

Report for:

U.S. Army-Naval Communication Intelligence
Coordinating Committee.

Special Report No. 1

The Need for New Legislation Against Unauthorized
Disclosures of Communication Intelligence Activities

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Representatives from
the Army and the Navy

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SUMMARY

Chapter I outlines the great need for continued security precautions in handling the special information derived from communication intelligence activities. In Chapter II the story of the modern development of cryptography, cryptanalysis and traffic analysis is told to demonstrate the increasing complexity of codes and ciphers during the past generation, and the consequent difficulties of deriving intelligence therefrom. This fact has necessitated the influx of a large number of persons into U.S. Army and Naval Communication Intelligence organizations, since the carefully selected few of pre-war times could not cope with the tremendously increased traffic.

Rapid expansion has made the problem of continued security even more pressing now than ever before. A detailed story of the publicity leaks concerning the success of communication intelligence in various nations has been outlined to cover the post-war period from 1920 to 1930, the Yardley era from 1931 up to the outbreak of the American-Japanese war, and finally, the present period in which the

most dangerous publicity leaks have occurred. Numerous instances have been cited to indicate the great need for improved legislation to protect the security of communication intelligence activities in the United States.

Chapter III discusses the effects of publicity leaks on United States' cryptanalysis and traffic analysis, with particular reference to Japanese security precautions after Yardley's disclosures in 1931, and with special emphasis on the developments resulting from the unfortunate publicity concerning the Battle of Midway.

Present legislation pertaining to security violations is analyzed in Chapter IV, and certain deficiencies are discussed. Chapter V suggests the inclusion of certain provisions in the proposed new legislation, and Chapter VI proposes that joint legislative action be inaugurated simultaneously by the English-speaking powers, if not all the United Nations, to protect the valuable sources of military and naval intelligence developed in this war.

A proposal for the establishment of a Joint

Military Intelligence Reviewing Commission to review all publications discussing sources of military intelligence is made in Chapter VII. The creation of a special reviewing committee, comprising a few outstanding individuals of different political beliefs, some representatives from the press, and military and naval officers, is the only certain means of preventing disclosures which will reveal the source of operational intelligence.

Chapter VIII discusses certain considerations in procuring new legislation, and points out that both interventionists and non-interventionists in Congress will support a well-considered plan for protecting an activity that has served as a scouting arm for our fighting forces in providing more accurate information concerning the enemy's intentions at less cost than any other form of intelligence.

I.

Purpose of the Report

This report has been prepared for the information of those in high command who have been charged with the direction and coordination of the Communication Intelligence organizations of the U.S. Army and Navy. The very nature of the work involved in the operations of these organizations has made the preservation of secrecy an important consideration. Unauthorized disclosures of their activities have jeopardized, on several occasions, the results of many years of arduous research and have endangered the safety of our armed forces, who at times have been dependent in great part on communication intelligence for information concerning future operations.

In view of the ever present danger of a disclosure in post-war times when military censorship will have ceased and most of our personnel will have been demobilized, it was deemed advisable to acquaint higher authorities who need to know with details of the serious security problem to be solved. For this reason, an historical resume of some of the famous publicity leaks of the past generation has been included in this report to demonstrate the need

for greater security precautions at the end of this war. An analysis of current legislation, pointing out some of the deficiencies therein and suggesting some provisions which may be acceptable to higher authorities for incorporation in a new law, has also been provided as a basis for further action by those responsible for the procurement of new legislation.

It is recognized that a satisfactory solution of this problem will probably encroach upon the freedom of the press and freedom of speech. The issues at stake are so important, however, that some action must be taken in the interest of national safety. The value of communication intelligence will not disappear with the cessation of war, for a review of the important information supplied to governmental authorities from this source prior to the war makes it obvious that the U.S. Army and Naval Communication Intelligence organizations must continue to be a valuable asset to the prosecution of the national policy in the years to come.

While the needs of the Army and the Navy will not be so pressing in times of peace, the requirements of the diplomatic and economic fields must be met. One important factor, which has further emphasized the

need for adequate protection from publicity, is that cryptanalysis has advanced beyond the pen and pencil stage, and in order to pursue it successfully in the future, complicated, expensive machinery and considerable numbers of highly trained personnel will be necessary. For these reasons every possible precaution must be taken to ensure the preservation of this valuable aid to our national safety.

II

Historical Background Of Unauthorized Publicity
Concerning Communication Intelligence Success

1. Modern Development of Cryptography, Cryptanalysis,
and Traffic Analysis

The increased importance of radio in modern communications as a channel for the conveyance of important military, diplomatic, and economic information has become apparent with the growing tempo of modern life. No other medium can rival the speed of radio in instantaneously relaying important decisions of commanders to their swiftly moving subordinates, scattered over widely separated areas. This fact explains the tremendous growth of communication intelligence organizations in every large nation since the last World War. The discovery of an enemy's or potential enemy's secret plans through radio interception has meant tremendous savings in men and money for many nations in recent wars.

Both cryptography and cryptanalysis have reached new heights in the last generation. The sudden development of communication intelligence emphasized the importance of cryptanalysis, for not till

the advent of radio could experts so easily obtain the mass of material necessary for proper research. Concomitantly with the progress of cryptanalysis, cryptography made a similarly noticeable advance, since the fact that radio messages were available to all who desired to intercept them necessitated the creation of extremely complex codes and ciphers. Thus, by a process of action and counteraction, both cryptography and cryptanalysis have made steady advances with first one and then the other in the lead. The ambition of every nation has been to develop unbreakable ciphers for its own use and to solve every cipher in use by the enemy. Strangely enough, the decryption of enemy ciphers is probably the only certain method of a country's ascertaining the security of its own cipher system. Hence, the significance of modern cryptanalysis is twofold:

(a) It has provided more accurate intelligence concerning the enemy's intentions at less cost in men and money than any other form of intelligence;

(b) It has served as a check on the security of a nation's own ciphers and codes.

It must be remembered, however, that the U.S. Army and Naval Communication Intelligence organizations

were created not to achieve success in the academic field of cryptanalysis, but to provide intelligence for operational authorities by means which may involve decipherment only incidentally. Traffic analysis, which does not possess the antiquity of cryptanalysis for it is as new as radio itself, is also an important phase of communication intelligence activity.

2. Expansion of United States Communication Intelligence Organizations

The tremendously increased flow of enemy operational traffic, which began with the outbreak of this

war, necessitated a great expansion of personnel in both the U.S. Army and Naval Communication Intelligence organizations. Consequently, many persons were introduced for the first time to activities which had long been deliberately hidden by strictest security precautions. In addition to those who have been members of the Army and Naval Communication Intelligence organizations, many other Army and Naval personnel have become aware of the existence and operations of these organizations through the handling of intelligence which necessarily had to be disseminated to certain operational commanders.

War correspondents and other publicists also have had an opportunity to come in contact with some of this intelligence, e.g., Stanley Johnston who divulged the story behind the Battle of Midway, and Fletcher Pratt who has also written a book on crypt-¹analysis. Furthermore, some members of the P.C.C., F.B.I., and State Department, and certain other civilian authorities have been cognizant of the success of American cryptanalytical agencies. It is estimated

1 - Fletcher Pratt, Secret and Urgent: The Story of Codes and Ciphers, Blue Ribbon Book, Garden City, N.Y., 1939; "The Mysteries of Midway", and "The Knockout at Midway", Bureau of Naval Personnel Information Bulletin, Nov.-Dec., 1943, reprinted from Navy's Magazine, 1943.

that at least 50,000 members of the Army and Navy have handled cryptographic material, and several thousand Army and Naval personnel, exclusive of intercept personnel, have been associated with cryptanalytical activities. The number of those who have handled the resulting intelligence is not as large as those who have been engaged in processing the material, but even the disclosure of certain techniques would be as damaging as the revelation of actual intelligence. It is apparent, therefore, that a large number of individuals possess knowledge which would be extremely damaging to the national interest, if made available to unauthorized persons.

It should be pointed out that it is not possible to hide the existence of large cryptanalytical organizations from experienced espionage agents. Furthermore, the enemy takes for granted, as we do, that every radio message transmitted in war time is intercepted by hostile forces, who intend to decipher and read the contents, if possible. But knowledge of the success achieved by American cryptanalysts can and must be limited to only higher authorities who need to know. This is the objective which must be

attained in the future lest the source of much unique intelligence be destroyed. Some examples of the damaging effects of publicity on communication intelligence activities will be discussed in the following pages.

