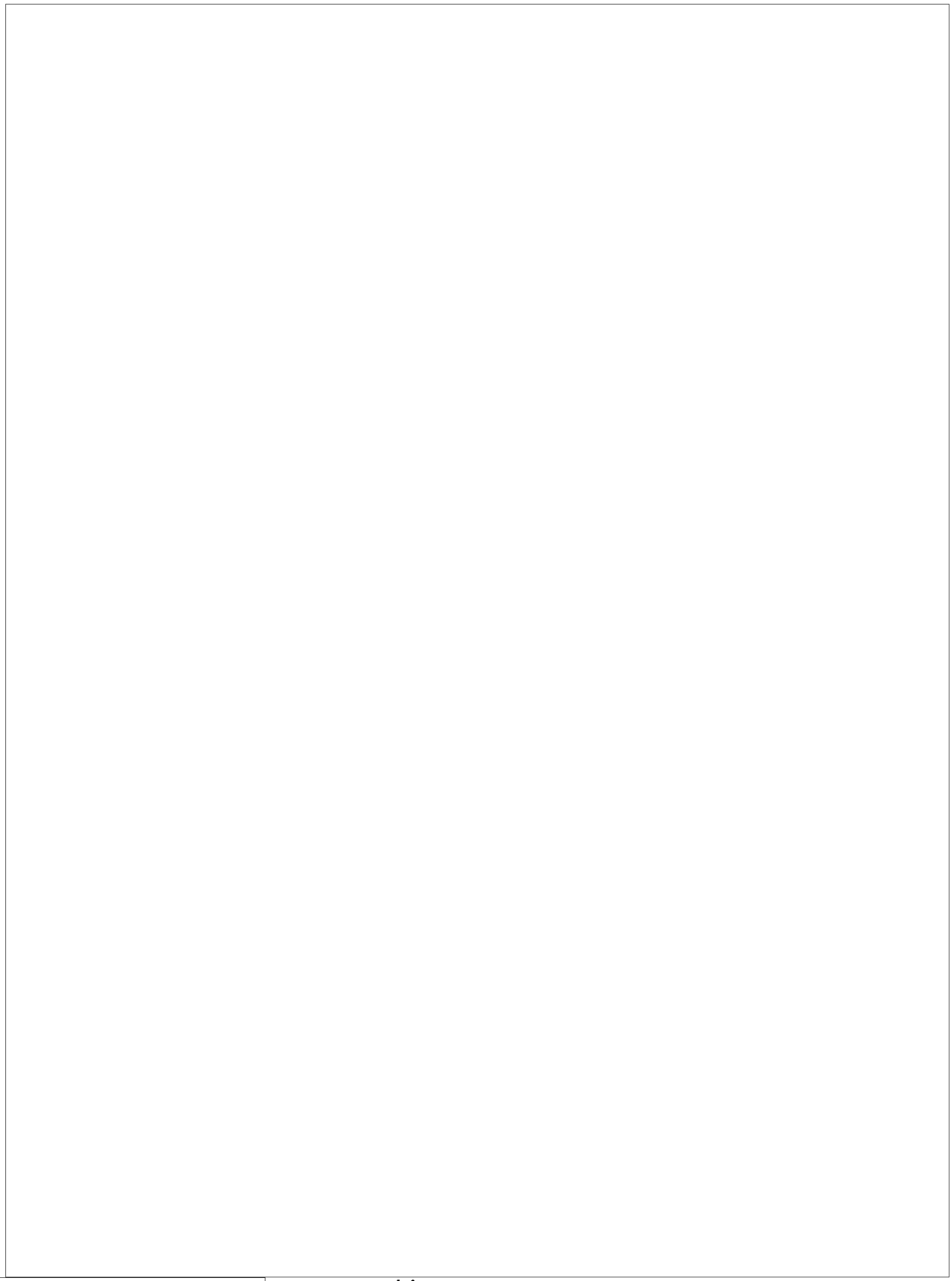


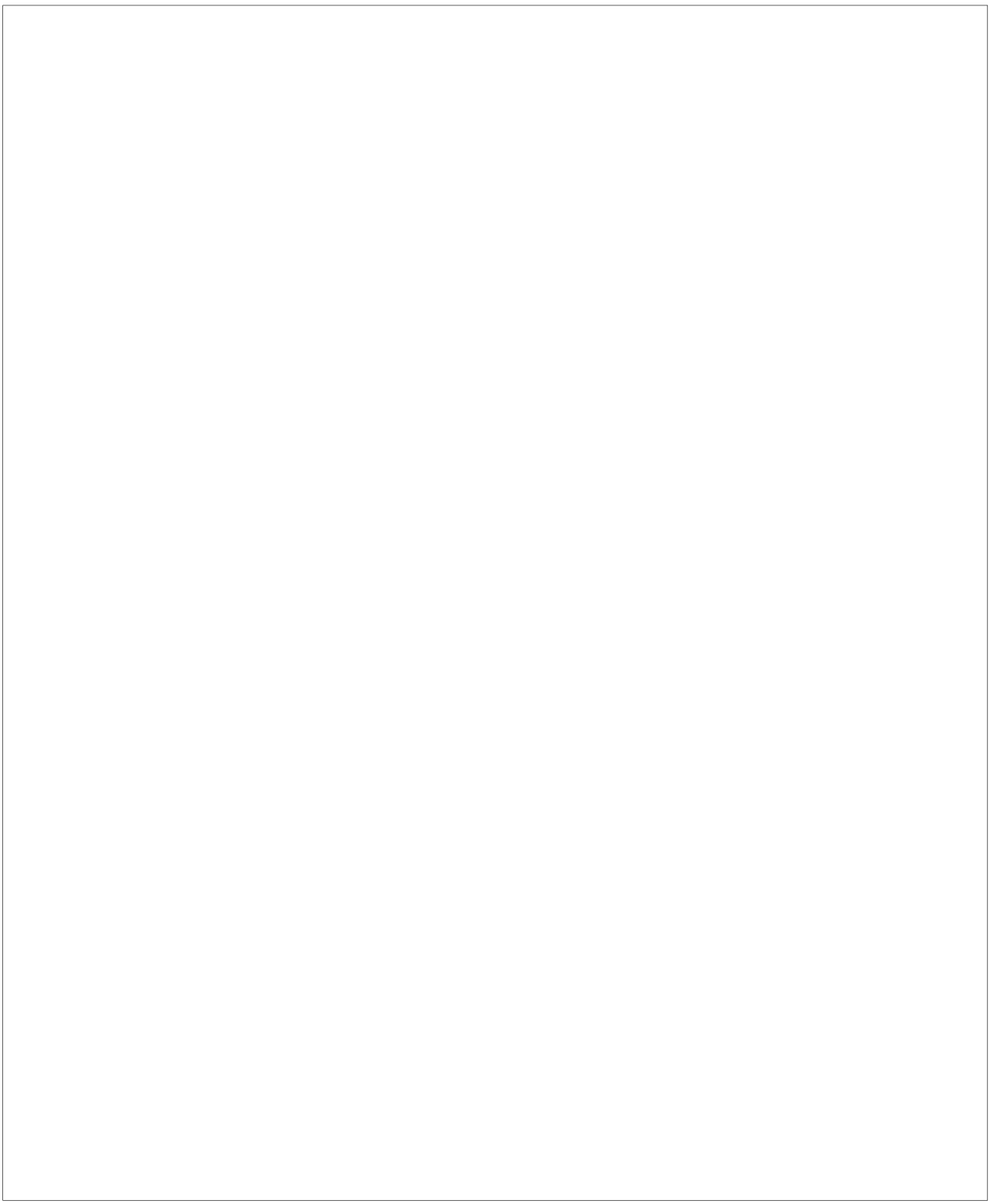


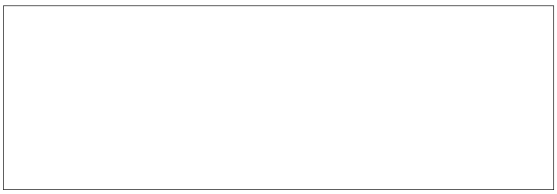


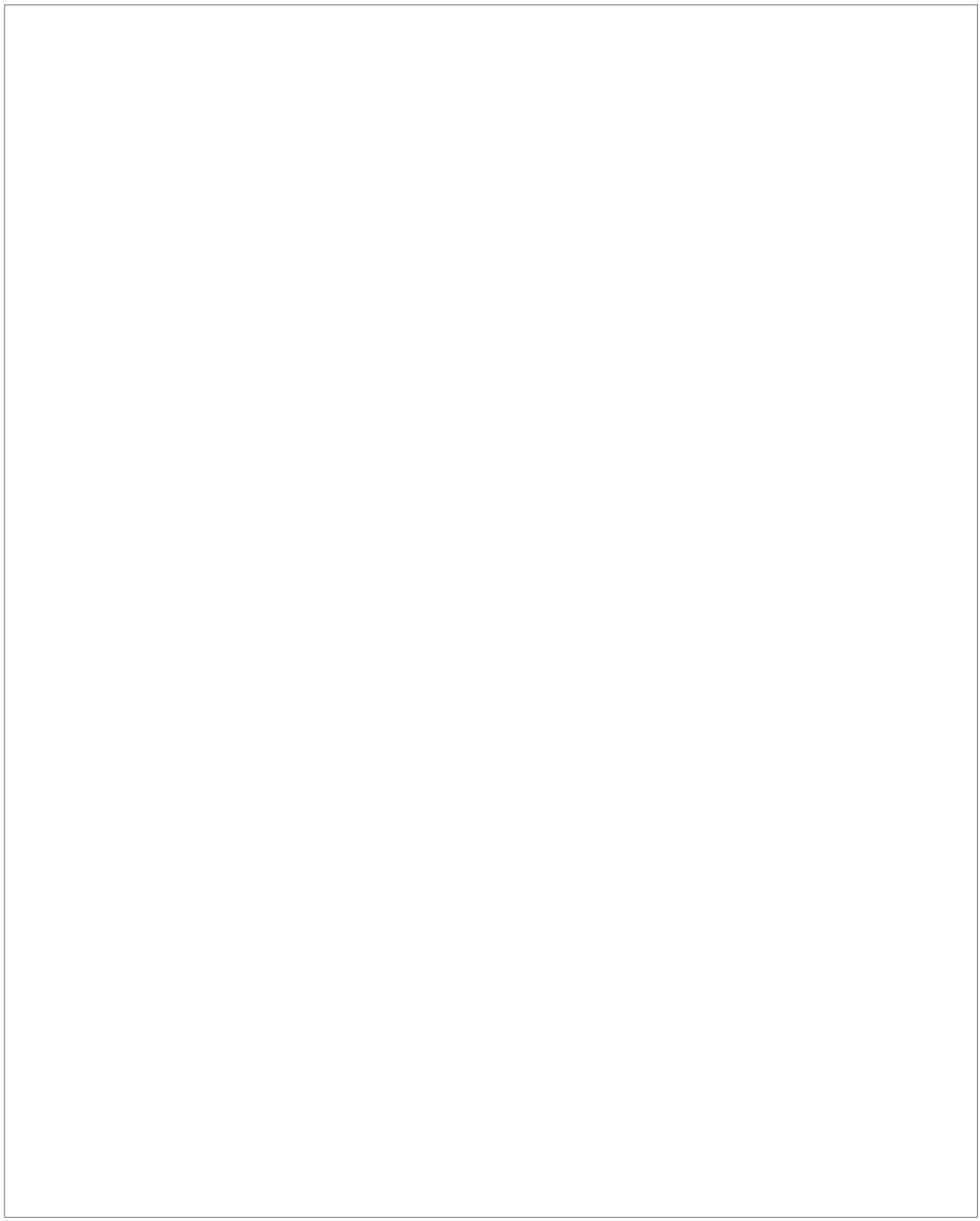


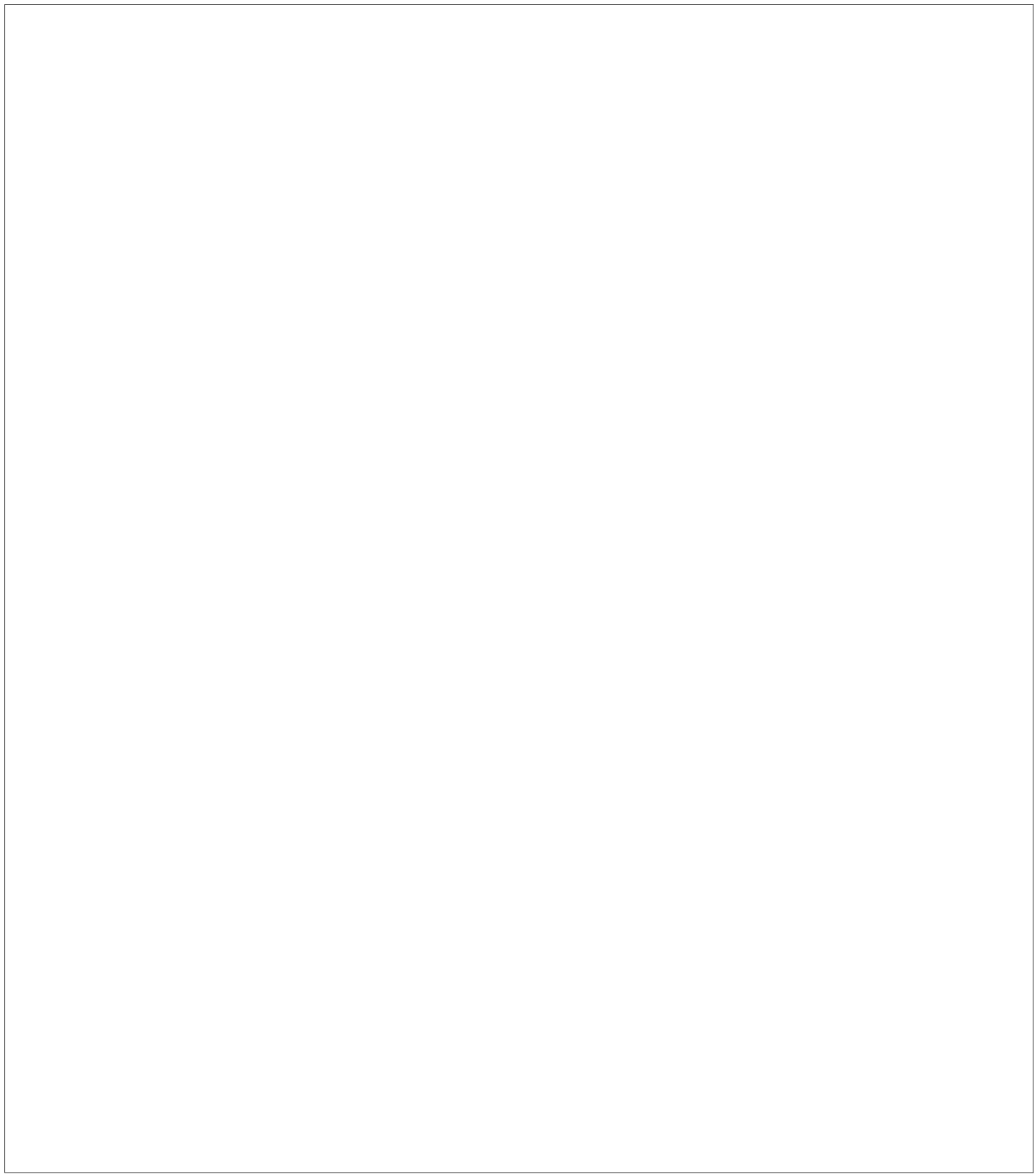












Annex VI

OSI's Role in Medical Intelligence

CONTENTS

		Page
I.	Early Development - The National Picture in 1948	1
II.	Establishment of Medical Intelligence in OSI	4
III.	Production of Intelligence in the Life Sciences	19
IV.	The Medical Intelligence Subcommittee of the Scientific Intelligence Committee	42
V.	Medical Intelligence Overseas	57
Tab A.	History of [redacted] SI	63
Tab B.	Functions of [redacted] SI	67
Tab C.	External Research Projects	75
References		78

[redacted]

Annex VI

OSI's Role in Medical Intelligence

Medical Intelligence is concerned with the effect of health conditions upon a nation's capability for international conflict. It includes in addition to consideration of the character, incidence and distribution of diseases (and their effect on manpower, military operations, and domestic economic capability), other aspects of health and medicine as they have a bearing on the interrelationships of man and his environment. Specialized concerns of medical intelligence are related to scientific, technical and economic intelligence. Included therein is information on aeromedical, bioastronautic, biomedical and environmental matters which may have a significant influence on foreign capability.

I. Early Development - The National Picture in 1948

In 1948 the Armed Forces were sharply reminded of an existing bleak picture in medical intelligence in the US through a "Report of the Subcommittee on Medical Intelligence of the Committee on Medical and Hospital Services of the Armed Forces". This report, familiarly termed the "Hawley Report", represented a response

on 2 June 1948 to the Committee's order for an inquiry into the status of medical intelligence in the military services. The report found that the Medical Intelligence Branch, Office of the Surgeon General of the Army, was the only "going concern" in 1948 worthy of the title of "organization". This unit was short in personnel, space and facilities. Its activities and output therefore were limited and "failed to meet acceptable requirements by a great margin". Of three essential elements in medical intelligence (epidemiological intelligence on a geographic basis, research and development intelligence, and field combat intelligence) this Branch was found to be deficient in the latter two.