3. Publicity Leaks Concerning Communication Intelligence

Publicity in America concerning the success of Communication Intelligence in various nations seems to have occurred in three major spurts:-

- A. The Post War Disclosures - which ran from 1920 - 1930 approximately.
- B. The Yardley Era - from the publishing of "The American Black Chamber" in 1931, up to the outbreak of the American-Japanese war.
- C. The American-Japanese War - which occasioned the most dangerous disclosures of all.

A brief study of each of these periods will be of value in understanding the need for strict security precautions which must be taken in modern communication intelligence work.

A. Post World War I Disclosures

The great interest shown in communication intelligence by most modern nations probably owes much to the revelations of such activity which were made public during the years following World War I. The information contained in this report has been gathered in the main from publications available in most public libraries, and has been set forth here to demonstrate the necessity of preparing to stop the anticipated avalanche of post war publicity which will jeopardize the activities of American intelligence agencies unless appropriate action is taken.

1. The Allies

(a) France

From the writings of various French experts it is known that the French entered the war in 1914, thoroughly familiar with German military codes and ciphers and with long experience in reading German and Italian diplomatic messages. ² Excellent

2 - Yves Gylden, The Contribution of the Cryptographic Bureaus in the World War, (translation of Chiffrebyråernas Insatser i Varldskriget Till Lands), United States Government Printing Office, Washington, 1935.

planning in times of peace, splendid cooperation between military and diplomatic leaders in regard to cryptanalytical assignments, and continuous research in developing the most efficient procedures resulted in great success for the French in anticipating and frustrating German attacks.

(b) England

The British Army and Naval Intelligence Departments had well-organized cryptanalytical bureaus during World War I, and the continued stress placed by the British on the speedy collection of material, careful examination and selection, and a skillful collation of all available sources of information has stimulated other nations to follow their example.

2 (Continued) - Henri Cartier, "Le Service d'ecoute pendant la Guerre", Radioelectricite, No. 16, 1923, p. 454; "Le Secret en Radiotelegraphie", Radioelectricite, No. 97, 1925, p. 445.

Marcel Givierge, "Questions de Chiffre", Revue Militaire Francaise, Paris, 1924, p. 409. Translated in U.S.A. Signal Corps Bulletin, March and May, 1926.

The Living Age, May 2, 1925, p. 233. Mentions the incident before the World War when H. Cail- laux, a French leader, disclosed, through a careless reference, the success of French crypt- analysts to the Germans. An important source of information was lost for a time because the Ger- mans changed their code.

Despite the existence of the British Official Secrets Act of 1911, as amended in 1920, several books published in England have given rather detailed accounts of British communication intelligence activities. Captain Ferdinand Tuohey discussed British methods of direction finding and code work in a book published in 1921. Even the rudiments of Tia and R.F.P. were explained in this work.³

In December 1927, the "best kept secret" of the Great War was disclosed by Sir Alfred Ewing, Principal of the Edinburgh University, in a lecture entitled "Some Special War Work" which he delivered to the Edinburgh Philosophical Institute.⁴ He told of the activities carried on during World War I in the famous Room 40 O.B. of the British Admiralty, where German dispatches were deciphered.

Four years later, in 1931, Sir Alfred Ewing added further details in an interview which was published in America.⁵ As many as 2,000 messages a day

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- 3 - Ferdinand Tuohey, The Secret Corps, London, John Murray, 1920, pp. 132-171.
 - 4 - Daily Express, Edinburgh, Dec. 14, 1927.
 - 5 - Article by Rayeen Church from London, N.Y. Times Magazine, Nov. 8, 1931.

were deciphered in Room 40 with never more than twenty-four hours delay. One of the messages, disclosing that the Germans planned to raid the East Coast of England, led to the Battle of Jutland when Admiral Jellicoe, forewarned, moved his fleet to meet the German warships. Another publicist confirmed Ewing's statement as to the Battle of Jutland by pointing out that the Admiralty knew of the plans of the German fleet at least twelve hours before it moved from its base. Admiral Jellicoe put to sea at 5:40 P.M. on May 30, 1916, and the Germans did not weigh anchor until 3:00 A.M., May 31, 1916.⁶

According to Ewing, Room 40 dealt with diplomatic ciphers as well as naval dispatches, and, therefore, was able to give warning of the Easter rebellion in Ireland, as well as information of German activity in Persia. Probably the most important exploit of Room 40 O.B. was the decipherment of a message sent on January 16, 1917, by Dr. Alfred Zimmerman, Undersecretary at the German Foreign Office, to von Eckhardt, German Minister to Mexico. This message revealed a German proposal for an alliance with Mexico

6 - Hector Bywater and H. C. Ferraby, Strange Intelligence: Memoirs of Naval Secret Service, Richard R. Smith, N.Y., 1931, p. 133.

on the grounds that after the war Mexico would receive the territory of New Mexico and Arizona which she had lost in 1848. As Ewing remarked, the publication of this message was decisive in converting American opinion to the necessity of war.

The complete details of the interception and decipherment of this message may be found in both English and American publications. The memoirs of a former German Naval Intelligence officer, von Rintelen, were published in London in 1933,⁷ and official correspondence dealing with the Zimmerman affair were disclosed in the memoirs of the former American Ambassador to England, Walter H. Page, published in America in 1925.⁸

Von Rintelen was captured during the war by the British on his way back to Germany from America, and he then learned from Admiral William Reginald Hall, the Chief of British Naval Intelligence, that the British had known Germany's five ways of sending

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- 7 - Captain von Rintelen, The Dark Invader: Wartime Reminiscences of a German Naval Intelligence Officer, Lovat Dickson, Ltd., 38 Bedford St., London, 1933.
- 8 - Burton J. Hendrick, The Life and Letters of Walter H. Page, 3 vols., Doubleday, Page and Co., 1925, Vol. III, pp. 331-364.

information to America or Mexico, and had intercepted and deciphered messages sent by all five routes. Furthermore, Admiral Hall disclosed the radio deception methods used in eliminating Admiral Spee's squadron at Falklands on December 8, 1914. A newspaper article by Hector Bywater in 1934 cited testimony from two British intelligence officers in confirmation of von Rintelen's story concerning the secret background of the Battle of Falklands.⁹

Mr. Bywater, who was one of the world's best informed writers on naval affairs, published many special articles and books on the English Navy, several of which discussed British direction finding and cryptanalysis, and especially the work of Room 40 O.B.¹⁰

Captain H. Landau of the British Secret Service wrote in 1934 of his World War activities in setting up information posts in Holland to obtain data on train movements in Belgium and occupied France. Indirectly, he was of great assistance to

9 - Daily Telegraph, London, Sept. 4, 6, 1934.
10 - Bywater and Ferraby, Strategic Intelligence; Hector C. Bywater, Their Secret Purposes, London Constable and Co., 1932, Ch. XIII.

Room 40 O.B., because his organization obtained a copy of every cipherea telegram sent out of Holland by the German Legation, the Consulates, and other German services.¹¹ Furthermore, even before the war broke out, according to Lord Fisher's memoirs, the British had a bureau established in Switzerland to collect foreign code telegrams.¹²

One of the sources concerning British communication intelligence activities in World War I was the book written in 1935 by Hugh Cleland Hoy, who became Secretary to Admiral (then Captain) W. R. Hall just after the latter had become Director of Naval Intelligence in October 1914.¹³ He told of the origin of Room 40 O.B. at the Admiralty, described some of its exploits, and then, ironically enough, stressed its great emphasis on secrecy as follows:

"Of it, [Room 40 O.B.], too, the late Earl Balfour said:

'To Room 40, the country owes an immense debt of gratitude - a debt which at the time, at least, could never be paid.

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- 11 - Henry Landau, All's Fair: The Story of the British Secret Service during the German Lines, G. P. Putnam's Sons, N.Y., 1932; Secrets of the White Lady, G. P. Putnam's Sons, N.Y., 1935.
 - 12 - Glyden, op. cit., p. 20.
 - 13 - Hugh Cleland Hoy, 40 O.B., or How the War Was Won, Hutchinson and Co., London, 1935.

Secrecy was of the very essence of the work, and never was secrecy more successfully observed.¹⁴ (14)

One of the most interesting accounts of Britain's cryptanalytical activities in the last World War can be found in the testimony brought forth before the Mixed Claims Commission of United States and Germany in regard to the disasters at Black Tom, N.J. on July 29-30, 1916 and Kingsland, N.J. on January 11, 1917.¹⁵ Admiral Hall of British Naval Intelligence supplied the texts of many intercepted messages to demonstrate the knowledge of the German Government in regard to the activities of its sabotage experts.¹⁶

Thus, much of England's secret war activities were disclosed not by espionage agents but by the books and newspaper articles of its own nationals, with some revelations by outside sources.

(c) Russia

The Russians entered the World War very badly prepared for military cryptography and cryptanalytical work, though long experience in success-

14 - Ibid., pp. 24, 25.

15 - Mixed Claims Commission, United States and Germany: Opinions and Decisions in the Sabotage Claims Heard From June 15, 1939 and October 25, 1941, H. K. Stewart, Superintendent of Documents, Washington, D.C.

16 - Ibid., pp. 22-26; pp. 300-302.

fully decoding Turkish, British, Australian, and Swedish diplomatic codes and police work against the Nihilists had necessitated cryptanalytical research. Despite all this background, it seems from the slight evidence available that very little military cryptanalysis was done by the Russians in World War I, though they did solve some of the German codes. On the other hand, lack of security precautions helped the Germans to decipher Russian codes. One reason for believing that the Russians did not achieve much cryptanalytical success arises from the fact that the Russians were unaware that the Germans were reading their codes.

(d) Italy

Before the first World War, Italy had done little to develop its cryptanalytical bureaus, and there is no published evidence to prove that she was any better during the war. This situation is difficult to understand because of the traditional interest of Italian scholars in cryptograms and cryptanalysis. More intensive research in Italian libraries than has been possible in drawing up this report would probably reveal further details of Italy's crypto-

graphic and cryptanalytical efforts in World War I.

2. Central Powers

(a) Germany

The German Army, Navy, and Ministry of Foreign Affairs had cryptanalytical bureaus before World War I, but inadequate and ill-trained personnel had made competent research impracticable. Compared with the French, they were much inferior in that they lacked a centralized organization, were without expert leadership, and because of insufficient research were not prepared to cope with the problems involved in deciphering French codes. Furthermore, errors and omissions discovered in German communications permitted the French to solve German messages very easily.

In the late years of the war, after a difficult period of self training, the Germans became much more adept in cryptanalysis. A British writer stated that the Germans were overhearing British signals and wireless conversation after 1916, and were thus always prepared for British attacks during the last years of the war.¹⁸

After Sir Alfred Ewing had disclosed the work of Room 40 during the World War, an announcement re-

18 - Ferdinand Tuschy, op. cit., p. 218.

vealing the corresponding German department appeared in the Vossische Zeitung. The article described the deciphering of intercepted British signals in a mysterious wireless station, surrounded by barbed wire on a lonely moor near Neumenster. This story was confirmed by a former German wireless officer, Lt. Comdr. N. Kraschutzki, who belonged to the Neumenster staff.¹⁹ It is believed, however, that this Bureau was not successful in deciphering British Naval dispatches until some time in 1916,²⁰ though it is known that at the outbreak of the war, Admiral Spee knew because of intercepted British messages that he was being shadowed by British cruisers.²¹

On the Russian front, the Germans were much more successful owing to Russian communication deficiencies. The Germans knew as much, if not more, than some of the Russian commanders about Moscow's plans for the Battle of Tannenburg. Germany had still better success with diplomatic secrets for they were able to read the messages of Major Langhorne, the American Military Attaché in Berlin. It will be

19. - London Times, Jan. 3, 1928.

20 - Gilden, op. cit., p. 43.

21 - Von Kintelen, op. cit., p. 34.

remembered that the Germans had arranged to send these dispatches for Major Langhorne who wished to keep them from falling into the hands of the British. In the process, the Germans were able to rewrite the American Attache's dispatches with a pro-German bias. It may be presumed also that their experts were able to read the messages of other nations.²²

(b) Austria

According to General Ronge, Chief of the Austrian Military Intelligence Service during World War I, cryptography had been much practiced in Austria, but cryptanalysis was entirely unknown until 1908, when he began to work on intercepted Italian Naval dispatches. Messages of other countries had been deciphered for years, but solutions had been obtained by acquisition of the codes through espionage rather than by cryptanalysis. However, in 1918 the Evidenzbureau of the General Staff was re-organized, and efforts were made to stimulate cryptanalytical activities.

Despite its inadequacy at the beginning of the war, the Evidenzbureau gave many Austrian officers an opportunity to analyze Russian systems and, as a result

of their specialized training, they were able to solve Russian ciphers much more quickly than the Germans. As the war progressed, the Austrian bureau expanded, and a French source states that in February, 1916, at least 26 cryptanalysts were employed in the Vienna office alone.²³

Austrian military commanders were well aware of the value of the information supplied them by this bureau, and Von Glaise-Horstenau, Chief of the War Archives in Vienna, Privy Councilor, and former officer of the Austrian General Staff, stated that if Austria had not been able to read Russian radiograms, it would most probably have lost the war as early as in the winter of 1914-1915.

3. United States

Very little was known by the American public about its cryptanalytical agencies until the time of Yardley's disclosures of 1931. Lieutenant Colonel Walter Sweeney, U.S. Army, reported in a book written in 1924 that during World War I the code and cipher section of the Intelligence Service at American GHQ had demonstrated that any code or cipher could be

23 - Gylden, op. cit., p. 22.

read, if sufficient time were granted.²⁴ A newspaper article in 1930 discussed the activities of G-2 and Room 40 O.B. in intercepting and decoding German radio messages.²⁵ However, public attention was not focused on American cryptanalytical activity until²⁶ Herbert O. Yardley, formerly of the U.S. Army, broke the seal of self-imposed silence which governs the activities of most cryptanalysts and published his famous "The American Black Chamber".²⁷

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- 24 - Lt. Col. Walter C. Sweeney, Military Intelligence: A New Weapon in War, Fred A. Stokes, N.Y., 1924.
- 25 - Sunday STAR, Washington, D.C., Apr. 13, 1930, Magazine Section, p. 5
- 26 - Major Yardley had resigned his commission in the U.S. Army Reserve before submitting the articles for publication.
- 27 - Herbert O. Yardley, "The American Black Chamber", Bobbs-Merrill Company, Indianapolis, 1931.

B. The Yardley Era1. Yardley's Revelations

Early in 1931, the Saturday Evening Post, a weekly magazine of tremendous national circulation, published a series of articles by Yardley which frankly disclosed the existence of cryptanalytical organizations in various countries, and discussed their methods, successes and failures. Analysis of the different types of ciphers and codes in use by these nations, with unflattering criticism directed at the U.S. Department of State, was one of the principal themes.

The articles were then published in book form, entitled "The American Black Chamber". Yardley stated that his organization, which had been established in 1917 and had worked in secret until 1929, had solved over 45,000 cryptograms during that period. At one time or another, it had broken the codes of Argentina, Brazil, Chile, China, Costa Rica, Cuba, America, France,

28 - Herbert O. Yardley, "Secret Inks" Saturday Evening Post, Philadelphia, Vol. 203, No. 40, Apr. 4, 1931;
 "Codes", ibid., Vol. 203, No. 42, Apr. 18, 1931;
 "Ciphers", ibid., Vol. 203, No. 45, May 9, 1931;
 "Cryptograms and Their Solution", ibid., Vol. 203, No. 73, Nov. 21, 1941.

Germany, Japan, Liberia, Mexico, Panama, Peru, Russia, San Salvador, Santo Domingo, the Soviet Union, and Spain. Furthermore, he revealed that all Japanese code messages received or sent by the Japanese representatives during the Washington Naval Conference had been read by American cryptanalysts.

The book created a sensation in both America and in Japan. In addition to a Japanese translation in book form which apparently was subsidized by Japanese militarists, two Japanese newspapers ran a serial translation, and headlines called attention to American treachery at the Washington Conference.²⁹ In America, the book received much attention in the press, and many book reviews disseminated his disclosures even more widely; thus, hundreds of persons who had never read Yardley's story were made aware of its revelations.

Yardley wrote two other articles late in 1931. One dealt with the cryptanalytical activities of the British,³⁰ and the other attempted to explain his

29 - K.K. Kawakami, Baltimore Sun, Aug. 18, 1931.
30 - Herbert O. Yardley, "Doublecrossing America", Liberty Magazine, N.Y., Oct. 10, 1931, pp. 38-42.

motives for revealing government secrets.³¹ The first article discussed British methods in obtaining every dispatch entering or leaving England, and the second, severely criticizing the State Department's inadequate ciphers, explained that his book had been intended to expose America's deficiencies in the field of cryptography with a view to stimulating the development of new codes for the preservation of national secrets.