The Report flatly insisted that medical intelligence was essential to the nation, that it must be centralized in one organization to serve all military departments, that it should be placed at a high echelon (preferably within the Office of the Secretary of Defense) and that it should have close working relations with many agencies.[1/]

At an interview in 1947, CIA representatives advised the Hawley Committee of the medical intelligence interest of the [redacted] Office of Research and Estimates,

[redacted]

CIA. [redacted]

[redacted]

Official uneasiness over intelligence shortcomings continued after publication of the Hawley Report. Another Committee, the Committee on the National Security Organization (known as the "Eberstadt Committee") was particularly concerned about the Nation's inadequacies in the fields of scientific and medical intelligence. It asserted in November 1948 that medical intelligence in the government was virtually non-existent. The Committee recommended that the Research and Development Board and the Central Intelligence Agency, as a joint undertaking, establish immediately within one or the other agency, an efficient and capable unit to collect, collate and evaluate scientific and medical intelligence in order that existing glaring deficiencies in this field be promptly eliminated.[2/]

[redacted]

II. Establishment of Medical Intelligence in OSI

While awareness of the serious deficiency in national medical intelligence was clearly evidenced by the Hawley and Eberstadt reports, no definitive federal action took place except in CIA. Dr. Willard Machle, who became the first Assistant Director of the Office of Scientific Intelligence on 1 January 1949 played a key role in the establishment of an OSI Division for the production of medical intelligence. In addition to his role as Director of CIA's scientific intelligence program, Dr. Machle was a physician with a keen personal interest in meeting the nation's intelligence requirement in his professional field. He first established a position for a physician in the [redacted] of OSI. Thus, medical intelligence has been a part of the explicit responsibility of the Office of Scientific Intelligence since its establishment. [redacted]

[redacted]

[redacted]

The Task of Coordination

In his response to Dr. Machle's request, Dr. [redacted] identified the principal task in medical intelligence to be the establishment of coordination of medical intelligence activities of all the federal agencies concerned. Believing that the National Security Act of 1947 had failed to give the DCI sufficient authority to execute his coordination responsibilities, Dr. [redacted] attempted by personal diplomacy to fulfill CIA's role of coordination despite the absence of any formal authority over other intelligence agencies. His early consultations with Service representatives led to the assignment of a senior naval medical officer to the Office of Naval Intelligence. In 1949 he established a regular schedule of visits by this officer to the [redacted] for the purpose of collaboration and coordination. In 1949, an Air Force Medical Intelligence Officer, on duty in the Office of the Secretary of Defense, was actually working at a desk in the [redacted]/OSI during a major portion of his duty hours as a collaborator.[4/]

In 1949, no Army medical officer was assigned to the Intelligence Division of the War Department. The Medical Intelligence unit of the Preventive Medicine

[redacted]

Division, OSG of the Army was then engaged in the compilation and production of epidemiological data which it published in technical bulletins. As noted above, the Hawley Report criticized the medical intelligence value of this organization. Nevertheless, since the unit represented Army medical intelligence, regular visits to CIA by its Chief were also firmly established by the [redacted]SI. Furthermore, with the creation of the interdepartmental Joint Medical Sciences Intelligence Committee (JMSIC), under the Scientific Intelligence Committee in 1949, a medical officer was assigned to G-2, Army, and this officer became the regular member of JMSIC for the Army.[5/]

The medical intelligence officer of OSI also established liaison in 1949 with officers of Camp (Fort) Detrick to coordinate medical intelligence interests with the intent of fostering centralization of medical intelligence in CIA.[4/]

Evolution of Organizational Structure of the Medical Intelligence Division

Initial Structure - On 1 January 1949, the Office of Scientific Intelligence was established from elements of the already-existing [redacted] of the Office

[redacted]

of Reports and Estimates.

Formal Branches - The areas of substantive responsibility of the OSI were set down in October 1950 in a formal statement of the organization and functions of the Office. This statement is a reflection of Dr. concepts at that time as supported by Dr. Machle and his successor, Dr. Chadwell. For SI the areas were: 7/ 8/

A. Medicine in its broad sense as it bears upon attacks on the health and efficiency of man, including research and development in the fields of medical science, the distribution and character of diseases as they may influence planned operation, domestic affairs; climatological, psychological and physiological aspects as they bear upon the interrelationships between man, his environment, equipment and tasks, and the medical aspects of atomic, biological and chemical warfare;

B. Manufacture, import and export of pharmaceutical and biological products, medical equipment and supplies;

C. Organizations, facilities, personnel and other resources in these fields.

[redacted]

At this time (1950) the separate [redacted] of OSI emphasized developments in biology, with explicit reference to offensive biological warfare.7/

In response to the gaps noted in the Hawley and Eberhardt reports, medical field and combat intelligence was an area of emphasis in the Division as were all aspects of medicine in relation to the armed forces. Stress was placed on epidemiological intelligence; i.e., the distribution and character of diseases of man and animals as these may influence domestic affairs,

[redacted]

planned operations or national security. No change was made in the area of interest of the [redacted] OSI, except to re-emphasize that BW was of special interest to it. The [redacted] study of R&D in pure and applied biology explicitly excluded human and veterinary medicine, which was regarded as the province of the Medicine Division.

Re-Assignment of Military Medicine

In 1951, the Medicine Division was reorganized [redacted] The eradication of the [redacted] Branch presaged the enactment of DCID 3/4 in 1952 which assigned military medicine to the Services.[9/]

The exclusion of military medicine in Division activities is directly attributable to DCID 3/4 (14 Aug 52) "Production of Scientific and Technical Intelligence," which lists in Annex A the responsibilities of the departments of the Department of Defense in the field of medicine intelligence, as follows:

". . .k. Military medicine, including:

(1) Medical aspects of civil defense in the USSR;

(2) Medical vulnerabilities of men and animals to BW agents, and capabilities for medical defense of man and animals against BW agents."

[redacted]

Because of excellent teamwork and cooperation which existed among members of the medical intelligence community at the working level, the Division was able to rely on the military for support in its areas. Coverage of aviation, field, shipboard and submarine medicine was handled exclusively by the Army, Navy, and Air Force for NIS and other production. Responses to [redacted]SI requests for contributions of intelligence pertaining to military medicine were very satisfactory and [redacted]SI believed the afore-mentioned allocation of production responsibility to be entirely suitable. The Division was relied upon within OSI to contribute estimates on k(1) and k(2) (see indented quotation above), even though these were allocated to the Department of Defense, because the Division had the analytical competence to do so.[7/]

Prior to DCID 3/4, work was also being done by the [redacted] in basic research on BW and CW. Further, the Division covered Soviet offensive and defensive BW in veterinary medicine. With the enactment of DCID 3/4, primary responsibility for BW and CW intelligence was also assigned to the military Services.

Ultimately (in 1955) the Army Chemical Corps established the Chemical Corps Intelligence Agency

[redacted]

which then developed a staff of rather mediocre caliber to cover BW-CW intelligence.[10/]

[redacted]

National Intelligence Surveys Role

[redacted]

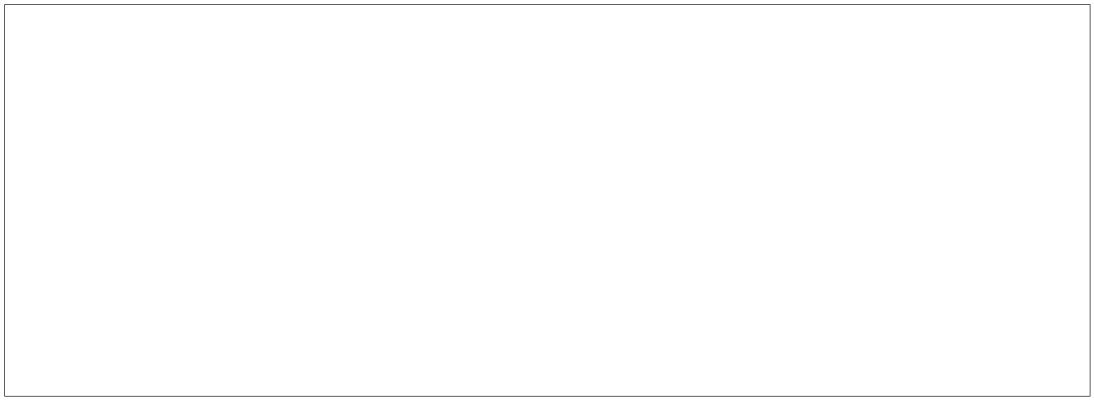
The NIS has been described as a substantially successful area of Agency activity. This production is scheduled by the Office of Geographic and Basic Intelligence and also by the [redacted] of OSI.[11/]

[redacted]

The fundamental principle of the NIS program, as laid down in NSCID No. 3, is the allocation of production and maintenance responsibilities to those agencies which are best qualified by reason of mission, production capability, and primary interest. The

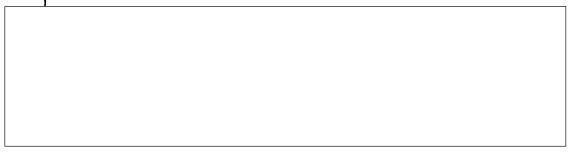
have made substantial contributions to the preparation of Sections 7, 17, 45 and 76 of the National Intelligence Surveys. In 1967, medical intelligence officers were contributing primarily to the preparation of Section 7 of the NIS; Sections 17 and 76 were discontinued.

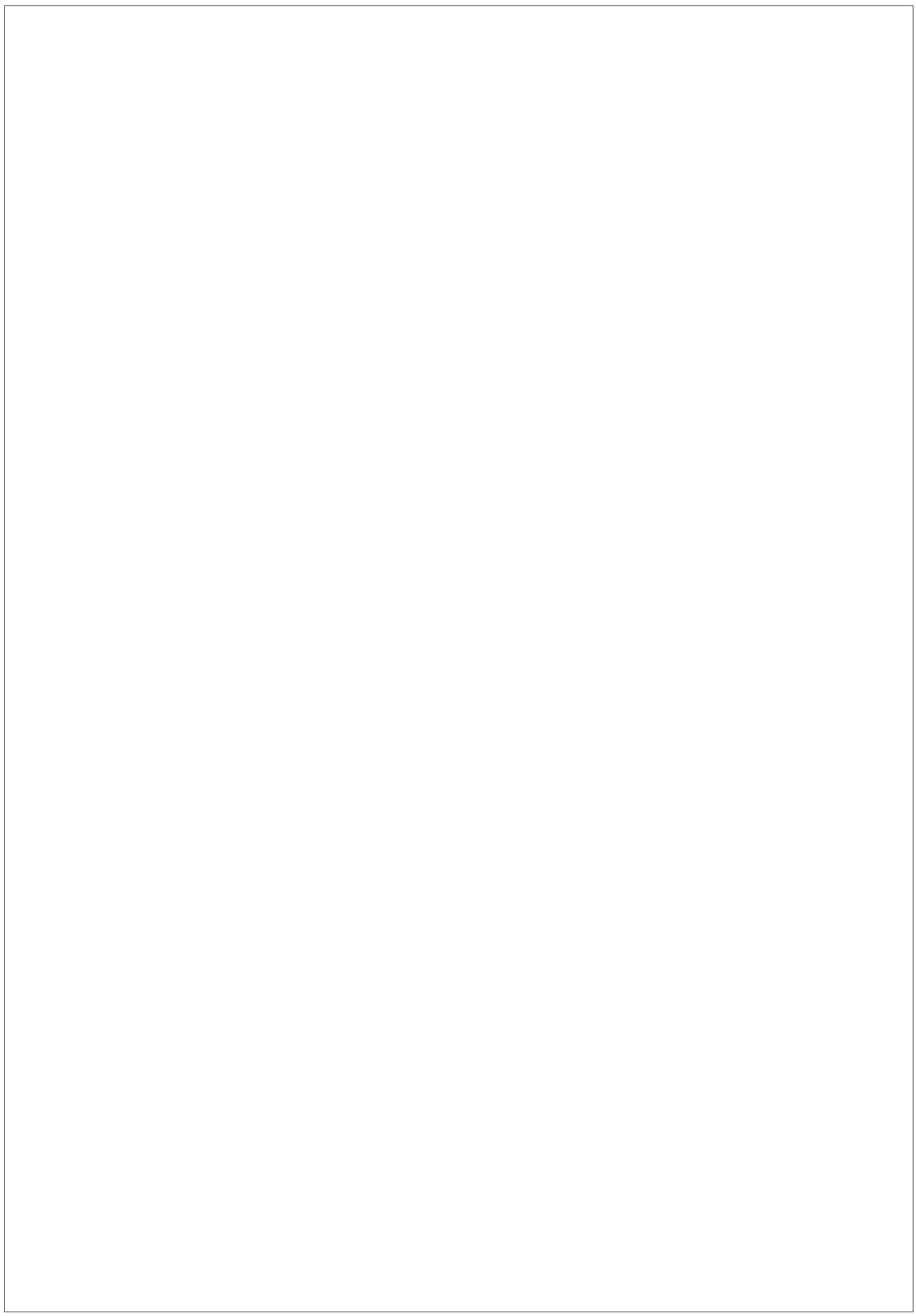
Responsibility for the Section 45 of the NIS rested originally with the Army and on 29 March 1948 the Surgeon General of the Army was given the task of its production. On 5 April 1954, the Army requested that the responsibility be reallocated, and it was assigned to the OSI.

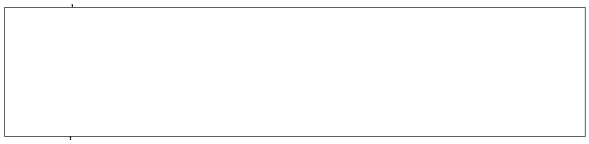


BW-CW De-Emphasized

The production of intelligence on CW-BW was generally considered to be the responsibility of the military departments. For this reason, Agency responsibilities in these fields were primarily directed at the surveillance and coordination of intelligence rather than at research and production. The latter activities were to be engaged in only at the request of the IAC Agencies or to the extent necessary to fill clearly defined gaps in coverage.



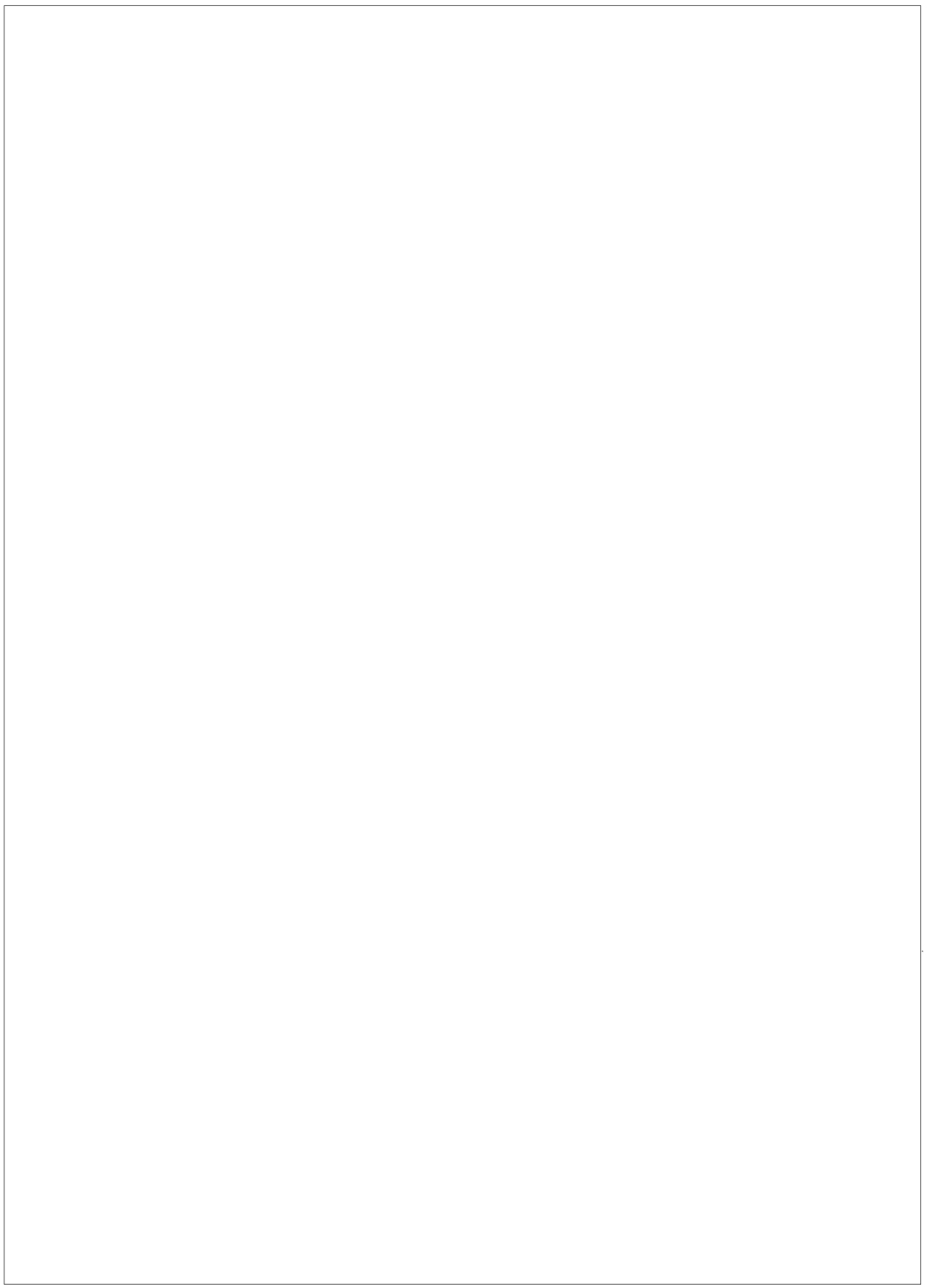




Bioastronautics

BW-CW Responsibility Assumed

The primary objective of this reorganization was to reorient and focus interests and coverage on those aspects of the life sciences which are of strategic intelligence significance. Also, by combining the BW and CW efforts, more efficient use of manpower and more effective support to the Scientific Intelligence Committee on BW/CW matters were expected.