Hollywood eventually made a picture called "Rendezvous" based on a novel by Yardley,^{31A} and as late as March 1942, the Navy Department had to request that the "American Black Chamber" not be republished.

2. Pre-War Publicity

In 1934 and again in 1937, newspaper stories discussed the activities of several American cryptanalysts whose existence had been disclosed when called upon to testify in court as government witnesses, or when discussed in civil service newspaper columns. Public attention was thus drawn to the Army's, Navy's, and Coast Guard's cryptanalytical units.

31 - Herbert O. Yardley, "Are We Giving Away Our State Secrets?", Liberty Magazine, Dec. 19, 1931.

31A- Herbert O. Yardley, The American Cryptanalyst, N.Y., 1934.

A newspaper article in October 1939, announced that the F.C.C. had revived a Black Chamber to decode all messages leaving the United States.³² A year later, the same columnist attacked the entrance of the F.C.C. into radio intelligence, pointing out that its staff had no experience or knowledge covering law enforcement or the value of military information, and, in addition, it was doing something which the Army, Navy and Department of Justice were perfectly equipped to perform.³³ A very detailed article, describing the war activities of the F.C.C. system, appeared in October 1941. Eleven counter-espionage radio stations and more than eighty secondary mobile units were mentioned, and new antennae for use in fixing the position of transmitters and plastic discs for recording messages were described.³⁴

All the foregoing examples of security violations occurred during peace. Some were minor, some were serious. The most damaging disclosures were to occur after the outbreak of war on December 7, 1941.

32 - Frank C. Waldrop, Washington Times-Herald, Oct. 1939.

33 - Ibid., Oct. 7, 1940.

34 - Los Angeles Times, Oct. 13, 1941.

C. American-Japanese War

1. Pearl Harbor Aftermath

On the day after the attack on Pearl Harbor, a Washington newspaper, quoting reliable informants to the effect that the War Department had succeeded in reading the Japanese code, indicated that Tokyo had probably suspected the decipherment of its codes and had neglected to inform the Japanese Embassy in Washington of its plans to attack Pearl Harbor so as not to warn Washington.³⁵ Two days later the same newspaper, speculating again as to whether or not Japanese diplomats in Washington knew in advance of the attack on Pearl Harbor, announced that the United States had solved the Japanese code in 1932, but that undoubtedly the Japanese knew this, and in turn the U. S. had learned that they knew it.³⁶

Time Magazine, early in 1942, reprinted a story concerning the F. C. C. which had originally appeared in the St. Louis Post Dispatch. According to this report, the F. B. I. had been stopped from seizing an illegal transmitter in the German Embassy because

35 - Daily News, Washington, D.C., December 3, 1941.
36 - Daily News, Washington, D.C., December 31, 1941.

the State Department did not want to jeopardize the success of negotiations for the safe exchange of diplomatic personnel in Germany. The F. C. C. announced later that every message sent out from the German Embassy had been decoded, and, furthermore, the transmitter had been jammed at the beginning of every broadcast.³⁷

A newspaper article in February 1942 attacked the F. B. I.'s statement that peacetime restrictions had prevented the copying of all messages transmitted between Honolulu and Tokyo over commercial radio circuits for several weeks prior to December 7, 1941. It declared that the communication service of the Navy and the signal service of the Army had kept commercial circuits between Tokyo and Honolulu under constant surveillance and had given copies of all messages to the F. B. I. Senator Harry S. Truman, of Missouri, Chairman of the Senate Interstate Commerce sub-committee on wire tapping legislation, informed the Senate that, notwithstanding the report of the Roberts Commission, the record would show

37 - Time Magazine, N. Y., January 5, 1942.

that "wire tapping and interception of messages were fully practiced prior to the attack on Pearl Harbor."³⁸

Another publicity leak occurred when Leon Pearson on a Mutual Broadcasting System program in February 1942 announced that one of the intelligence services of the Government had deciphered certain messages from the French West Indies - Martinique and Guadalupe - which indicated that German submarines had been refueled from the small ports of the Atlantic coast of Guadalupe.³⁹

As a result of all the newspaper publicity at the outbreak of the war which had been given to the crypt-analytical agencies of the U.S., many colleges began to inquire of the Navy about the inauguration of courses in cryptanalysis to prepare their students for war duties. All of the voluntary offers were declined politely, because of the publicity which would accompany such courses.

2. Battle of Midway Exposure

The most important publicity leak of the present war concerning communication intelligence

38 - Chester Manley, Time Herald, Washington, D.C., February 7, 1942.

39 - War Department Radio Digest, February 26, 1942, No. 210.

occurred in early June 1942, after the Battle of Midway, when an article appearing in three newspapers of very wide circulation disclosed that the U. S. Navy knew in advance of Japanese plans for an attack on Dutch Harbor in the Aleutians and against Midway Island.⁴⁰

Indicating that the Japanese had used a striking force, a support force, and an occupation force, the article gave specific details of the makeup of each enemy force. It was evident that the reporter had somehow acquired much of the information which U. S. Naval Communications Intelligence had disseminated to a very few important commanders, and it was obvious to the experienced observer that such complete details of the enemy's plans could have come only from deciphered Japanese messages.

Furthermore, a radio broadcast of Walter Winchell on July 5, 1942, stated that advance knowledge of the enemy's plans had saved U. S. forces from defeat on two occasions. Another item from his newspaper column of July 7, 1942, announced that

40 - N. Y. Daily News, Chicago Tribune, Washington Times Herald, June 7, 1942.

Colonel McCormick's paper in Chicago had divulged the reason for American success at Midway — the decoding by the U. S. Navy of Japanese secret messages.⁴¹

Meanwhile, an effort was made to indict those responsible for the original disclosure concerning Midway. On August 8, 1942, newspapers throughout the country reported that the case was to be investigated by a Federal Grand Jury in Chicago, as a result of a preliminary inquiry made by the Justice Department at the recommendation of the U.S. Navy. William D. Mitchell of New York, former Attorney General under President Hoover, was to direct the investigation of the Grand Jury into any possible violation of a criminal statute or of the Act of June 15, 1917, as amended by the Act of March 28, 1940, concerning the unlawful communication of documents or communications relating to national defense.⁴² However, damaging publicity was the only result of the action since the Grand Jury failed to indict Colonel McCormick, Managing Editor James Loy Moloney, or Stanley Johnston, the reporter.⁴³

41 - N. Y. Daily Mirror, July 7, 1942.

42 - N. Y. Times, August 8, 1942.

43 - New York Evening Post, August 31, 1942.

Two years later another publicist reported that American cryptographers had broken the Japanese naval code just before the Battle of Midway.⁴⁴ Once again it was obvious that current security measures, presumably provided by present laws and voluntary censorship, would not accord sufficient secrecy for future cryptanalytical activities.

3. State Department Leaks

In 1942, "How War Came", a semi-official review of American foreign policy from 1940 until the beginning of the American-Japanese war, was published by Forrest Davis and Ernest K. Lindley.⁴⁵ Purporting to be "an independent venture, critical, unofficial, and bearing no imprimatur", the book gave evidence that the authors had been given access to documents and confidential material which had not been made available to the general public. Prior to the publication of this book, several chapters were first published in the Ladies' Home Journal in July and August 1942.

Many references were made in the book to

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- 44 - John Gerber, "The Secret Language of War," Facts, Vol. IV, No. 2, February 1944, pp. 13-18.
45 - Forrest Davis and Ernest K. Lindley, How War Came: An American White Paper; from the Fall of France to Pearl Harbor, Simon and Schuster, N. Y., 1942.

secret and detailed information which the United States possessed in advance of several important events. Though it may very well be argued that espionage reports provided the basis for this secret intelligence, certain references were so phrased that any experienced observer would readily perceive the source of this information. The authors stated that the U. S. knew from "sources of proved reliability" that Hitler was pressing the Japanese to validate a secret protocol of the Axis pact of September 1940, which called for war on the English-speaking Powers under specified circumstances.⁴⁶ Discussing Japan's joining the Axis, the authors declared that American and British diplomats knew of this very secret decision of the Japanese almost as soon as the last member of the Imperial Council had voted. They also declared that President Roosevelt had been closely advised of the ramifications of the new alliance, and pointed to the existence of a secret protocol committing Japan to engage the English-speaking Powers whenever the circumstances seemed

46 - Ibid., p. 9.

right to the Axis.⁴⁷

In a chapter entitled "Warning to Moscow", the authors stated that midway in January 1941, Mr. Sumner Welles had warned Russian Ambassador Oumansky that Hitler's armies would attack Russia in the following June. According to this book, the United States "knew" that the decision to breach the Nazi-Soviet accord had been taken in Berlin. Two months later the Russian Ambassador inquired whether or not the United States had any confirmation of the report from Berlin, and he received categorical assurance that the United States possessed additional evidence of Chancellor Hitler's intentions.⁴⁸ The United States also advised Russia that Mr. Matsuoka's chief errand in Europe was the negotiation of a non-aggression treaty with Russia to free Japan's rear for a war on the English-speaking Powers.⁴⁹

In describing the reaction of American officials in Washington to the news that Germany had attacked Russia in late June, the authors remarked that neither President Roosevelt, Secretary Hull,

47 - Ibid., pp. 152-153.

48 - Ibid., pp. 175-176.

49 - Ibid., p. 216.

nor Mr. Welles were surprised by the announcement, for the event, which shocked the public, had long been anticipated by both London and Washington. According to the book, Mr. Churchill for two months had been practicing his famous speech which promised full assistance to Russia.⁵⁰ Washington also knew that Nazi party strategists had assured Chancellor Hitler that the Russian venture would be merely a brief detour, which would permit him to return to the main task of subjugating England.⁵¹

A decision of the Japanese Imperial Council on July 2, 1941, concerning an attack on Siberia, was given twenty-four hours later to Ambassador Oumansky by Sumner Welles, who also advised the Russian Ambassador a few days later that pressure was being exerted upon Tokyo for an early attack on Vladivostok.⁵²

Pointing out that the Nazis believed that war in the Pacific would remove the United States as a formidable factor in the Atlantic, the book declared that the United States government was fully

50 - Ibid., pp. 238-239.

51 - Ibid., p. 240.

52 - Ibid., pp. 247-248.

aware "in surprising detail" of the nature, exigency and pace of the German arguments leveled at Tokyo.⁵³ The belief that Marshal Goering disclosed the Japanese intention of attacking Pearl Harbor to Marshal Petain was held erroneous by the State Department because it had what it considered an accurate precis of the Vichy-Nazi conversations a few hours after their termination.⁵⁴

4. Espionage Disclosures

The Battle of Midway publicity and the disclosures of "How War Came" were not the only unfortunate publicity leaks. In June 1941, the F. B. I. arrested twenty-six men and three women, twenty-two of them German, on charges of conspiracy to undermine national defense by acting as spies in transmitting to Berlin confidential information concerning many phases of national defense and shipments of military cargoes to Great Britain.⁵⁵ Further details were disclosed when the case came to trial in September 1941. A German agent, secretly working for the F. B. I., revealed details of a radio code in which messages of the

53 - Ibid., p. 292.

54 - Ibid., pp. 311-312.

55 - Washington Post, June 30, 1941.

espionage ring were sent to Berlin.⁵⁶ A few months later Drew Pearson also discussed the secret code used by the German espionage ring.⁵⁷

In September 1942, a magazine article described American counter-espionage activities in uncovering illegal shipments of mercury from Mexico to Japan. The Mexican government had ordered a special customs examination of a Japanese freighter on the basis of "exact information" supplied by American intelligence agents.⁵⁸

Much publicity has resulted from the discovery of Axis espionage agents in South America. Since 1942 many articles in American newspapers and news magazines have mentioned the radio interception and cryptanalytical activities of American counter-espionage agencies. Most of this publicity emanated from the interception of clandestine messages by the Federal Communications Commission. A very revealing report, giving full details of the interception of clandestine radio messages transmitted from South America, was published with official approval in

56 - N.Y. Times, September 9, 10, 12, 1941;
 Washington Times-Herald, September 12, 1941.
 57 - Washington Times-Herald, November 28, 1941.
 58 - Harbors Magazine, September 1942, p. 392.

July 1943.⁵⁹ It not only mentioned the interception of clandestine radio messages, but it also gave completely documented appendices containing the deciphered dispatches of Axis agents. Since these appendices were not printed in the Spanish edition of this volume, the responsibility for the unfortunate publicity rests solely with a United States' agency.

One section of this report entitled "German Espionage Agents in Chile", outlined the whole history of an Axis clandestine station in Chile, and the texts of seventy-one intercepted and deciphered messages were appended to the chronological story.⁶⁰ Another section, entitled "Axis Espionage Activities in Argentina", discussed four groups of Axis agents in Argentina, each one of which was operating an important clandestine radio station.⁶¹ A number of intercepted and deciphered dispatches from these stations was also published.

The fundamental difference of opinion in regard to the publication of intercepted material,

59 - Annual Report Submitted to the Governments of the American Republics, Emergency Advisory Committee for Political Defense, July, 1943, Montevideo. English edition distributed by the Pan-American Union, Washington, D.C., 1943.

60 - Ibid., pp. 85-104.

61 - Ibid., pp. 107-129.

which exists between authorities of the Communication Intelligence organizations of the U.S. Army and Navy and other agencies of the United States, came to light in the following decision of the committee:

"In view of the gravity of the charges made, which specifically describe acts committed by Axis agents against the security of the Hemisphere, it is highly desirable to give publicity to such information, as well as any other of the same character, since it is of great value to the collective defense of America." (62)

Furthermore, the Emergency Advisory Committee for Political Defense had already decided that the publication of this material had achieved its desired objectives, for it stated:

"The realistic and practical significance of the Resolutions approved by the Committee was corroborated by the information published and thus brought to the attention of the American peoples and their Governments." (63)

Public attention was again focused on the Federal Communications Commission Radio Intelligence Division in May 1944, when newspaper articles described the activities of George E. Sterling, Chief of the

62 - Ibid., pp. 43, 85.
63 - Ibid., pp. 44-45.

Division, in locating clandestine radio stations.⁶⁴

Though some attempt was made to disguise the source of the intelligence by praising Latin American officials for arresting spies and seizing code books to make possible the decoding of Nazi radio transmissions, earlier reports had stressed the cryptographic activities of this agency. During a debate in the Senate, in March 1944, Senator Meade of New York, proposing that the Senate restore over two million dollars to the F. C. C.'s allotment in an appropriation bill, read a letter which referred to the "excellence" of the F. C. C.'s cryptographic work. A discussion of the meaning of "cryptographic" then took place, and Senator Meade explained that it meant the deciphering of codes.⁶⁵

In June, 1944 a movie short entitled "Patrolling the Ether" produced by MGM in the "Crime Does Not Pay" series, was shown all over the country. It received much advance publicity and was seen by thousands of individuals before its run was completed. The script dramatized the activities of the F. C. C.

64 - Washington Daily News, May 19-20, 1944.

· Time Magazine, May 22, 1944.

65 - Washington Times-Herald, March 17, 1944.

Intelligence Division, and for purposes of spectator interest, added certain elements of suspense in dealing with espionage agents, which are not part of its normal activities. The picture disclosed that radio amateurs had been enlisted by the F. C. C. Radio Intelligence Division in a listening campaign against clandestine stations as early as 1940, and by 1944 seventy or eighty F. C. C. monitoring stations were operating all over the United States. A map locating these stations was shown in the picture.

The use of mobile radio detection units was demonstrated, as was the employment of a hand detection set called a "snifter". In the course of dramatizing the radio detection of a typical clandestine station, an F. C. C. representative was portrayed as pointing out that every enemy message had been intercepted and that jamming by the F. C. C. had prevented reception of the messages. It also announced that the clandestine messages were enciphered rather than in code, and that all the messages had been deciphered. When the enemy transmitter was finally located, an F. C. C. Radio Intelligence representative used the enemy cipher in sending a false

message to German submarines to lead them into a trap set by Allied submarines and planes. The picture ended with a newspaper's headlines announcing that the Navy had sunk several German submarines. The impression was conveyed that the work of the F. C. C. in deciphering enemy messages and using radio deception was the reason for much of the past success of the U. S. Navy in crushing German submarine packs.

Though the picture was well done and was very interesting, since it dealt with the mysterious arts of radio direction finding, cryptanalysis, radio deception, spy hunting and submarine chasing, its evident purpose of publicity seeking conflicted with the long established policy of the Army and Naval Communication Intelligence organizations, which for serious and historic reasons are definitely opposed to any publicity, even of a seemingly innocuous nature, concerning radio intelligence activities.