[redacted]

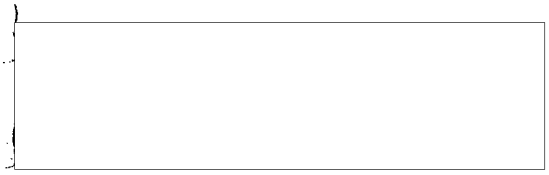
III. Production of Intelligence in the Life Sciences

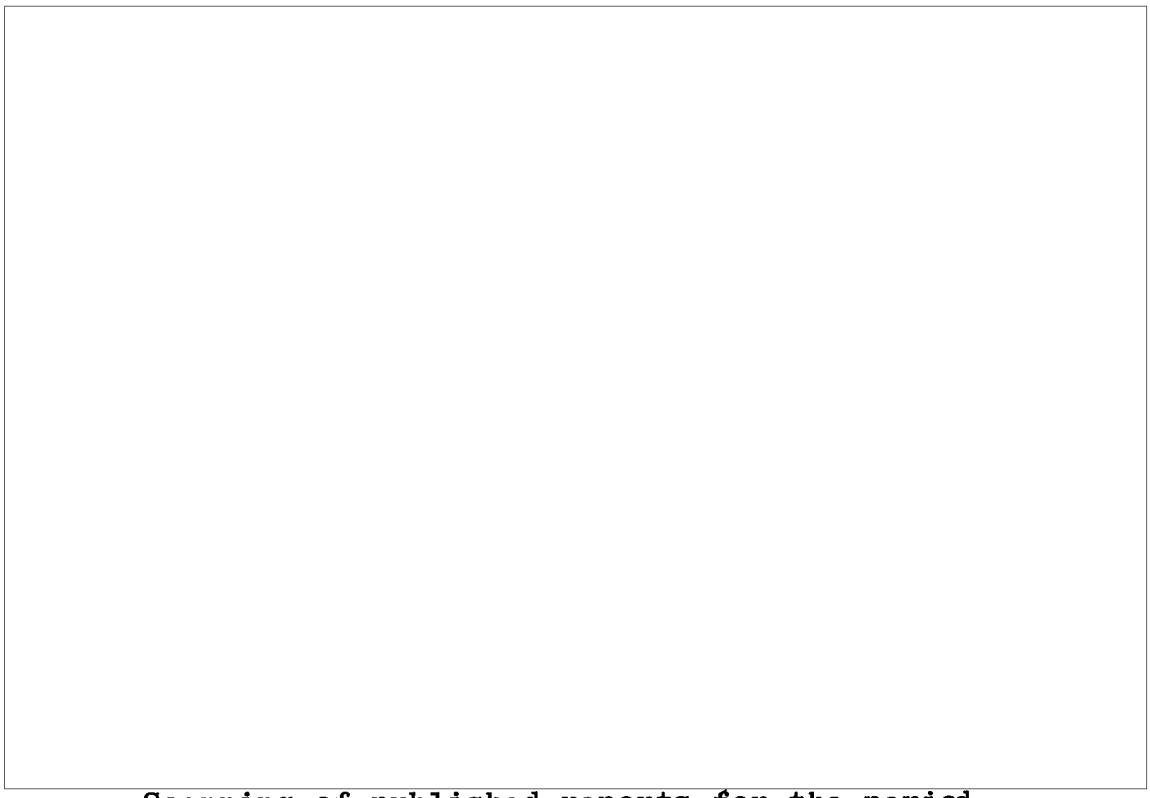
A Massing and Analysis of Data

In 1949 in the absence of an acceptable medical intelligence program outside OSI/CIA, the [redacted] initiated its program with a tremendous effort to establish a data base. [redacted]

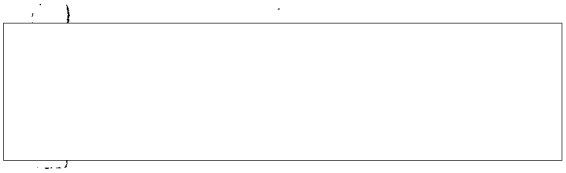
[redacted] Documents available from governmental and non-governmental sources which contained medical information on the USSR or international health were perused and coded; [redacted] briefings and debriefings were conducted, and files were inaugurated on personnel, facilities and subjects of priority interest: additional reports were received in response to these activities. [redacted]

[redacted]





Scanning of published reports for the period of the 1950's demonstrates that the establishment of the level of Soviet medical science was accomplished. Production reports emphasized coverage of substantive areas, e.g., treatment of mass casualties, ionizing radiation, fermentation, microbiology, hematology, immunochemistry, immunology, basic aeromedical problems, toxicology, medical sciences in the various countries of the Soviet Bloc. Research and development in medicine and allied sciences -- physiology, biochemistry, medical microbiology and biophysics -- were carefully analyzed and reported. Medical intelligence officers fulfilled the essential task of getting to know the USSR and



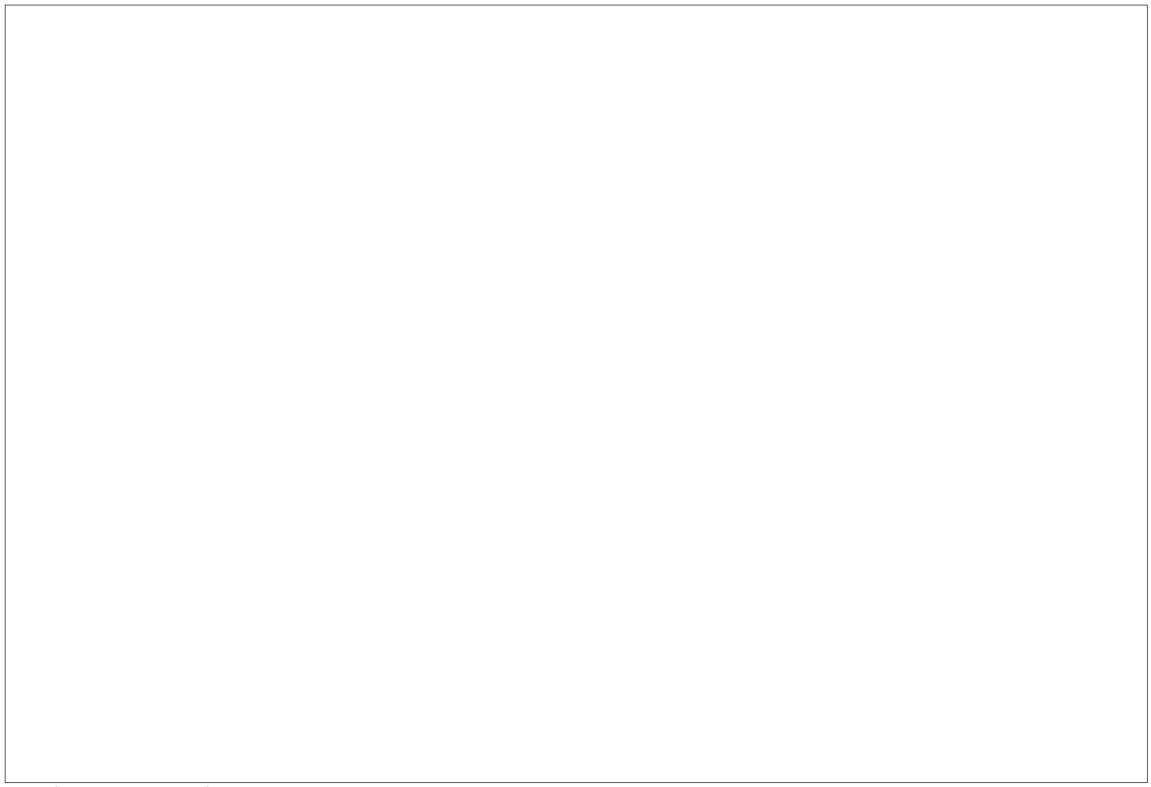
reflecting this knowledge in published reports and oral briefings for policy makers, federal scientists and law makers, and for the American scientific community which required information about the USSR.

[redacted]

[redacted]

Synthesis

As noted above, medical intelligence production had recorded developments in information in two areas in the 1950's: Soviet efforts in space medicine and in attempts to control human behavior. While analysis of subject matter lost none of its essential role, it was now becoming possible to synthesize a picture of Soviet programs.



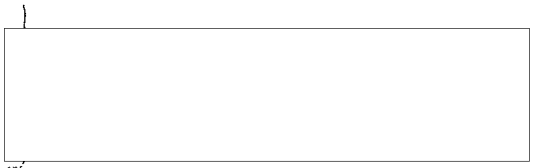
Cybernetics

Key papers on Soviet cybernetics were also characterized by the synthesis approach. In 1957

[redacted] was initiated to study research on human behavior in the USSR. This research identified the first Soviet attempts at cybernetic conceptualization of mechanisms of behavior.

[redacted]

[redacted]

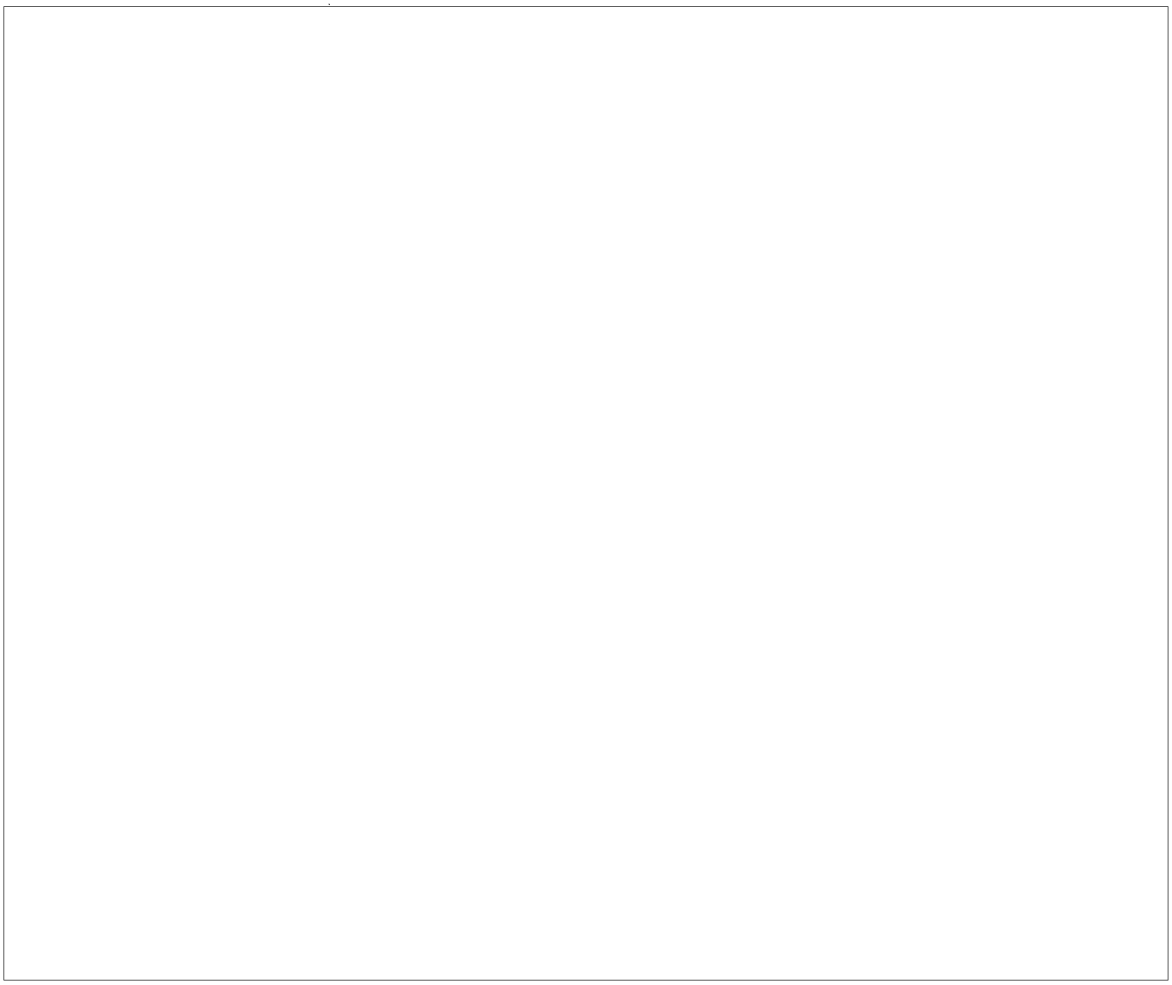


Strategic Intelligence Production

Production in the period from 1964 on reflects the qualifications of [redacted] medical intelligence officers to participate in long-range, high-level foreign policy intelligence. They had been able to discern Soviet programs (e.g. the man in space program and the cybernetics program) even while those programs were in the process of forming in the USSR. A major activity now was monitoring and reviewing the performance of the USSR and estimating what it would do and when it would do it [redacted]

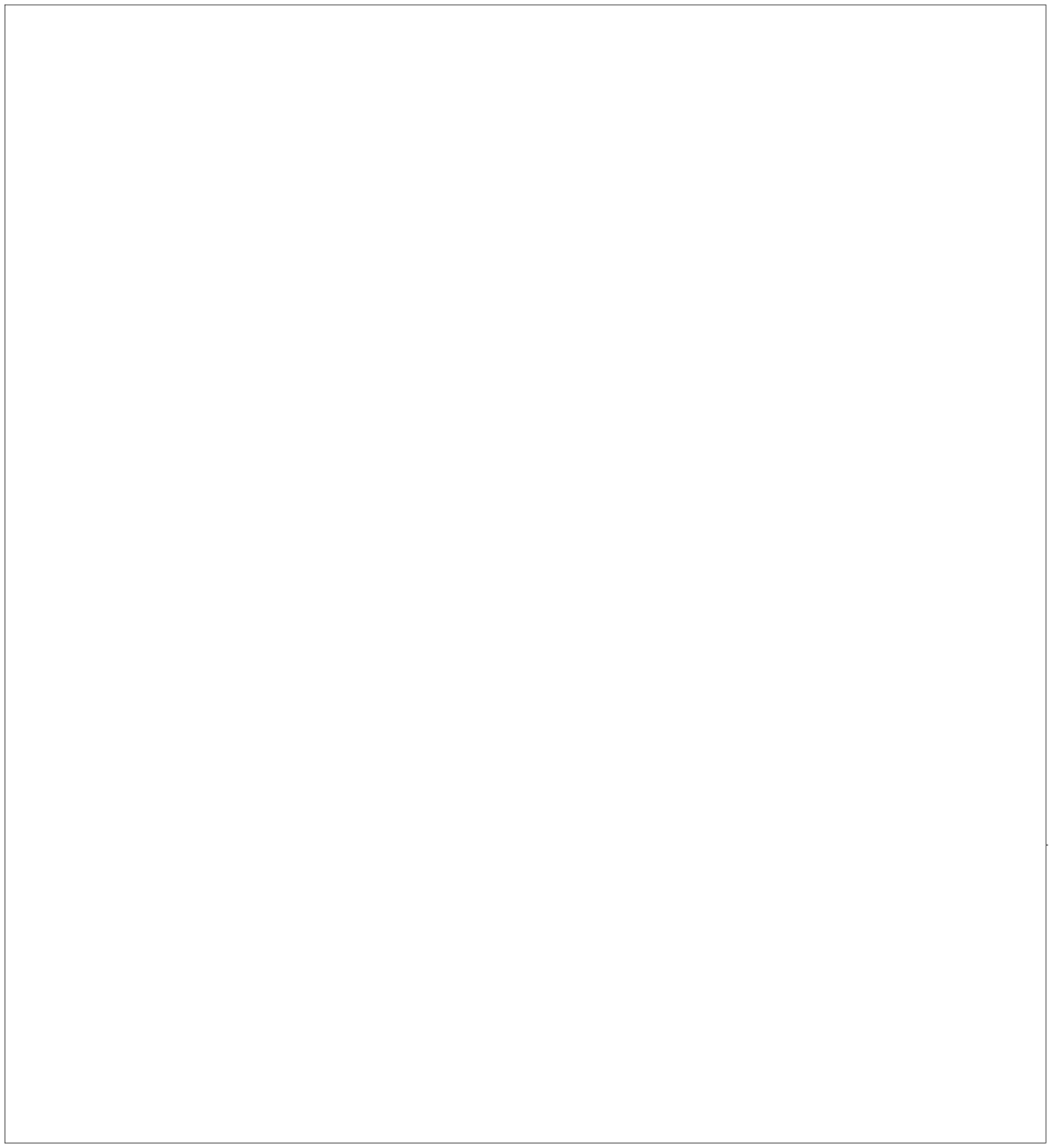
[redacted]

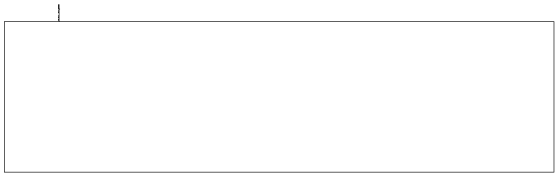
[redacted]

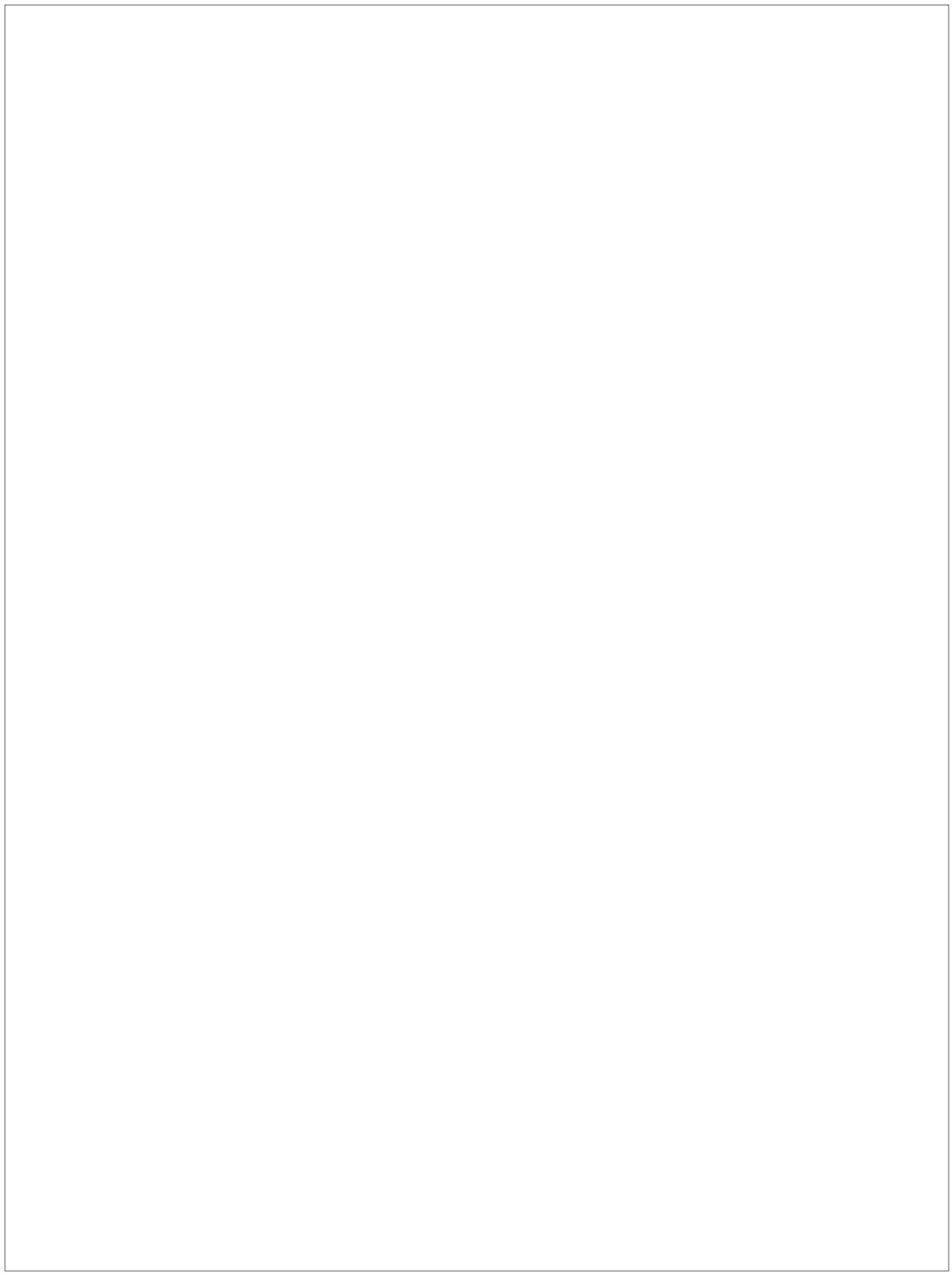


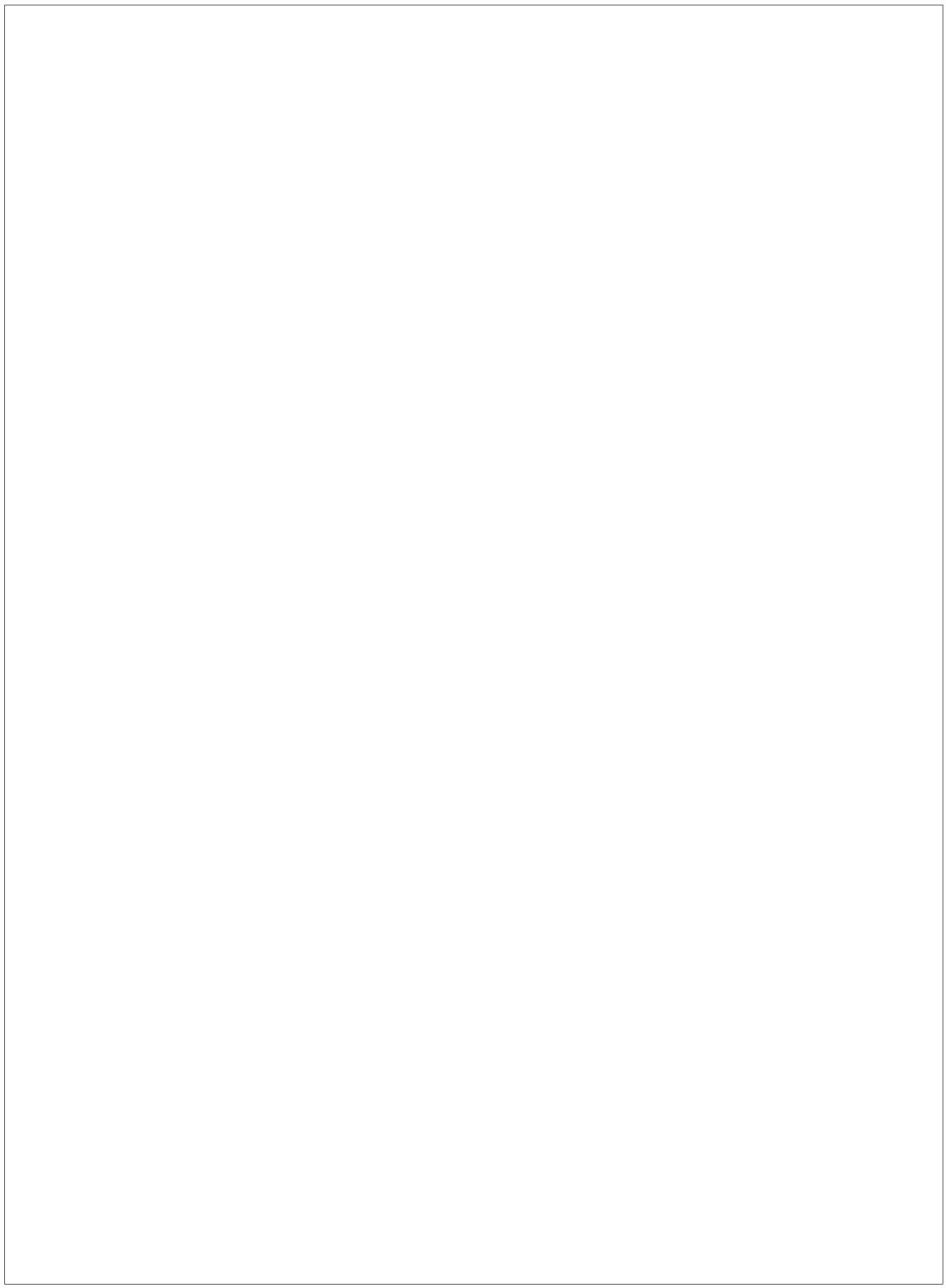
Foreseeing the growing menace of Communist China, division officers are placing priority emphasis on medical intelligence on China. Coverage of Communist China has included public health, medical practice, medical training, medical research, and military medicine as they pertain to China's political, economic, and military development. Production reports indicate that the life sciences have continued to play a major role in China's development as the

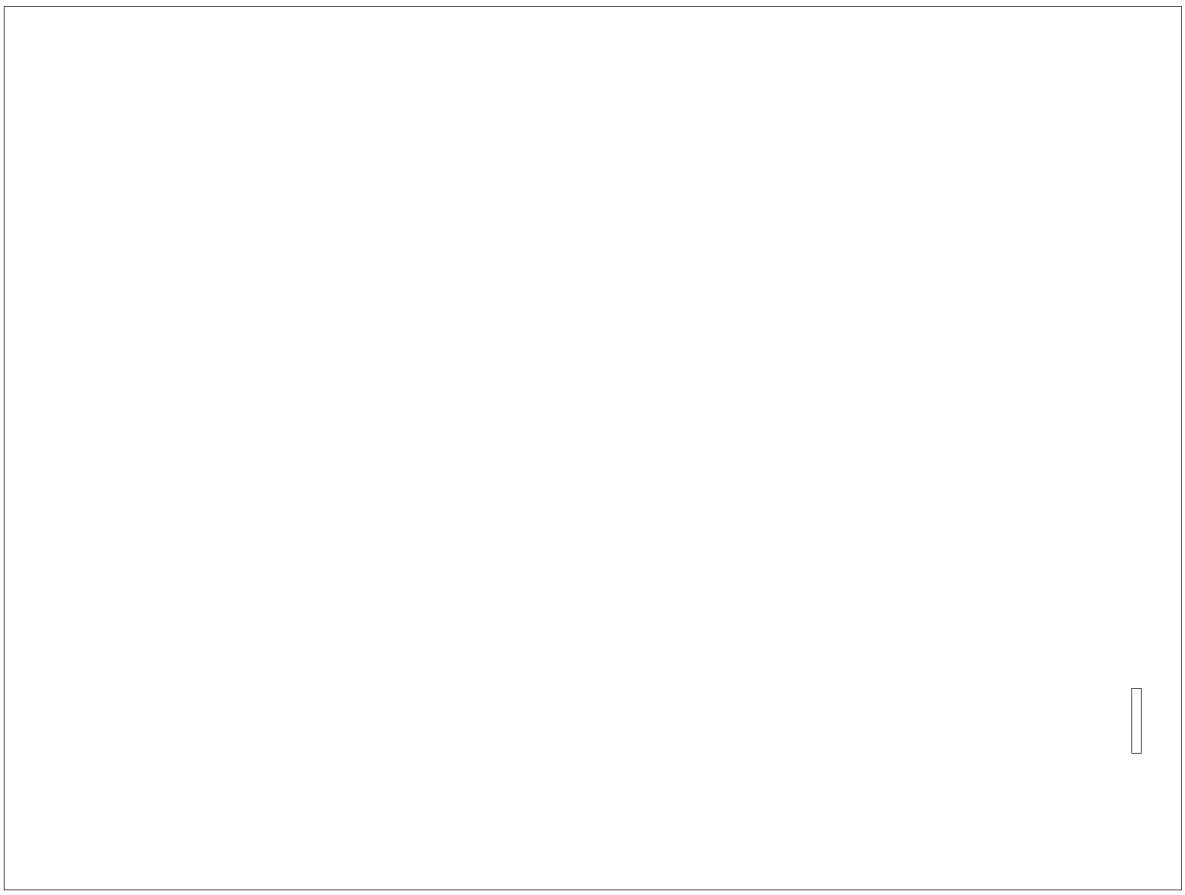
regime attempts to balance its political strategy of expanding world influence against its internal fight to survive infectious diseases and the consequences of its population explosion.