5. Summary

This completes the brief analysis of the three principal periods during the last generation in which communication intelligence activities received much

unwelcome publicity. Many unauthorized persons were made aware of supposedly secret organizations, and, what is more important, revelations concerning past achievements endangered the future success of American cryptanalysts. In view of recent cryptanalytical successes, despite the many damaging publicity leaks which have already occurred, it may be thought that it matters little whether or not security precautions are maintained at high levels. To demonstrate the falsity of this opinion, the next chapter will discuss the effects of publicity leaks on communications intelligence activities during the past few years.

III

Effects of Publicity Leaks
on
U.S. Cryptanalytical Activities

During the past generation every nation in the world has gradually become more conscious of the Black Chambers of other countries. Japan was no exception, and a study of its progress in security precautions during the past two decades demonstrates the accumulative effects of minor publicity leaks in complicating the problems of American cryptanalysts.

1. Japanese Security Measures

Japan was very deeply disturbed over Yardley's disclosures in 1931, and a series of assassinations of Japanese leaders, who had been associated with the Washington Conference, showed the feelings of the militaristic elements. The most dangerous effect, from the viewpoint of American cryptanalytical agencies, was the great interest displayed by the Japanese in stricter cryptographic security measures. Their diplomatic codes were changed in 1932, and research on a machine cipher was accelerated, resulting in their adoption of this technique in 1934. The

Japanese Navy became much more careful in their use of ciphers and codes, but fortunately, their general radio procedure was weak and the security of their call identities was not great. Though special codes, ciphers, and call signs were used during war maneuvers, low standards of radio discipline compromised their calls, which were changed only at fairly long intervals.

In 1935 the Japanese Navy began to improve their radio technique and about the time of the Japanese Grand Maneuvers in 1937, a definite trend toward complete communications security became evident, and constant progress has been made along these lines ever since. Improvements in circuit discipline, more frequent changes of calls, encipherment of ship-movement reports, a decrease in plain language messages, interception of U.S. Naval messages, and a raising of the standards of Japanese Naval codes in 1939 marked this period.

Japanese diplomatic traffic from 1940 to the outbreak of the American-Japanese war disclosed a constant effort on the part of all Japanese representatives to ensure greater communication and cipher security in the face of the cryptanalytical activi-

ties of other nations. Tokyo warned that various countries were increasing their intercept facilities to obtain coded messages of other countries, and were using espionage and other means to acquire the codes.

In 1941 the Japanese laid even greater stress on security measures, and certain ciphers and codes were removed from Japanese offices in the United States where a twenty-four hour watch could not be maintained. Worldwide courier systems were introduced and were operated at very frequent intervals so as to ensure the safe transfer of important documents. The Japanese were suspicious not only of American and Allied agents, but also of German and Italian cryptanalysts.

Just before the attack on Pearl Harbor, the Japanese changed their most important naval cipher system--the Japanese Fleet General Purpose System--which usually had been changed every six months, and was expected to be changed again on January 1, 1942. The change of cipher on December 4, 1941, was in itself a warning that something unusual was about to occur.

2. After the Attack on Pearl Harbor

After war with the United States had begun, the Japanese continued to lay stress on the observance of security rules in cipher and communication work. Their success in deciphering English codes stimulated their interest in this regard, since they suspected that the Russians in turn were reading some Japanese ciphers. For some unexplainable reason, the Japanese were quite certain that neither American agents in South America nor their Axis colleagues in Berlin could decipher the Japanese machine code. Investigations in Sweden by Japanese agents strengthened their belief that no country was making any progress in solving cipher machine codes.

The Japanese began to imitate the American practice of frequently changing call signs in April 1942, and in early May 1942, the increased use of concealed addresses by the Japanese was noted as another obstacle for American traffic analysts. On May 28, 1942, the Japanese changed their Fleet General Purpose System in accordance with their usual procedure just before an important engagement. As a result, enemy naval dispatches could not be read

until some time later, but, fortunately, intelligence concerning Japanese intentions was already in the hands of operational authorities.

3. After the Battle of Midway

It is more than mere coincidence that within a few weeks after the appearance of publicity relating to the Battle of Midway, drastic changes began in all Japanese codes and ciphers. There is no information available to disclose whether it was the original story in the Chicago Tribune, or the furor aroused by the abortive attempt to indict the persons responsible for the story, or an independent espionage report which caused Japan to learn of the decipherment of its codes. However, we do know that in August-September 1942, practically every Japanese code and cipher was changed, and a systematic effort was made to improve Japanese security in every respect.

The Japanese Fleet General Purpose System changed on August 15, 1942 after only two months of use, long before another modification was normally expected. Furthermore, strenuous efforts were made by the Japanese to frustrate American traffic analysts.

Japanese attempts at radio deception, though not successful, also indicated their awareness of American communication intelligence activity.

Many modifications were made in Japanese ciphers after the war began.

4. Summary

It is evident that revolutionary changes in Japanese communication security occurred after the Battle of Midway. Japanese imitation of U.S. Naval procedure was so successful that American traffic analysts have had great difficulty ever since, because of the necessity of starting each day with no identified call signs. It is difficult to avoid the conclusion that there was an unescapable relationship between the publicity given to the success of U.S. Naval Communication Intelligence at Midway and the swift cryptographic reaction of the Japanese in succeeding months.

The seriousness of this situation must be realized. Traffic analysis was considered by radio intelligence experts as the one means of obtaining information concerning the enemy when enemy dispatches could not be deciphered. If the Japanese suddenly

decided to revamp all their ciphers and call signs simultaneously, and could do this efficiently, American communication intelligence experts would be helpless for a certain period of time. Meanwhile, the Japanese might very well make an attack on our forces.

Although it may be said that no code or cipher, except a one-time system, has as yet withstood determined attack by experts, recent publicity concerning the solution of codes and ciphers has resulted in such advances in cryptographic security that cryptanalytical solutions which once could be achieved by relatively few experts and by simple means in a short period of time, now require complex machinery, large forces of personnel and extensive time-consuming research. The problem of obtaining intelligence in time to be of operational value may soon be almost insurmountable. It is for this reason that American cryptanalytical agencies insist that something be done to safeguard the security of their operations so that the enemy will not introduce further revolutionary cipher changes which

may make the acquisition of timely intelligence impracticable.

This ends the discussion of the need for adequate legislation to prevent disclosures of the activities of American cryptanalytical agencies to unauthorized personnel. An analysis of present legislation, indicating certain deficiencies, and making certain suggestions for a new law, will be treated in the following pages.

IV
Deficiencies of Present Legislation

It is evident from the foregoing discussion that several problems are involved in drawing up new legislation against the unauthorized dissemination of communication intelligence. The objectives of a new law would be as follows:

1. Prevention of Army and Naval cryptographic or cryptanalytical personnel from discussing their activities either at present or in the future.
2. Prevention of unauthorized dissemination of information relating to communication intelligence by military personnel not engaged in cryptographic or cryptanalytical activities, but who have acquired knowledge of this activity through their official positions.
3. Prevention of disclosures by civilians, journalists, war correspondents, etc., who may have acquired knowledge of crypto-

graphic or cryptanalytical activities either through their official position or by any other means.

There are two aspects of the above problems: first, to prevent publicity leaks, and second, to penalize them. The passing of a strong law against the revealing of intelligence resulting from cryptanalysis should help to cut down future publicity. The present laws, which are inadequate to accomplish the objectives described above and which appear in Army Regulations No. 380-10, are as follows:

- (A) Act of 15 June 1917 (40 Stat. 217, as amended) - prohibits the disclosure of any information directly or indirectly to a foreign government "with intent or reason to believe that it is to be used to the injury of the United States or to the advantage of a foreign nation", and penalizes the disclosure of information relating to the national defense through willful action or gross negligence on the part of persons to whom it is entrusted.

- (B) Executive Order 8381, 22 March 1940 - defines military and naval installations or equipment requiring protection against the general dissemination of information relative thereto.
- (C) Act of 19 June 1934 (48 Stat. 1103) - prohibits any person from divulging information obtained by intercepting any interstate or foreign communication.
- (D) Executive Order 9066 - authorizes the Secretary of War to prescribe restricted military areas.
- (E) Act of 10 June 1933 (48 Stat. 122) - prohibits disclosure of any information concerning or derived from any diplomatic code.

In addition to these laws, the U. S. Army and Naval Communication Intelligence organizations administer a special secrecy oath to all members by which a promise is made to maintain security at present and in the future. Copies of these oaths

will be found

in the appendices.

The principal difficulty with the present Espionage Act is that to secure a conviction under the clause covering disclosure to a foreign nation it is necessary to prove on the part of the accused, the "intent" to injure the United States, or "reason to believe" that such injury will result. Therefore, Yardley's book or the Chicago Tribune story of the Battle of Midway would scarcely be penalized under this provision.

The clause dealing with disclosure of information regarding national defense through gross negligence introduces the necessity of proving negligence; e.g. demonstrating that the accused knew the value of the information concerned, while the clause regarding willful communication restricts the information protected to that pertaining to "national defense", besides introducing the element of "willful" communication, which is not applicable to ordinary negligence.

The Act of June 10, 1933, which was passed to stop publication of Yardley's second book, states that a person "willfully" publishing or furnishing to another person any official diplomatic code, which was obtained while in the process of transmission

in the United States, may be punished. This law does not cover military ciphers or code, nor does it prevent publication of books or articles on the subject if no messages are quoted.

It is believed that the phrase "intent to injure the United States" should be eliminated from new legislation since this could scarcely be proved against any of our personnel who revealed information to other than a foreign spy. As pointed out above, it would be difficult to prove a case against a journalist who might write a very revealing story of our cryptanalytical activities under the pretext of protecting the United States or defending the motives of an individual, as has happened. It is recognized, however, that because Congress may be disinclined to penalize unintentional disclosures of our activities, omission of the phrase "intent to injure the United States" may not be permitted. Furthermore, it is doubtful whether Army or Naval authorities would care to prosecute in cases where inadvertent publicity resulted from non-malicious acts. However, something must be done to prevent deliberately sought-for publicity, such as Yardley's, which disclosed our activities. The elimination of

the "intent" phrase would automatically reduce the crime to a misdemeanor, for intent is necessary for a felony.

Obtaining proof that a person has revealed information with "a reason to believe that it is to be used to the injury of the United States or to the advantage of a foreign nation", is difficult even during wartime, when it may be presumed from the existence of certain military restrictions and safeguards that the disclosure of certain information would be of value to a foreign government and detrimental to the United States. When the present war ends, and many of the executive orders defining restricted areas, equipment and information are rescinded, many persons who formerly dealt with classified military information will have returned to civilian life and will no longer be informed concerning the proper classification of this material. Proof of "reason to believe that it is to be used to the injury of the United States" will then be as difficult to obtain as will be proof of malicious intent.

The law prohibiting dissemination of information obtained from intercepting foreign communications

fails to cover many aspects of the work carried on by the cryptographic agencies of the U. S. Army and Navy. Moreover, many of the persons engaged in cryptographic work have little or no knowledge of intercept activity, and disclosures without such knowledge is not covered by the statute. The law for the protection of diplomatic codes does not cover military material handled by the Army or Navy. Furthermore, none of the acts mentioned above were written to achieve the objectives now desired. This latter is a desirable element since a given court's decision may turn on its effort to carry out legislative intent. A clear general statement of our security purposes, enacted into law, would be a distinct aid to enforcement.

V

Elements of Proposed New Legislation

It is suggested to the authorities concerned that certain elements be included in the proposed new legislation so as to accomplish the purpose desired. These are as follows:

(a) A Broad Definition of "Information"

This definition should not be restricted merely to the nature of codes, ciphers or methods used in connection with communication intelligence, but it should also include information concerning the resulting intelligence and the success of such activity. If it is deemed desirable to omit reference to cryptanalysis or cryptography for security reasons, it may be possible to cover these aspects by making a general reference to all military and naval intelligence. It may be advantageous to frame legislation along general lines after consultation with other branches of the armed forces.

(b) A Definite Standard Defining the Information to be Protected

It is not desirable to describe the information as being of use to the enemy, or to say that its disclosure would be detrimental to the United States, for such a definition might involve difficulties of proof. It is suggested that a sufficiently broad basis could be achieved by relating the information to some military standard of classification, such as a restricted area

or the normal classifications of "Secret", "Confidential" and "Restricted". An even broader basis such as "all information relating to military or naval intelligence activities" may be preferable.

(c) Protecting Clause for Disclosures Made in Line of Duty

This must be carefully considered by higher authorities since anticipated public investigations of certain aspects of the present war may very well entail official

disclosures of cryptanalytical intelligence.

(d) Persons to Whom Applicable

Legislation should be applied to both military personnel and civilians.

(e) Penalties Clause

It is suggested that for the new law, in which the offense becomes a misdemeanor and not a felony, the maximum penalty be not higher than \$500.00 or imprisonment for one year. However, the present laws against espionage and malicious disclosures to foreign governments, with their heavier penalties, should be retained.

VII

Proposal for a Military IntelligenceReviewing Commission

It will be seen from the analysis of present legislation that, even with the passage of a new law, only one of the two great objectives of American communication intelligence organizations is solved. New legislation combined with old statutes will probably provide proper punishment for unauthorized disclosures, and such penalties will have a definite effect against future security violations. The principal objective from the communication intelligence viewpoint, however, is not to penalize such disclosures, but to prevent them. Though the British Official Secrets Act, which has been studied in connection with this present project, was in full force for several years before damaging disclosures were made by English writers, it was not able to prevent them.

In the light of this experience, it is suggested that in collaboration with other branches of both services a law be passed to establish a Military

Intelligence Reviewing Commission to pass on the contents of any book, newspaper or magazine article, motion picture or radio script, etc., before permission for publication would be granted. Such a committee would have no authority to censor any criticism of political or military leaders; its powers would be strictly circumscribed so as to permit deletion only of references to sources of military or naval intelligence. To offset possible criticism of partisanship, the membership of the committee could comprise a few outstanding individuals of different political beliefs, military and naval officers, and also press representatives. This would obviate complaints against a suspected military or naval policy of suppressing embarrassing facts, and it would also help to obtain united congressional support.

VIII

Considerations in Procuring New Legislation

Some of the difficulties which may be met in procuring desired new legislation have already been discussed. It is evident that fundamental principles of American life - freedom of speech and freedom of the press - will have to be modified somewhat in the future, if the work of the cryptanalytical agencies of the United States is to be unimpeded. Yet, in the light of the evident determination of Congress to maintain strong fighting forces, it is obvious that our legislators will do everything they can to supplement national defenses. Though it is difficult to dramatize the work of cryptanalytical agencies, since the very nature of their operations demands the utmost secrecy, both interventionists and non-interventionists will understand the need for protecting an activity that has served as a scouting arm for our fighting forces in providing more accurate information concerning the enemy's intentions at less cost than any other form of intelligence. Congress will also be anxious to protect

the interests of the nation in the labyrinthine ways of post-war diplomatic and economic affairs.

Now is the time to request protection for sources of important intelligence; for the domestic and foreign, political and economic problems of the post-war period may monopolize the attention of our legislators. The importance of Communication Intelligence in helping to control some of the dangerous aspects of the post-war world should not be lost sight of in making a request for appropriate legislation.

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Annex to Special Report No. 1

Special Report No. 1 emphasized the need for new legislation to prevent the unauthorized disclosures of information concerning communication intelligence activities, since present legislation is deficient in that it can only penalize certain types of disclosures, and what is much more important, it cannot prevent similar occurrences. Reference was also made to the fact that the British Official Secrets Act of 1911, as amended in 1920, possessed weaknesses similar to those found in American legislation relating to the same information. This can be best demonstrated by reviewing a book, published just a month prior to the outbreak of World War No. II, and reprinted twice since that time.

The book in question is The Man of Room 40: The Life of Sir Alfred Ewing, written by his son¹ Alfred Washington Ewing. It related the life story of James Alfred Ewing, engineer, cryptographer and educator, with most of its pages devoted to the scientific and educational contributions of this

1 - Hutchinson & Co., Ltd., London and Malbourne; first edition August 1939, reprinted October 1939 and January 1940.

great physical scientist. However, Chapter IX was devoted to his war work at the Admiralty from 1914 to 1917. Up until August 4, 1914, Ewing, as Director of Naval Education, was engaged in reforming the British Navy's educational system. On that day, Admiral Henry Oliver, then Director of Intelligence Division of the Admiralty War Staff, showed him a number of intercepted enemy cipher wireless messages which had been received by British listening stations. Ewing had become interested in code during some cable testing experiences off the coast of Uruguay in 1875, and in 1904, he had patented a new method of detecting electric oscillations such as occur in wireless telegraphy. Before the war, he had devised some ciphering mechanisms and had discussed ciphers with Admiral Oliver.² Thus, it was natural that Admiral Oliver turned to Ewing when seeking for assistance in crypt-analysis.