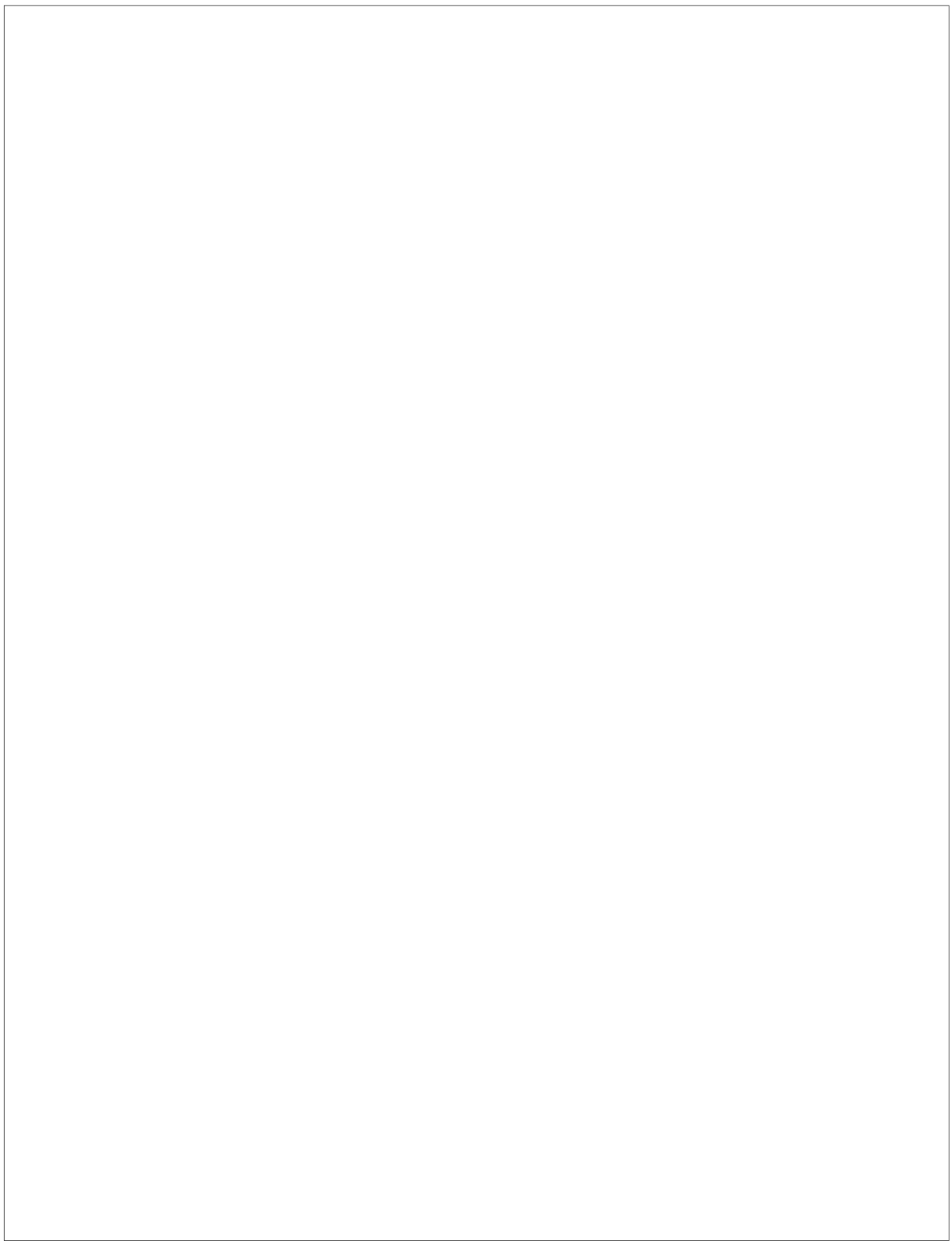


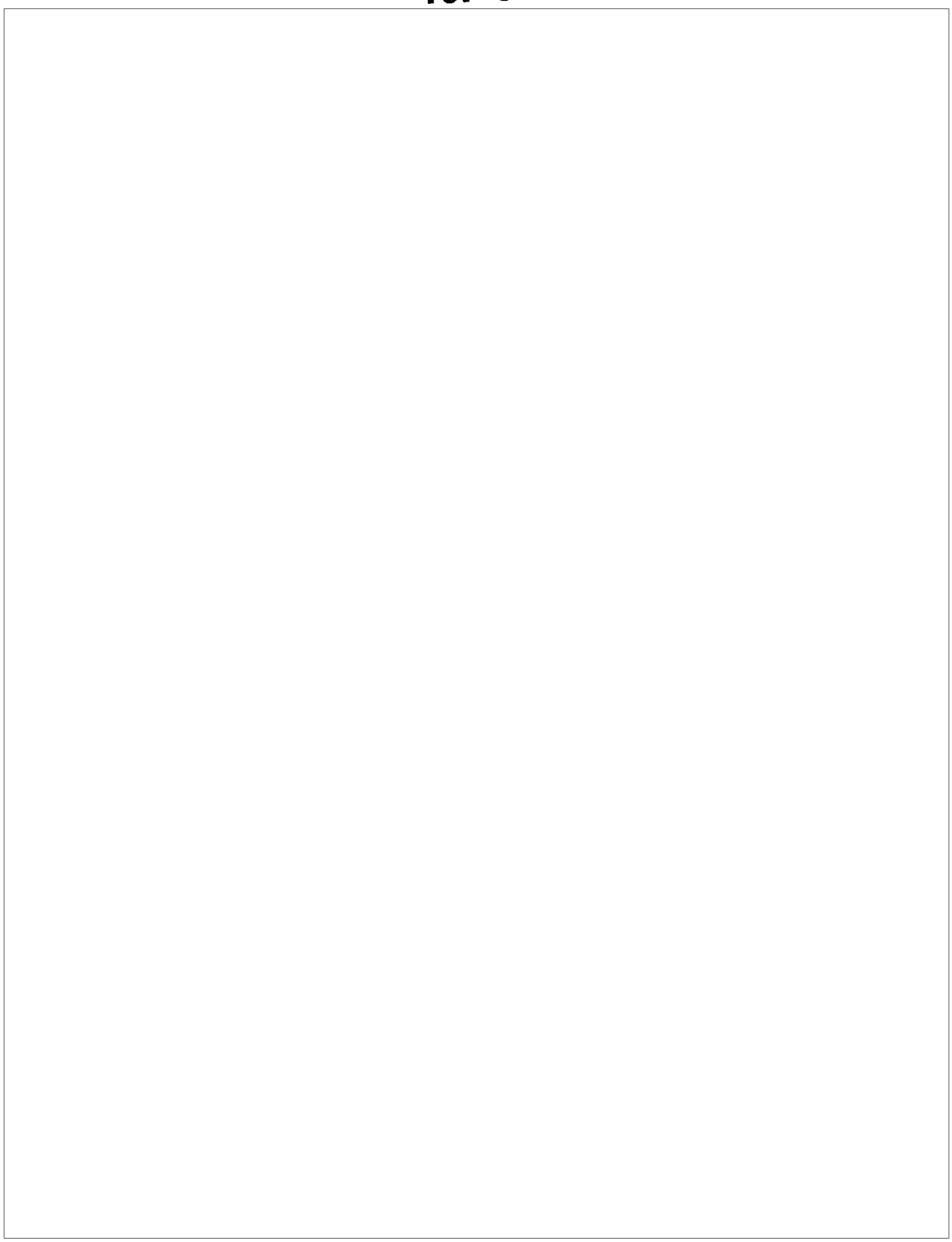


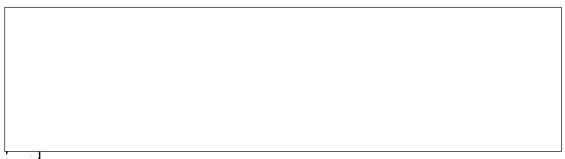
d. Soviet Agricultural Sciences

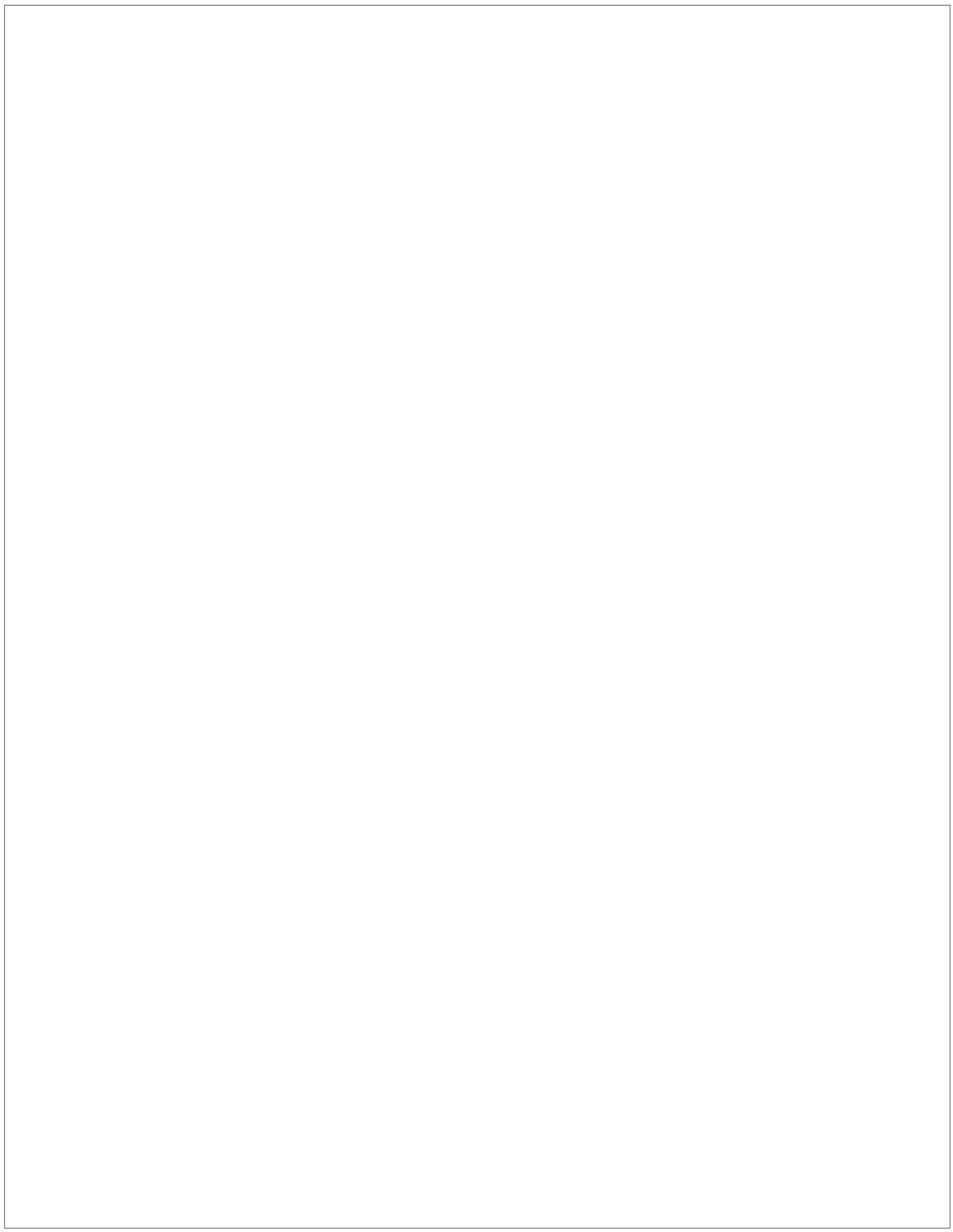
to assist in the compilation of research summaries in the USSR on (i) soil sciences, (ii) cereal grains research and, (iii) new agricultural chemicals. His work (1958 to 1961) contributed to Division SIRs and a Monograph on Biology.

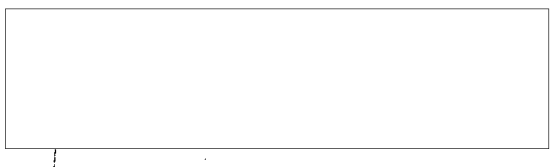
e. Cybernetics

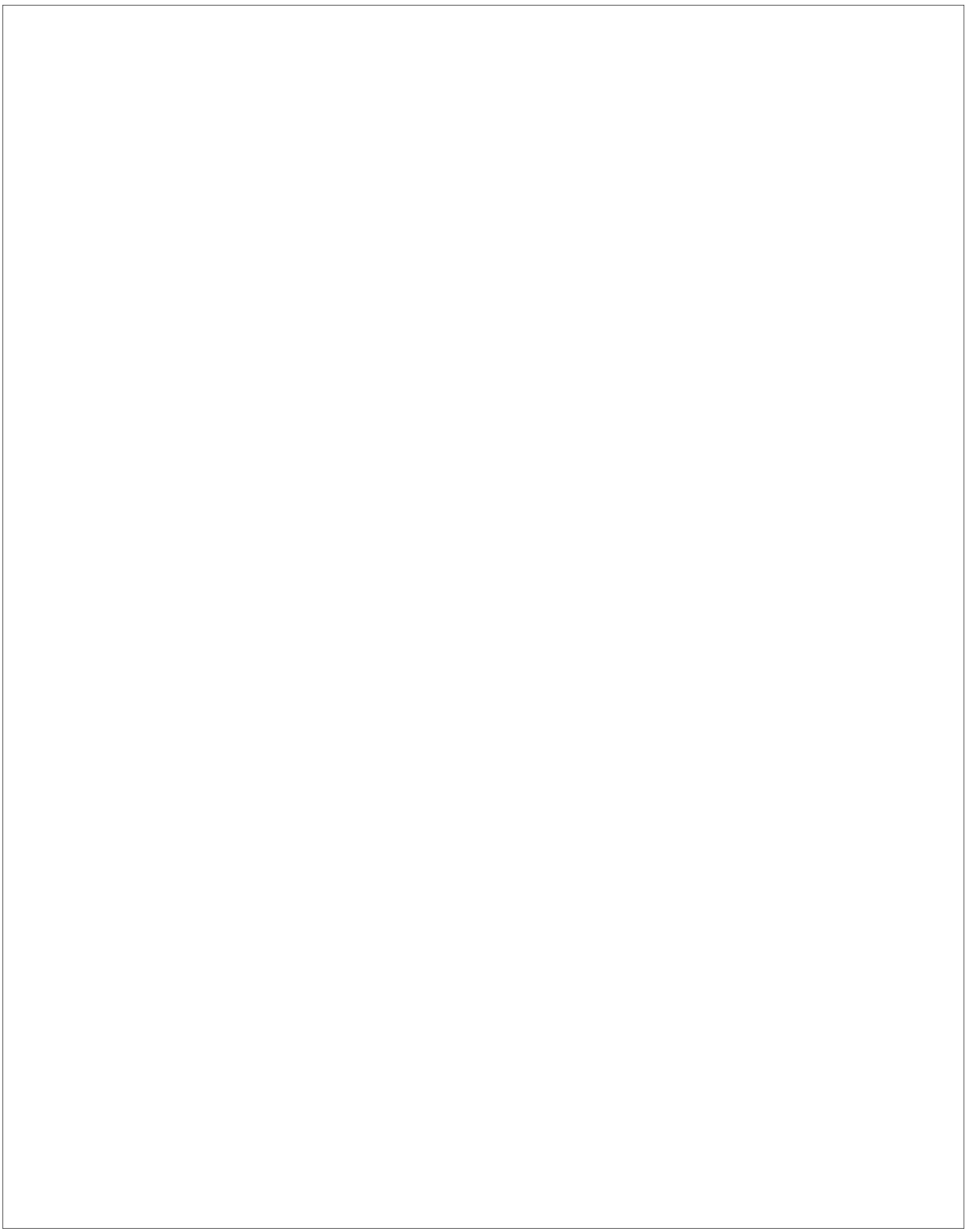


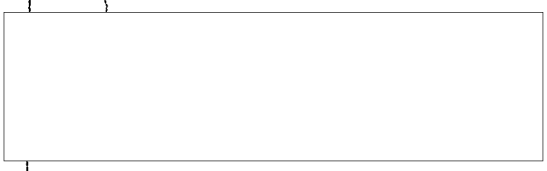


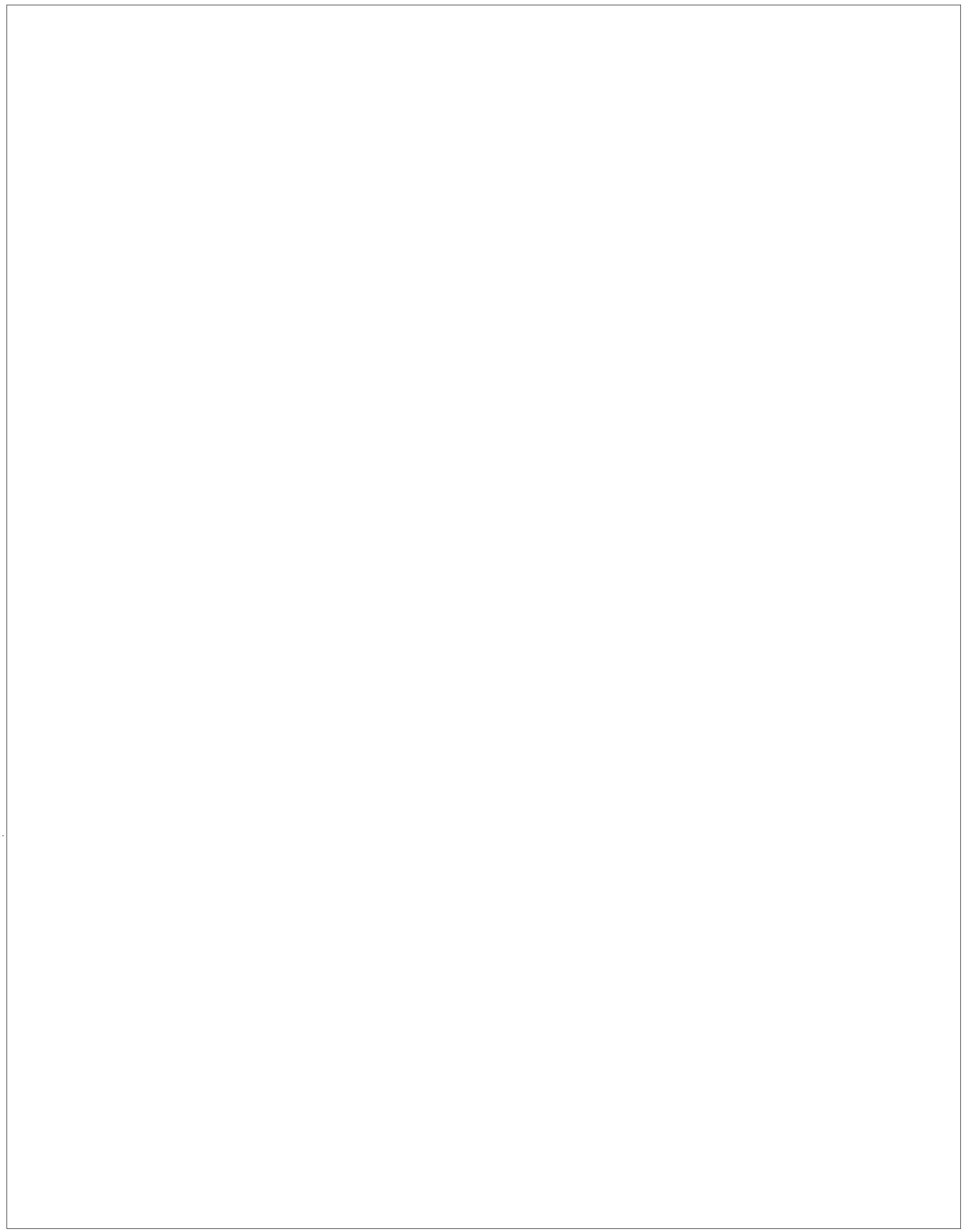


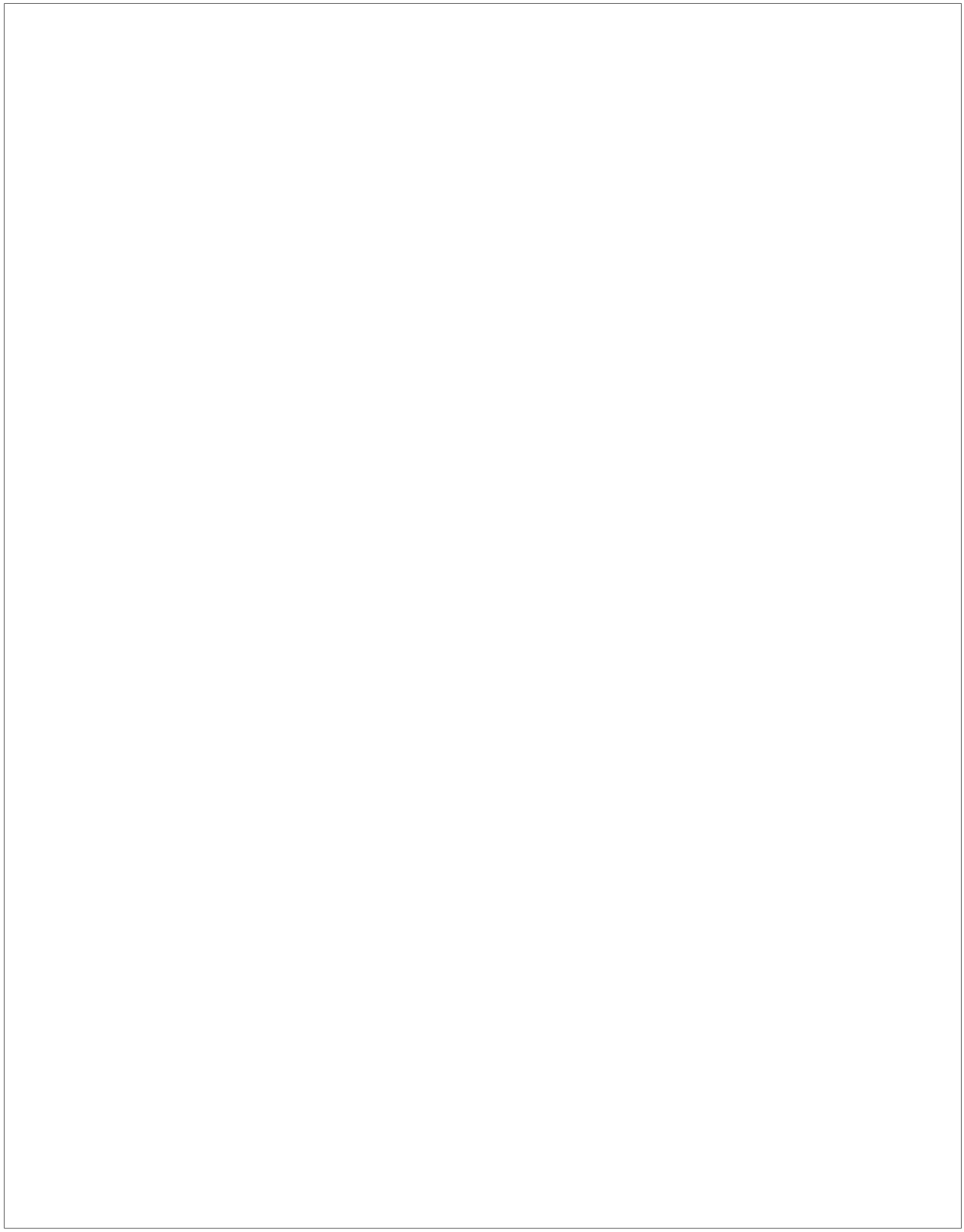


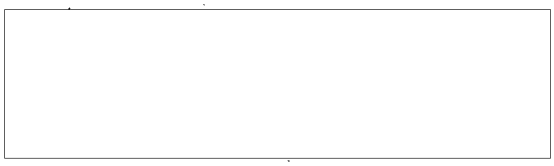


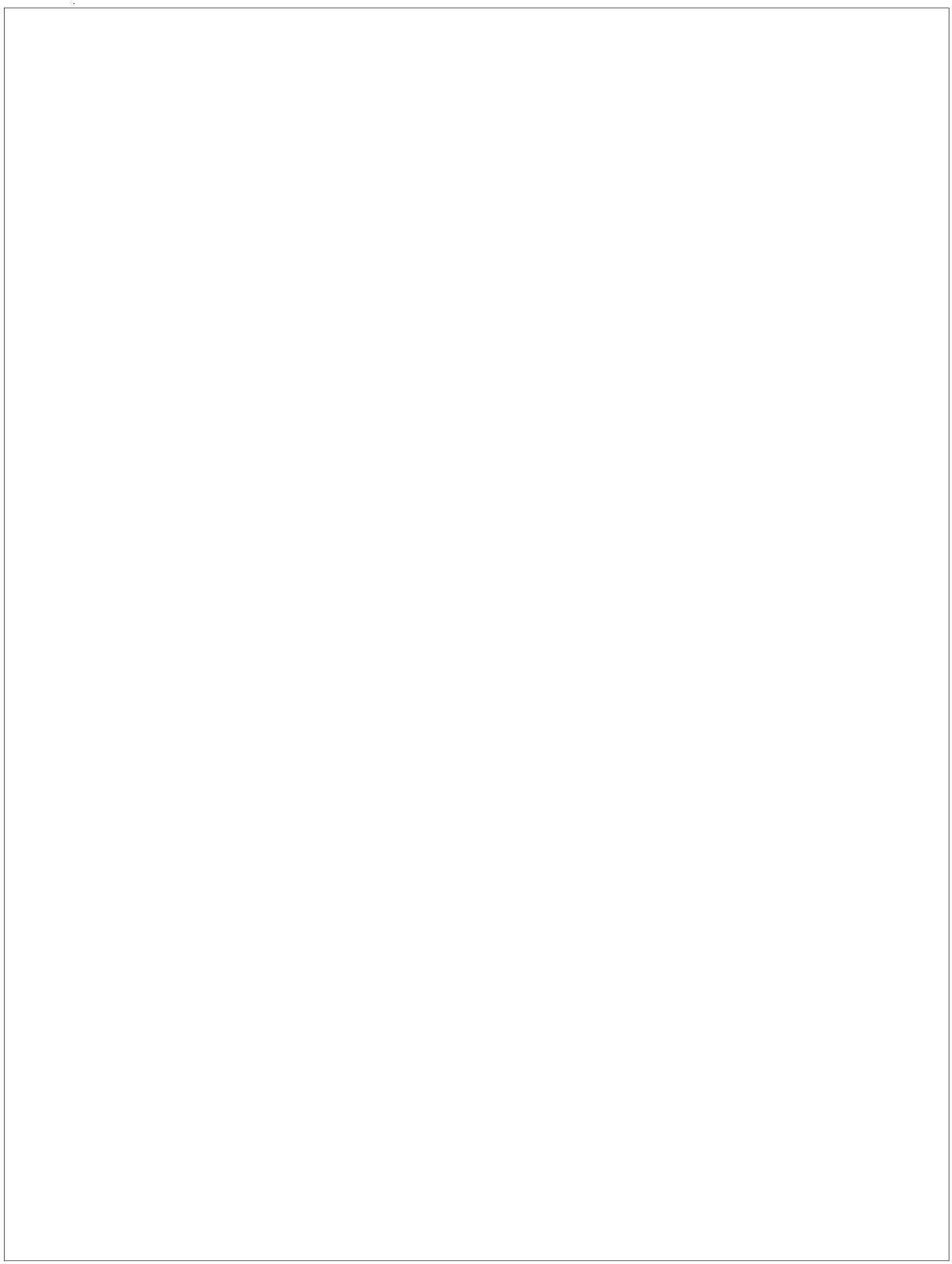












[redacted]

IV. The Medical Intelligence Subcommittee of the Scientific Intelligence Committee

Efforts [redacted] of OSI, to establish interagency coordination reached fruition within the Joint Medical Sciences Intelligence Committee, a subordinate unit of the Scientific Intelligence Committee (1949-1952).