Chapter IX outlined the whole history of Room 40 through the war years. Discussing the origin and work of Room 40 O.B., which soon gave way to much more spacious quarters, it enumerated the difficul-

2 - Ibid., pp. 173-174.

ties that Ewing had to experience before meeting his first success.³ The acquisition from the Russians of a German code taken from the wreck of the Magdeburg was discussed, and Mr. Winson Churchill, in The World Crisis, was quoted as an authority for the details of the story. Mr. Churchill was also quoted as saying that the Admiralty, basing its orders on intelligence derived from enemy intercepted dispatches, knew beforehand of every sortie in force that was made by the German Navy during the war.⁴ Admiral of the Fleet Lord John Fisher, was also quoted in his published Memories as saying of Room 40 O.B.'s decipherments:

One of the crowning glories of the Admiralty ... in my time, they never failed once in that elucidation [of naval ciphers].⁽⁵⁾

On January 23, 1915, after Ewing's staff had intercepted and interpreted a series of enemy cipher messages, it was apparent that important movements of German naval forces were commencing. This intelligence, as Mr. Churchill has related, led to the battle of the Dogger Bank. As each enemy message

3 - Ibid., pp. 175, 179.
4 - Ibid., pp. 179-180.
5 - Ibid., p. 181.

was decoded and interpreted during the battle, Ewing took it into the war room of the Admiralty where Mr. Churchill, Lord Fisher, Admiral Oliver and Admiral Wilson were assembled. ⁶ Rarely had such a precise picture of a naval battle been presented to operational authorities.

The progress of the British Admiralty in establishing directional wireless stations around the coast to pick up German submarine messages was also described, and the importance of Room 40 in anti-submarine and anti-Zeppelin warfare was indicated. The intelligence supplied during the battle of the Dogger Bank had been so satisfactory to the Admiralty that Ewing was able to increase his staff and to supply improved apparatus to some of the listening stations. In addition, both Mr. Churchill and Mr. Balfour, his successor, were fully aware of the im-⁷portance of this work and did much to foster it.

Room 40 O.E. deciphered not only naval messages, but also German diplomatic codes. Full details of the Sir Roger Casement incident and the

6 - Ibid., pp. 183-184.
7 - Ibid., pp. 185-188.

Easter Rebellion in Ireland were thus disclosed.⁸ Further details, which have already been mentioned in Special Report No. 1, were given concerning the decipherments which revealed German intrigue in Persia, and enemy espionage in Spain, and the disclosure of the famous Zimmerman message which had so much influence on American public opinion was discussed.⁹ As for its success with naval messages, Ewing's son quoted Mr. Churchill, concerning the Battle of Jutland, who said:

Without the cryptographer's department there would have been no Battle of Jutland. (10)

Ewing's son pointed out that the work of Room 40 continued successfully during Ewing's frequent absences for necessary duties in connection with his new post as Principal of Edinburgh University, which he had assumed in 1916. Its success was due to men whose faculty for cryptanalysis was far greater than his own, for Ewing's chief function was to collect and organize a staff, giving it such general directions as was necessary.¹¹ In May 1917, Ewing re-

8 - Ibid., pp. 188, 192-194.
9 - Ibid., pp. 199-202, 203, 207.
10 - Ibid., p. 195.
11 - Ibid., pp. 198-199.

signed his responsibilities for Room 40 to Admiral Hall, Director of the Intelligence Division, so as to permit undivided attention to his university labors.

In the course of his narrative, Ewing's son emphasized that British work in cryptanalysis began only with the opening of World War I and ended when peace came.¹² Though it makes little difference whether or not these statements were true, it is obvious that no informed observer of world affairs believed them to be true. In fact, Ewing's effort to stress the absence in England of such activity before and after 1914-1918 only drew attention to the existence of an organization which the statement was intended to hide.

Other references in this book cited the public tributes of Sir Maurice Hankey and Mr. Winston Churchill to the work of Ewing in Room 40.¹³ Both tributes reached the public eye. Sir Maurice Hankey stated that among those who had worked in obscurity, as opposed to those who had been in the limelight, no one deserved greater honor than Ewing, and no man

12 - Ibid., pp. 175, 203.

13 - Ibid., p. 223.

had done greater service to his country.¹⁴ Churchill said that Ewing had

... made a contribution to the affairs of the Admiralty and to the fortunes of the State, which might almost be called inestimable, if only from the fact that it had never been recognized. (15)

On the occasion of Mr. Lloyd George's official visit as Lord Rector to Edinburgh University,¹⁶ Mr. George said of Ewing:

His discoveries, the organization which he set up, and what he discovered by means of that organization, brought to their knowledge things without which our fleet could not have operated successfully, and without which it would have been difficult for our submarine campaign to have carried on. I say more than that. The organization which he set up gave us the information which ultimately brought America into the war. That story will one day be told. (17)

In discussing Ewing's famous lecture, "Special War Work" given to the Edinburgh Philosophical Institution, Ewing's son maintained that it was delivered in view of disclosures already made about Room 40 in various publications, both at home and abroad, and because Lord Balfour desired him to

14 - Scotsman, July 19, 1921.

15 - Scotsman, July 12, 1923.

16 - Ibid., pp. 230-231.

17 - Morning Post, March 2, 1923, Daily Chronicle, March 2, 1923.

do so. He believed that a lecture in which details and comments likely to do harm were carefully omitted would be desirable, since he wished particularly to pay a well-deserved tribute to a most capable and devoted staff, some of whom were already dead.¹⁸

Lord Balfour, who, as First Lord of the Admiralty during part of the war, had much personal knowledge of the value of the work, promised to act as chairman for the lecture, but though political duties prevented his appearance, he sent a letter to be read aloud by the Chairman, Lord Sands, in which he paid warmest tribute to Ewing's work during the critical period of Balfour's stay in the Admiralty. The lecture was delivered on December 13, 1927 before an audience of nearly 1500 persons.

On the following day, the Admiralty inquired why Ewing had not asked their permission before delivering the lecture. Replying that he had talked the matter over with various workers of Room 40 and that Lord Balfour had known beforehand of his intentions, he stressed that he did not wish to hide behind Lord Balfour since he was not a child and felt capable of

18 - Ibid., pp. 245-246.

forming his own judgement as to what was suitable reticence and what might properly be mentioned in view of the disclosures already made in certain publications.¹⁹ However, after correspondence with the Admiralty, Ewing promised not to publish anything dealing with his war work without express permission, although he maintained that publication of the text of the lecture would allay and satisfy curiosity rather than excite it, as he was certain that the narrative had enough historical value to justify its existence in print.

In October, 1932, Ewing was asked to attend a dinner of the I.D. 25 Association (Admiralty Intelligence Division), and to his great surprise and pleasure he was made Chairman, and sat between Admiral Hall and Lord Lytton, with the utmost cordiality shown all round. At that time he was writing his reminiscences of Room 40 for inclusion in his coming volume of papers and addresses. He sought official permission to publish it, but eventually after much consideration, the Admiralty announced its regrets that his account entitled "A Chapter of History" could not be published. No reason was given officially, but Ewing gathered that

19 - Ibid., pp. 245-246.

they had drawn a distinction between any publication which might be brushed aside as sensational journalism on one hand, and a narrative that would be really authentic on the other. Ewing thought that he had

... fallen on an unlucky moment, when the sanctity of official secrets has been violated by some who should know better, and the Lords and Commons are, so to speak, whacking them on their backs. Anyhow that's that! So the book is now going ahead for publication without the story of Room 40. (20)

It is evident from the foregoing that many publicity leaks concerning Ewing's activities had occurred even before Ewing himself disclosed them in his famous lecture. It is interesting to note that most of the disclosures were made by persons who formerly had occupied positions of great authority in Britain, or were still holding important posts. Apparently no official action was taken because of the importance and undoubted patriotism of those revealing the secrets.

The point is clear, however, that the British Official Secrets Act did not prevent nor penalize these disclosures. It is noteworthy that very damaging revelations were averted by the fact that the

Admiralty was able to review Ewing's own account of his activities before publication. This further strengthens the contention made in Special Report No. 1 that a Military Intelligence Reviewing Commission be set up to review all manuscripts which refer to the sources of military or naval intelligence. It will be recalled also that the French government instituted a similar procedure in stopping the publication of General Givierge's Memoirs, which his family planned to publish after his death.

It appears to be evident, therefore, that unless similar precautions are taken by the English speaking powers before the end of this war, memoirs and diaries published in the future by persons of great authority may contain revelations similar to those noticed in the writings and speeches of Mr. Winston Churchill, Lloyd George, Lord Fisher, Ambassador Page, etc., after World War I.