The progress of the Interdepartmental Medical Intelligence Committee, currently (1968) termed the Biomedical Intelligence Subcommittee of the SIC, is delineated below and in Figure 1. It must be pointed out that in the early years of the Joint Medical Sciences Intelligence Committee the absence of a major program in medical intelligence in any of the major member agencies other than CIA placed the burden of a large part of the work of the Subcommittee upon CIA. The JMSIC Chairman and Secretary were furnished by CIA and to the present day OSI furnishes the Chairman and Secretariat of the Subcommittee. A Scientific Intelligence Committee (SIC) meeting in

[redacted]

1963 revealed the major contribution of OSI's medical intelligence unit to the Subcommittee: in that year, fourteen years after the founding of JMSIC, its Chairman was again forced to point out to the Chairman, SIC that the Services Members of the SIC Medical Intelligence Subcommittee did not have adequate resources available to them and therefore could not carry out their medical intelligence research responsibilities in the Subcommittee. The burden of support continued to rest on [redacted] OSI [redacted]

The Scientific Intelligence Committee (SIC) was established 28 October 1949 by DCID 3/3. The SIC in turn established six subcommittees one of which was the Joint Medical Sciences Intelligence Committee (JMSIC). The Chief [redacted] OSI was appointed Chairman of JMSIC. The membership of JMSIC was made up of representatives of Army, Navy, Air Force, State Department, Atomic Energy Commission and CIA and of any ad hoc members which JMSIC designated. On 14 August 1952, DCID 3/4 abolished SIC and replaced it with the Scientific Estimates Committee (SEC). Termination of SIC automatically discontinued the existence of its subcommittees, among which was JMSIC.

At a special meeting on 1 October 1952, the newly-created SEC established a Medical Intelligence Working

[redacted]

Conference (MIWC) on an ad hoc basis for a period of six months. The MIWC membership was the same as that of the JMSIC. In addition, through the coordination efforts of the Chief, [redacted] OSI, meetings were attended now by representatives of the Office of the Assistant Secretary of Defense (Health and Medical), the Federal Civil Defense Administration and the Public Health Service. At the end of the six month period, the MIWC automatically ceased to exist but the personnel of the committee still continued regular informal meetings until December 1955. The Federal Civil Defense Administration's representative ceased to attend these meetings when its medical section was moved to Battle Creek, Michigan.

Need for the coordination activity of the Chief, [redacted] OSI was emphasized by the Service representatives on the MIWC. The members of the informal group constituting the former MIWC called to the attention of the SEC the fact that, although the group had no official status, it had continued to function informally to serve a demonstrated need of its member agencies. These members expressed their strong conviction of the value of the professional intelligence collaboration provided. On December 1955, the SEC established the SEC Ad Hoc Medical Intelligence Sub-

[redacted]

committee (MIS) for a six month period terminating 29 June 1956. The departmental membership remained the same as that for the former JMSIC and MIWC plus the addition of a representative of the Joint Intelligence Committee of the Joint Chiefs of Staff. The SEC Ad Hoc MIS was given the specific task of preparing a report on gaps in intelligence on the Sino-Soviet Bloc. After this, the MIWC continued to work as an informal group. On 17 October 1956, it was activated as the Ad Hoc SEC Medical Intelligence Working Group.

DCID 3/4, dated 3 February 1959, established a Scientific Intelligence Committee (SIC) to coordinate scientific and technical intelligence activities of the government. On 2 April 1959 the SIC issued "Terms of Reference for the SIC Subcommittees in Electronics, Biological and Chemical Warfare, and Medicine". The Medical Intelligence Subcommittee (MIS) resumed official status with publication of these terms. Terms of Reference for the MIS set forth in 1959 by the SIC for the MIS contained these specific responsibilities.

1. provision of a forum of exchange of S&T information for intelligence purposes related to the national security;

2. recommendation of S&T intelligence objectives within the overall national intelligence objectives and indication of their relative priorities;

3. evaluation of the effectiveness of collection and production efforts toward meeting national scientific and technical intelligence objectives, identification of deficiencies and possible remedies for the SIC;

4. participation in the preparation of contributions to national intelligence estimates and interdepartmental intelligence reports as directed by the SIC;

5. direction of attention of the SIC to outstanding foreign advances of concern to U.S. intelligence and the R&D community.

Although a Subcommittee in Biological and Chemical Warfare was also established by the SIC the MIS was historically expected to maintain cognizance of the medical aspects of BW and CW -- and of AW through its AEC Member -- (Note: at BMIS-23, SIC relieved BMIS of responsibility for defensive BW). Membership of the MIS was the same as that of its precursors. The 1959 Terms of Reference for MIS have never been

superseded and are in effect at present (1968). In 1964 the MIS was re-titled the Biomedical Intelligence Subcommittee (BMIS) to reflect more completely the coverage by the Subcommittee of both the biological sciences and medical sciences, its surveillance of R&D advances in these fields and world-wide epidemiological trends. Further, to reflect advances in Soviet and world cybernetics, a separate SIC Memorandum gave responsibility for Control Sciences, including Cybernetics, to the Medical Subcommittee. OSI's [redacted] is playing the major national intelligence and coordinating role in this area, and [redacted] is furnishing the chairman of a bio-cybernetics working group of the Subcommittee. [redacted]

Figure 1 outlines the development of the Medical Intelligence Subcommittee from 1949 to 1968.

Year	Committee Name	Parent Committee
1949-1952	JMSIC (Joint Medical Sciences Intelligence Committee)	SIC (Scientific Intelligence Committee)
1952-1953	MIWC (Medical Intelligence Working Conference)	SEC (Scientific Estimates Committee)
1953-1955	Ad Hoc MIWC	None
1955-1956	Ad Hoc MIS (Medical Intelligence Working Group)	SEC

[redacted]

1956-1959	Ad Hoc MIWG (Medical Intelligence Working Group)	SEC
1959-1964	MIS (Medical Intelligence Subcommittee)	SIC (Scientific Intelligence Committee)
1964-1968	BMIS (Biomedical Intelligence Subcommittee)	SIC

Figure 1. Development of Medical Intelligence Committees/SIC

While the 1959 Terms of Reference of the Subcommittee are still in effect, strengthening of these Terms has been suggested by two Chairmen: (i) in June 1963, Chairman, MIS, submitted a detailed draft of MIS responsibilities as recognized by the Chairman of the MIS Task Force for Study of MIS responsibilities; (ii) in 1964, Chairman BMIS, submitted strengthened Terms of Reference with a view to acquiring effective manpower for the agencies represented in the BMIS. The SIC indicated that it preferred to make no changes in the 1959 Terms but re-affirmed its understanding that the Subcommittee's established Mission and Functions give it sufficient flexibility to fulfill its responsibilities.

The medical intelligence work of OSI, through its [redacted] has occupied the central stage in the intelligence community. The [redacted] has been the only member of

[redacted]

the Subcommittee with a staff to accomplish the work of support to the Subcommittee. Selected examples of the accomplishments of the Subcommittee indicate that [redacted] staff work has achieved coordination of life sciences intelligence and has been, in effect, the highest level producing entity dealing with medical intelligence in the intelligence community.

A. Preparation of Contributions to National Intelligence Estimates

1. This activity has been accomplished by preliminary preparation of draft estimates within the [redacted] in OSI and subsequent coordination of the drafts with individual Committee Members. The list of estimates so coordinated is long: this work is described in Minutes of the Meetings. [redacted]

[redacted]

[redacted]

[redacted]

2. The BMIS through its Chairman (who is the Chief [redacted] OSI) has established permanent Working Groups within the Subcommittee with SIC approval to achieve coordination of life sciences intelligence activities in the community: The Chairman foresaw eventual preparation of estimates assigned to the Subcommittee by these Groups. The Groups now working are:

   a. Environmental Sciences Working Group. (This Group, at first known as the Bioastronautics Working Group, has prepared a contribution to NIE 11-1-67 which was then coordinated in BMIS)

   b. Molecular Biology Working Group (This Group has updated the Estimate of Science and Technology in Communist China (BMIS-35,36,37)

   c. Global Epidemiology Working Group (This Group now publishes the Status Report on the Incidence of Infectious Diseases)

   d. Bio-cybernetics-Behavioral Sciences Working Group is being organized (1967)

B. Exploitation of East-West Exchanges

1. Basic Support

Collection of life sciences intelligence information has been fostered through Subcommittee

[redacted]

support of East-West Exchanges. This support has included briefings and debriefings, preparation of requirements, suggestion of names of personnel to participate on Exchange Teams, identification of installations and locations to be visited, identification of scientists visiting the US or foreign scientists worth visits in their homelands. The Subcommittee has conducted a briefing on the Exchange Program (BMIS-5) for its own Members. [redacted] Selected examples of Exchanges aided by the Subcommittee include the following:

U. S. Virology Team	(9 Apr 56)	
Radiology Exchange	(12 May 58)	
Polio Exchange	(12 May 58)	
Women Physicians	(12 May 58)	
Biochemistry	(22 Jun 59)	(MIS-3)
Mental Retardation	(30 Apr 62)	(MIS-47)
Hospital Systems	(BMIS-3,4)	
Physiological Development of the Child	(BMIS-3,4)	
Hyperbaric Systems	(BMIS-15,16)	

Others are described in Minutes of MIS-70, 71, 77, 78, 79, 80, and 81. Efforts have been initiated

[redacted]

(1967) to program a "Man-in-the-Sea" Exchange Team for the forthcoming Exchange Protocol.

2. Current Support

A regular item on the Formal Agenda of MIS Meetings in the East-West Exchange Program. The [redacted] OSI Member of the Subcommittee prepares and distributes to its members at each meeting a report entitled "East-West Exchange Notes" (OUO). These notes direct attention to current or projected Exchange visits of Soviets to the US and American Scientists to the USSR.

C. Exchange of Information on the Incidence of Infectious Diseases

1. The Subcommittee has regularly published each month a Status Report on the Incidence of Infectious Diseases. This report has presented in graphic form news of disease outbreaks throughout the world reported during the time period since the last scheduled meeting of the BMIS. The Global Epidemiology Working Group of the BMIS assumed responsibility for its preparation in 1966. Disease outbreaks which are reported through channels classified higher than OUO are announced orally at each Meeting and are recorded in BMIS minutes. The "Status Report" thus serves as a device to communicate to all Member Agencies, including HEW and NIH, current information on diseases occurring throughout the world.

Members have paid tribute (MIS-73) to the amount and quality of information on epidemics made available in the "Status Report." The value of the Committee meeting as a central point for information on infectious diseases has been noted by the Members (MIS-71, 78, 79).

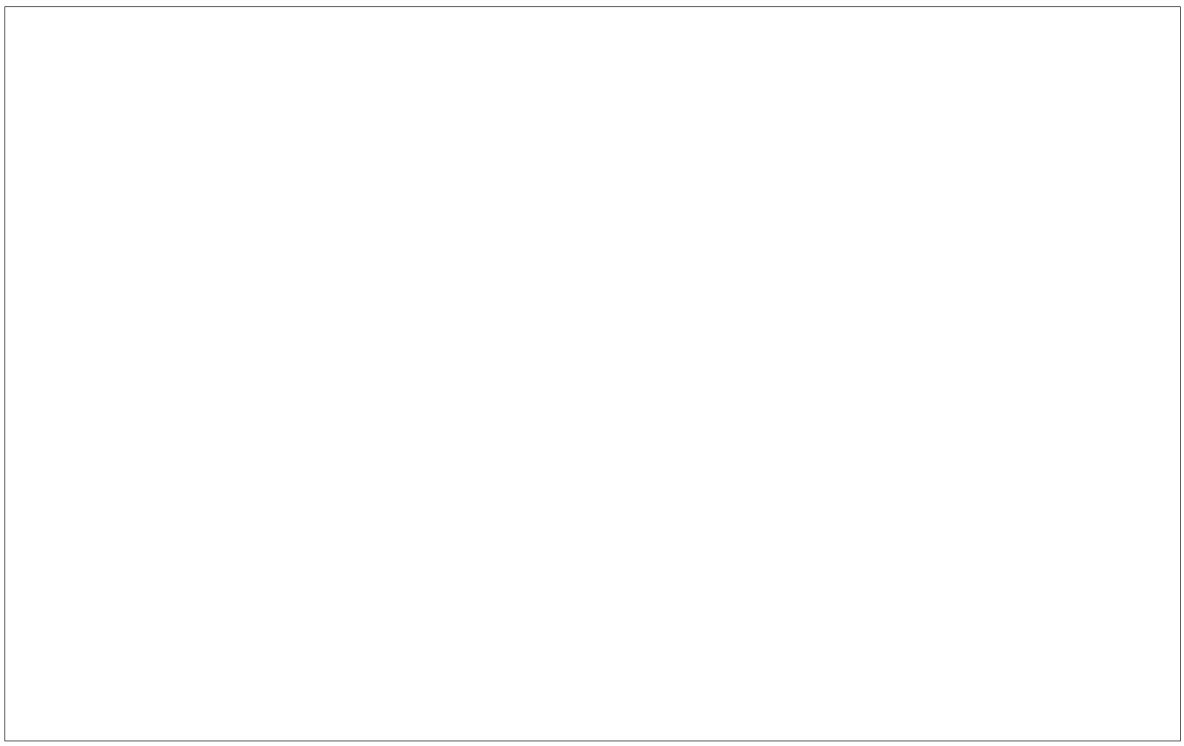
Individual MIS Members regularly supplement the formal Status Report with oral reports of information received in their respective agencies. An analysis of the El Tor cholera outbreak in the Far East was presented at an MIS Meeting (MIS-80) by the HEW representative.

A portfolio of Global Epidemiology Maps has been assembled for background source material support in the preparation and utilization of the Status Report on Infectious Diseases. The portfolios have been prepared in looseleaf format so that additional maps can be inserted as needed and maps exchanged as indicated (BMIS-11).

D. Exchange of Fundamental Science Information

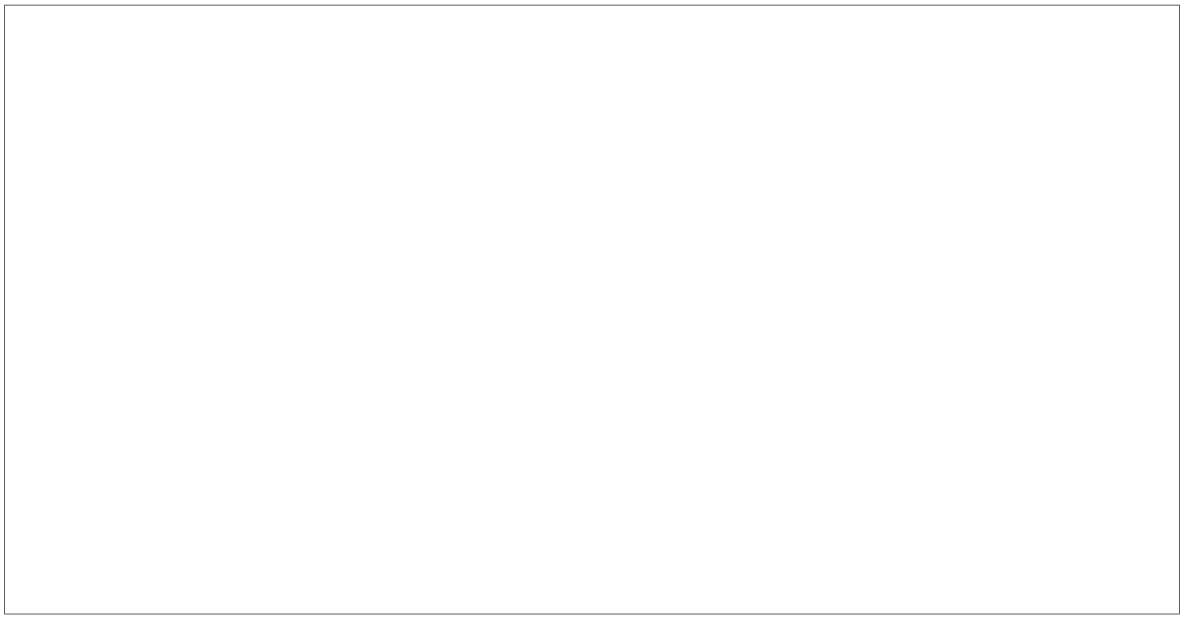
1. Report on Subjects of Substantive Medical Intelligence Interest.

Coverage of fundamental science areas of intelligence concern has been effected within the Subcommittee by the use of formal and informal reports and seminars to the Members. These reports emphasize pertinent substantive areas, intelligence collection, and coordination of activities.



2. Inauguration of Intelligence Orientation Seminars.

The Chairman established a program of seminars on intelligence and intelligence-associated activities to be conducted within the Formal Agenda of the Meetings.

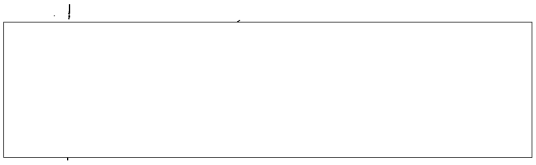


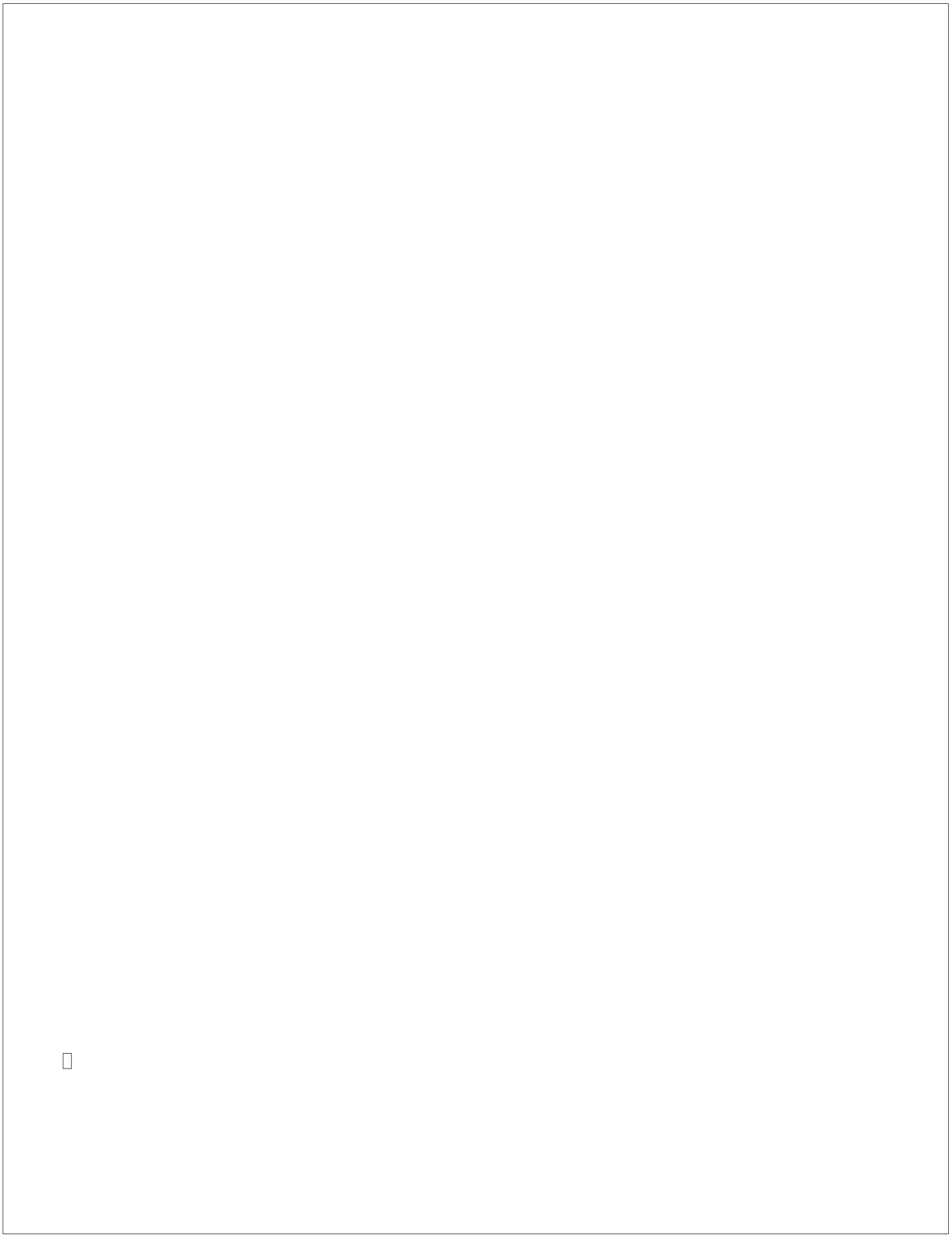
E. Identification of Intelligence Objectives and Priorities

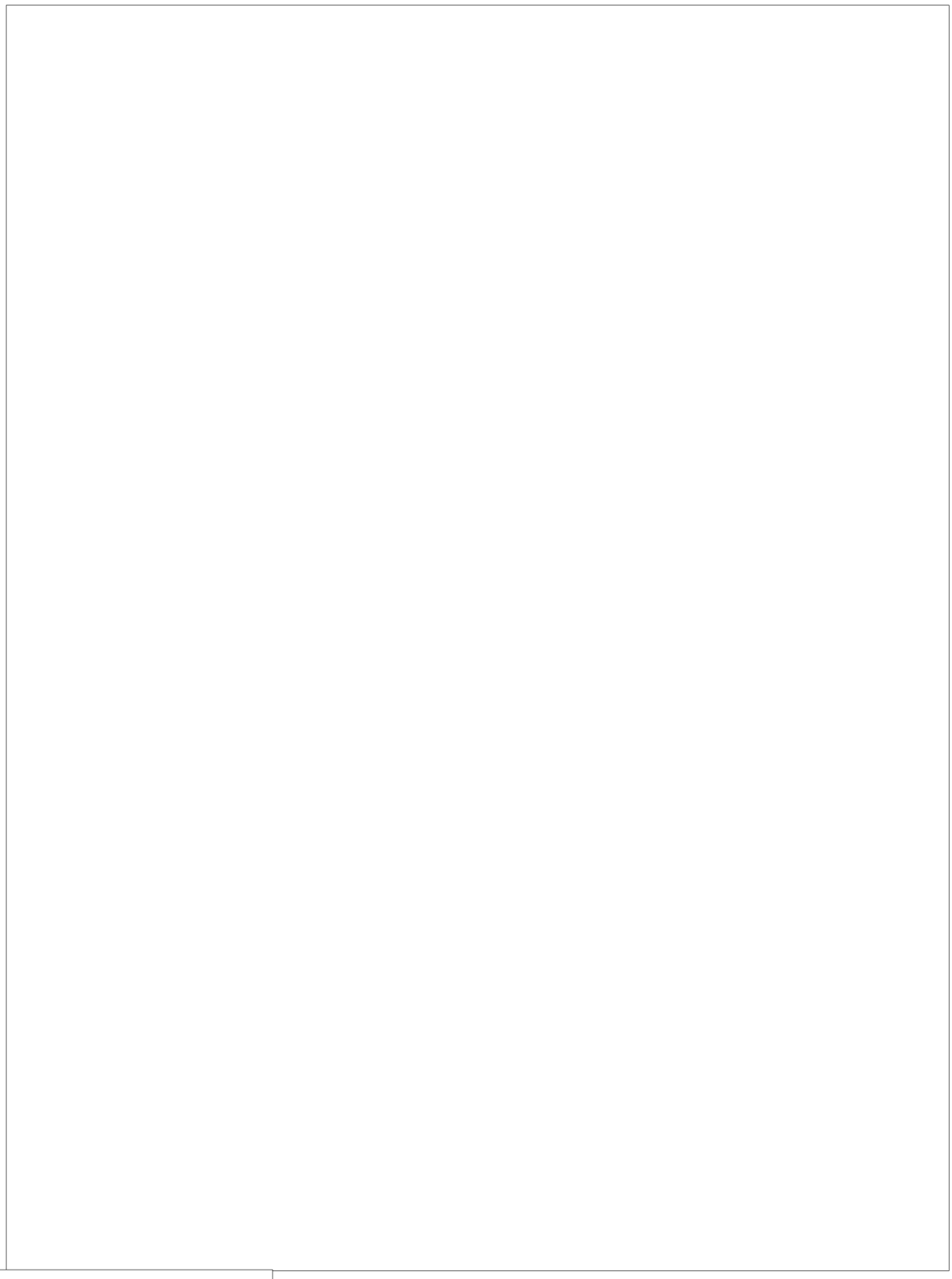
At its first meeting in April 1950, the JMSIC undertook the coordination of general medical requirements (JMSIC). In subsequent meetings it identified countries of primary importance to medical intelligence (JMSIC-3, 6 July 50) and listed priorities in general order of importance (JMSIC-7, 1 Sep 50).

F. Publications of BMIS

1. The BMIS has undertaken the publication of reports under a BMIS cover sheet. These reports are devoted to topics of interest to a broad circle of readers in addition to those in the intelligence community.







TAB A

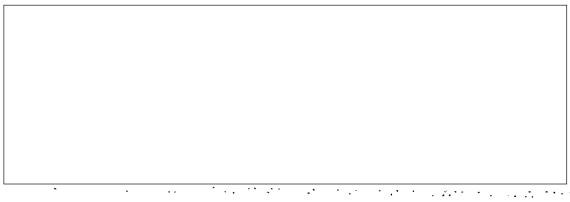
HISTORY OF [redacted] SI

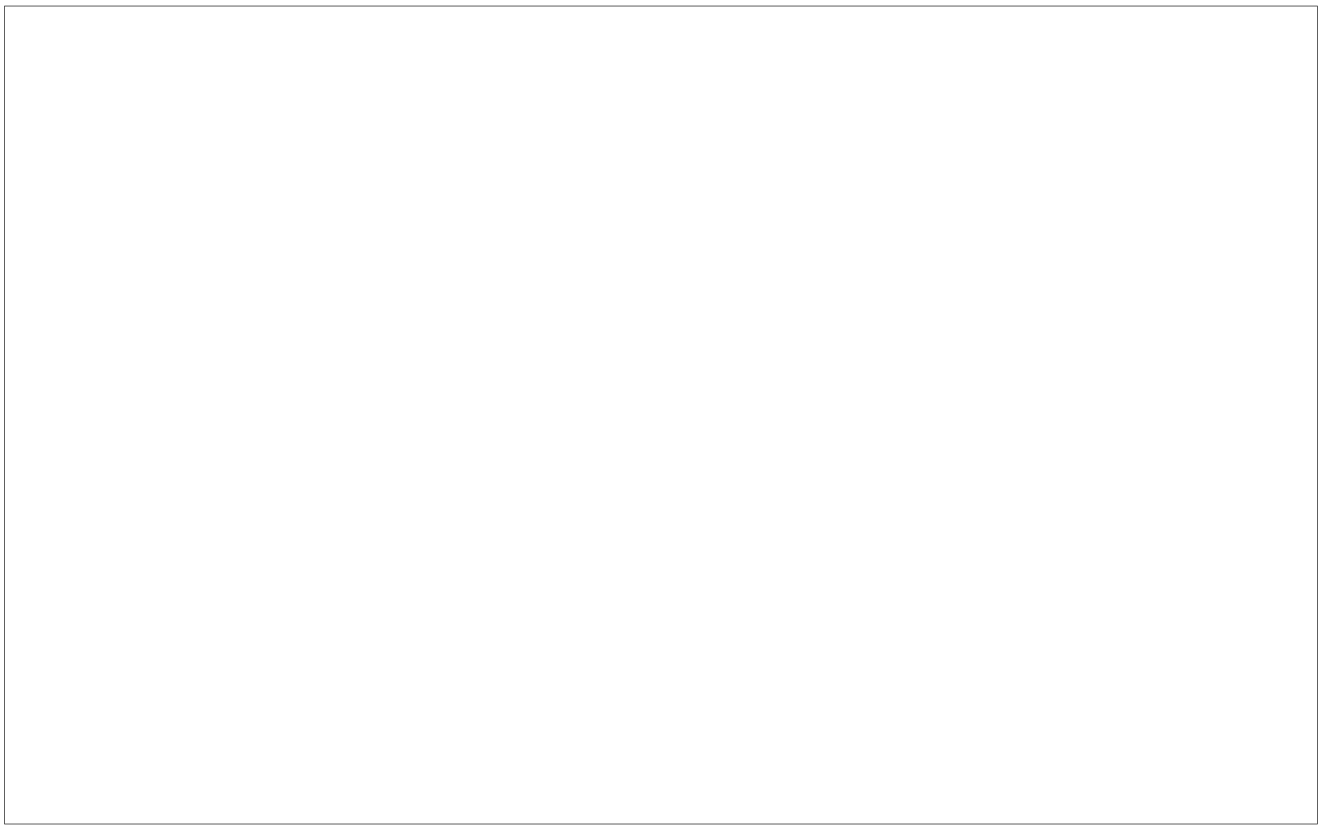
31 Dec 1948 Establishment of OSI:

The already existing [redacted] of ORE was separated from ORE. It acquired Office status and was given the name Office of Scientific Intelligence (OSI).

[redacted]

[redacted]





TAB B

FUNCTIONS OF [redacted]/SI

The following functions of the [redacted] have existed, with some refinements since [redacted]

A. Research and Production

(1) Obtain data [redacted] in relation to:

(a) Foreign research, development and trends which specifically influence the health and efficiency of man including space medicine; nuclear medicine; the understanding and control of human behavior; medical aspects of civil defense; biochemistry, pharmacology, radiobiology, microbiology, pathology, physiology, biophysics, and clinical medicine.

(b) International health problems and practices including organization and administration, personnel, facilities, training

[redacted]

incidence, prevention and treatment of diseases and technical aid, including bilateral and multilateral activity in the health field.

(c) Foreign research, technology and trends in biological sciences including molecular biology, microbiology, genetics, radiation biology, physical, chemical, and mathematical biology; marine biology, astrobiology and astrobotany; and agricultural sciences related to food potential (Veterinary medical sciences are -- 1967 -- part of the responsibility of LSD, while agriculture has been given a lower priority.)

(d) Theoretical technical and applied aspects of the control sciences in the SovBloc including:

1) Scientific efforts to generate theory concerning the regulatory mechanisms which control complex biological , technical and/or social systems or organization, and involve problem-solving, decision-making and other aspects of information processing in natural processes.

2) Technical and engineering efforts to model physically the systems generated by the control theorists including self-optimizing behavior, mechanical translation, information transference, processing, retrieval and storage, and automatic control.

3) The application of control concepts, schemes and devices to the regulation of living organisms, technical complexes and social processes. Applications may concern brain-programming in the New Soviet Man, the creation of a self-optimizing, automated, industrial-economic base and weapon-system control.

(e) In addition, the [redacted] provides the chairmanship and secretariat of the Biomedical Intelligence Subcommittee of the Scientific Intelligence Committee and, since 1967, of the BW/CW Subcommittee.

(2) In accordance with long-range and fiscal year intelligence research and production programs and objectives, develop, schedule and conduct all-

[redacted]

source research in the assigned sciences and fields, and produce the following types of intelligence for review by the Intelligence Board and approval by the AD/SI where required:

(a) Contributions to National Intelligence Estimates and National Intelligence Surveys, and critiques of contributions by other agencies.

(b) Scientific Intelligence Reports, Scientific Intelligence Memoranda, Scientific Intelligence Digest items and Scientific Intelligence Research Aids.

(c) Special estimates, reports, briefings and debriefings for internal OSI use and in response to requests by other offices and agencies.

(d) Current intelligence items for OSI publications and for support of the AD/SI.

(3) Coordinate intelligence research and production with other OSI divisions, other Offices, agencies and groups, including participation in working groups, such as the Biomedical Intelligence Subcommittee and the BW/CW Subcommittee of the Scientific Intelligence Committee , in order to delineate areas of

responsibility, to fill gaps in intelligence research and production, to exchange information and to provide scientific and technical intelligence support.

(4) Advise and assist the Production Staff in developing OSI programs and objectives for intelligence research and production, and programs for the coordination of scientific and technical intelligence research and production.

(5) Assist the Staff in scheduling and allocation of intelligence research and production responsibilities and in the dissemination of finished intelligence.

(6) In collaboration with the Staff, advise OCI in the development of intelligence indicators and in evaluating current intelligence.

(7) Initiate external projects and proposals for the use of consultants in support of division activities relating to intelligence research and production for approval by AD/SI, assist the Administration Branch in developing proposals for external projects and administer and supervise execution of such approved external projects, preparing reports to the AD/SI as required.

(8) Compile information in assigned fields on the scientific and technical intelligence research and production activities of other offices and agencies and make recommendations for improvement as appropriate.

B. Support of Collection:

(1) Assist the Office in establishing collection priorities and in development of long-range and fiscal year programs for support to collectors

(2) Develop proposals relating to new and improved techniques and systems for collection and collation of scientific and technical intelligence and information, coordinating and collaborating with other divisions, Offices and agencies as required.

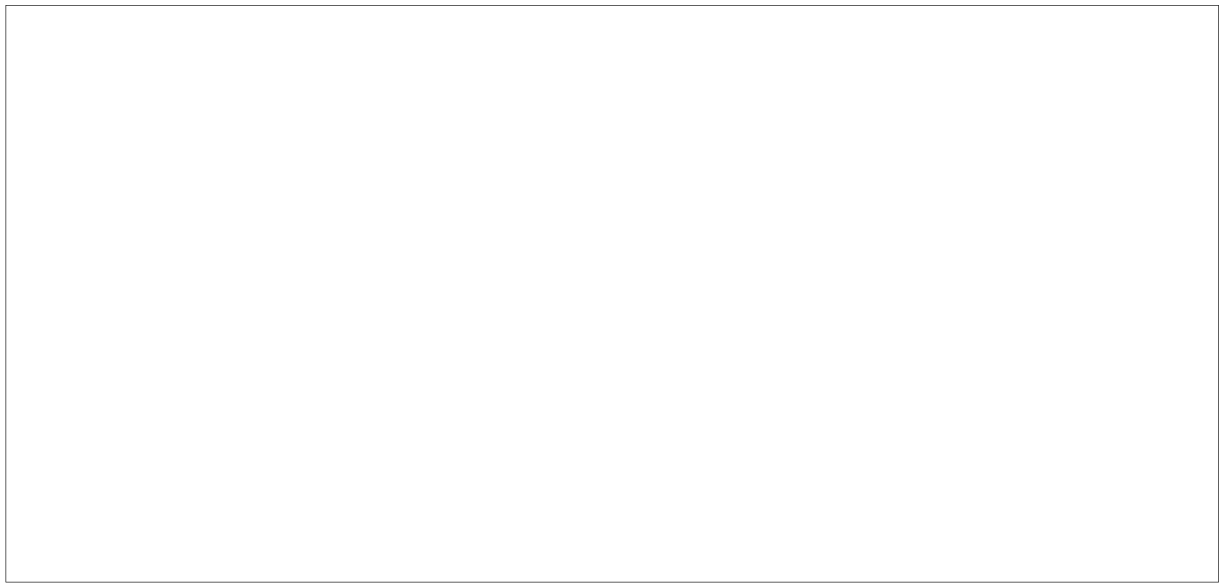
(3) Collaborate in the preparation of recommendations regarding utilization of existing sources of information

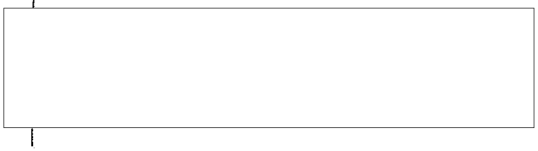
(4) Initiate external projects and proposals for the use of consultants in support of division activities relating to support of

collection for approval by the AD/SI, assist Administration Branch in developing proposals for external projects and administer and supervise execution of such approved external projects, preparing reports to the AD/SI as required.

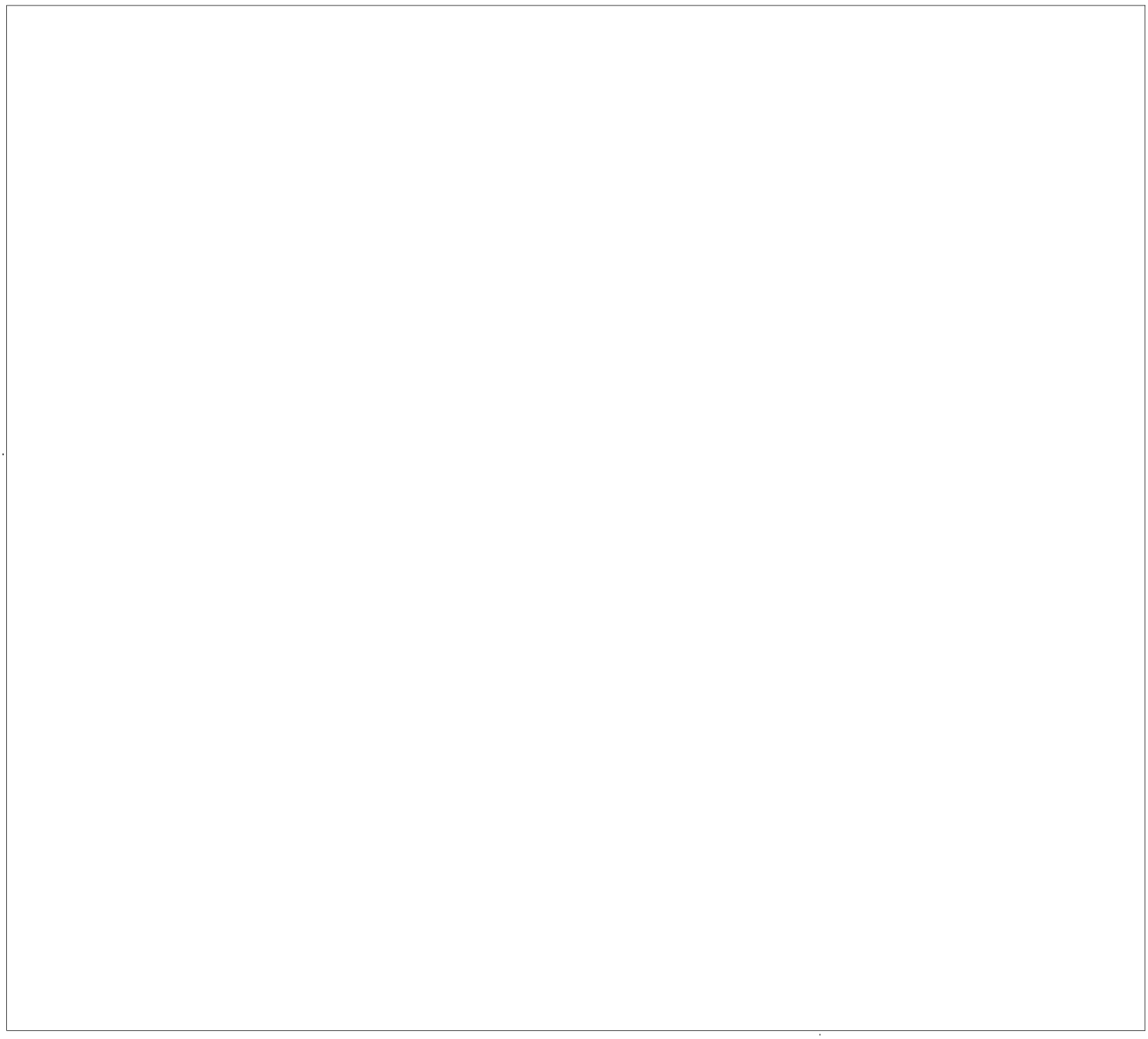
(5) Develop collection requirements, target briefs, priorities lists and reading guides, and conduct necessary liaison with collectors to expedite fulfillment of requirements.

(6) Compile information in assigned fields on the collection activities of other offices and agencies and make recommendations for improvement as appropriate.





TAB C



Annex VII

[redacted]

CONTENTS

Page

[redacted]

[redacted]

Annex V

OSI and ELINT

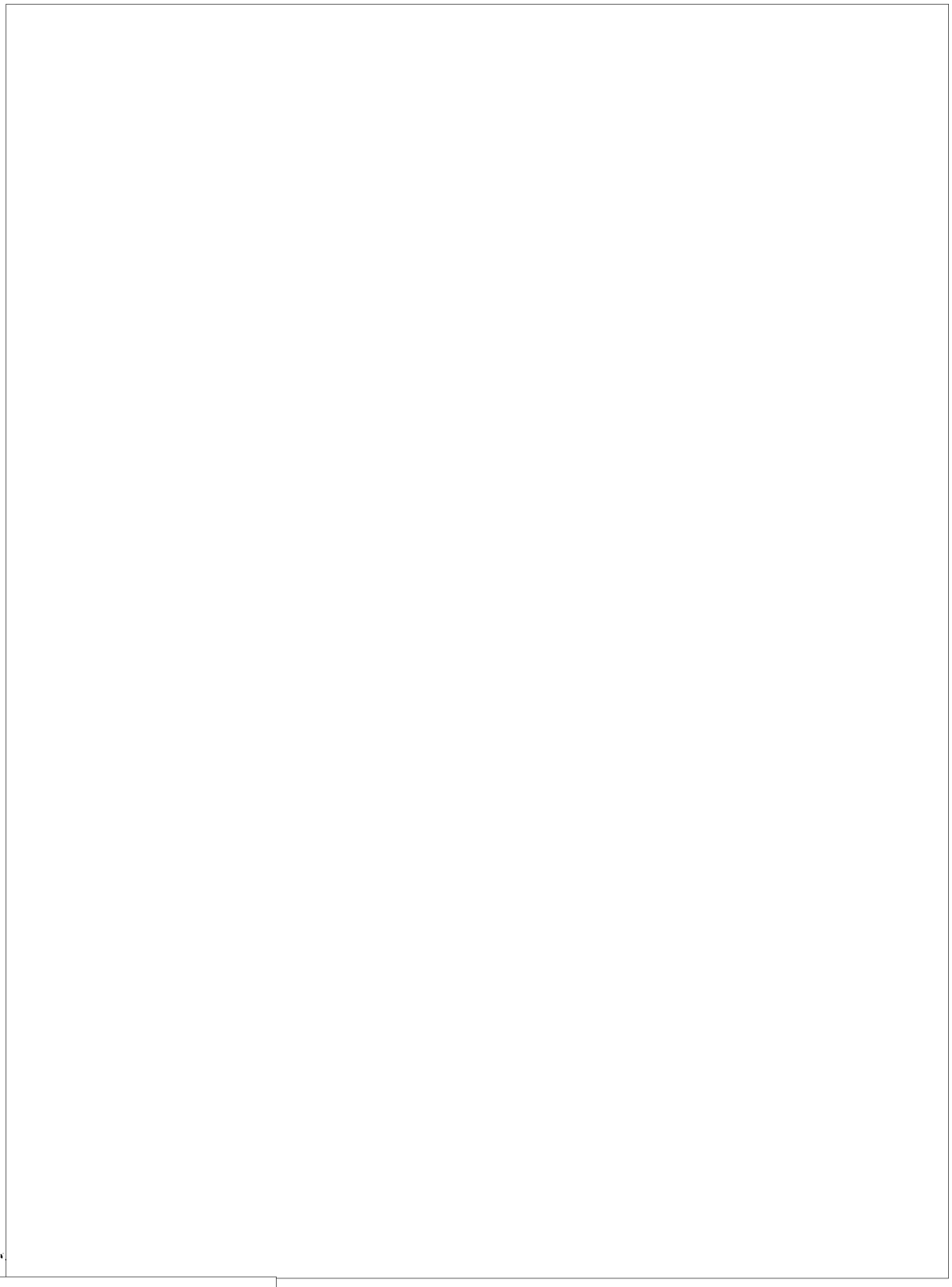
CONTENTS

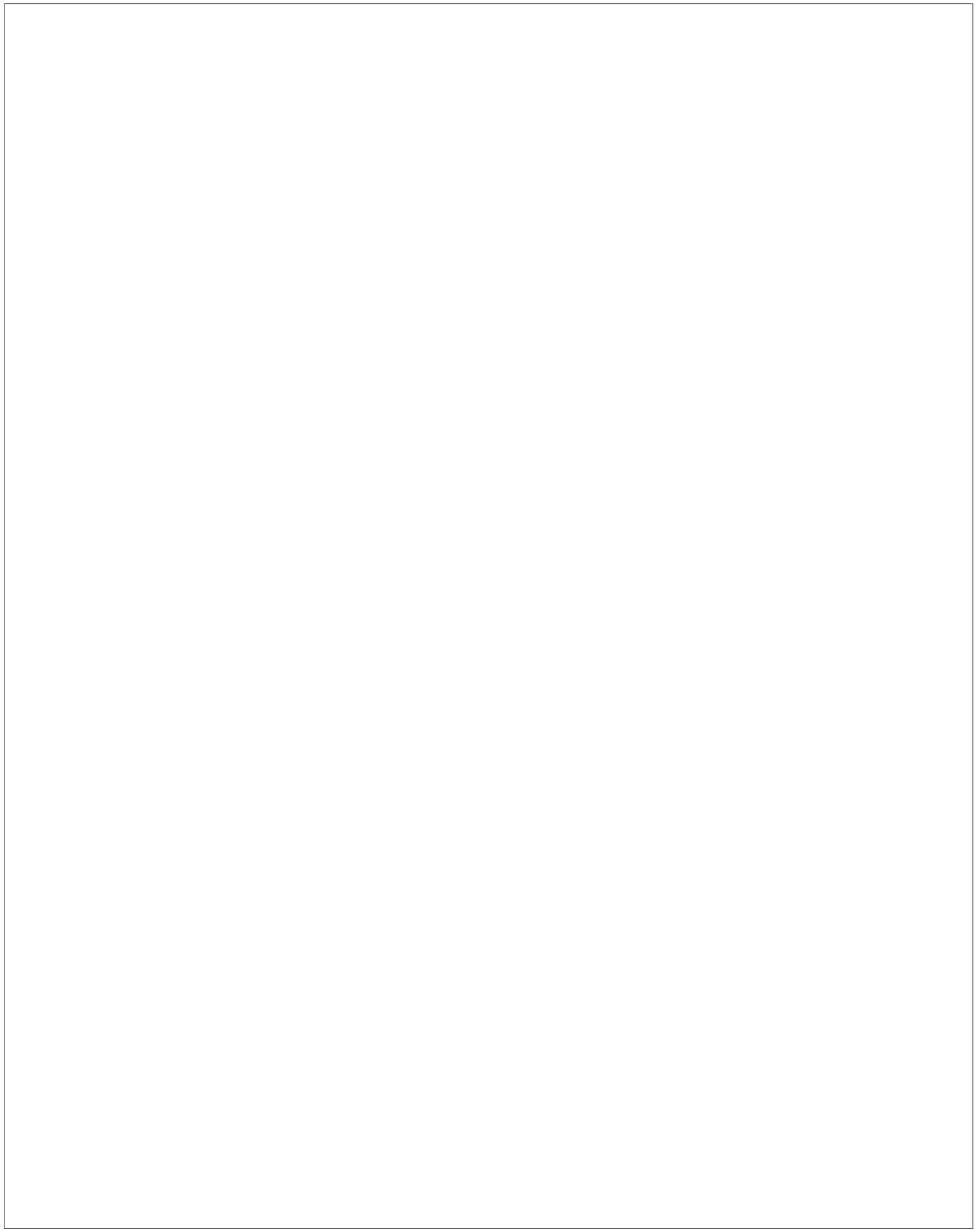
Page

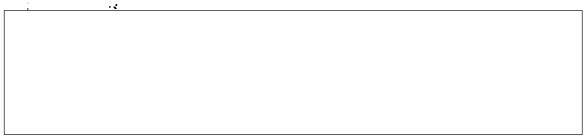
[redacted]

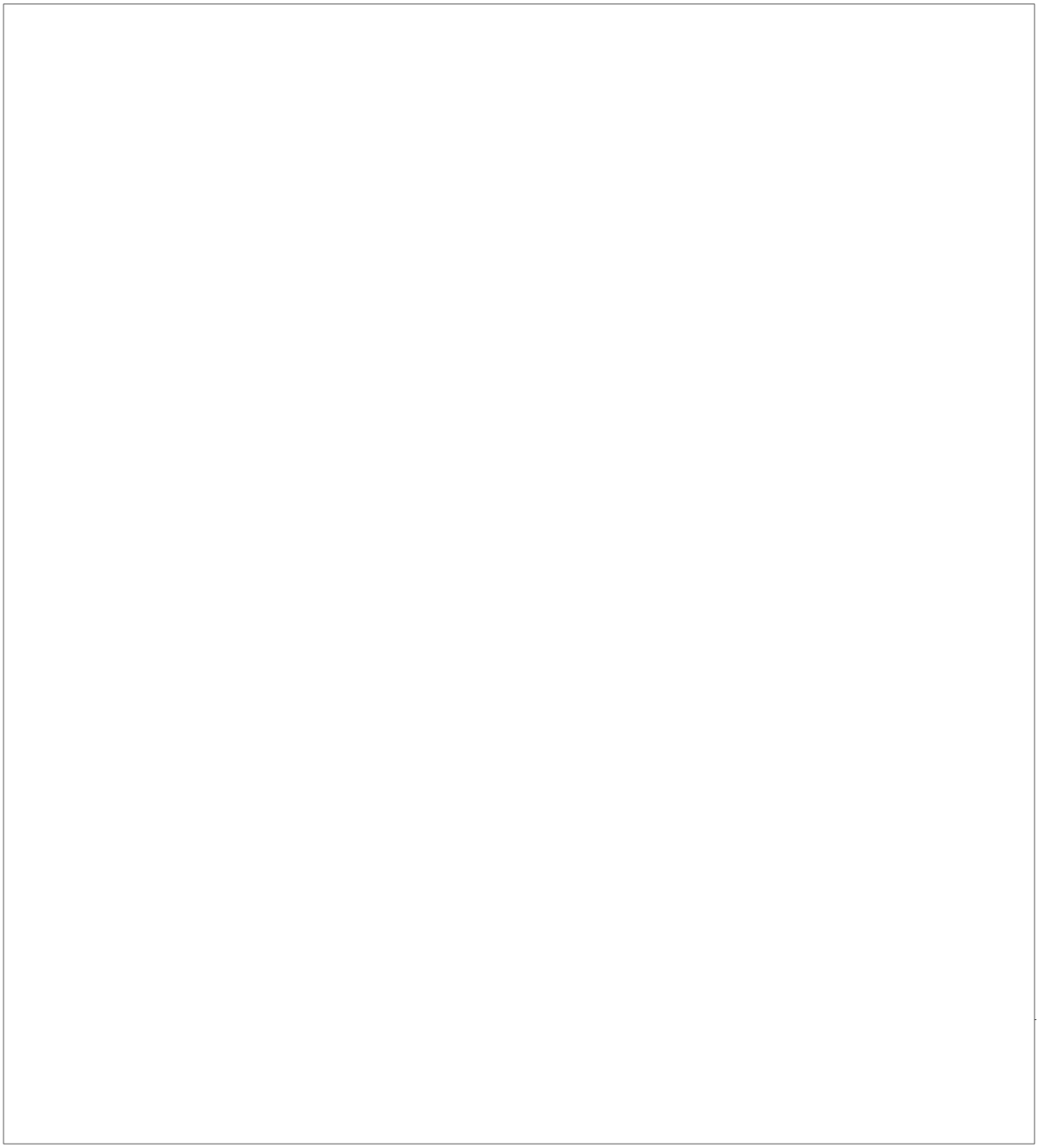
Annex V

OSI and ELINT









Annex VII