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TO	NAME AND EXTENSION OF PERSON REQUESTING FILE Mr. William F. Friedman, 310 2nd. St.	ORGANIZATION, BUILDING, AND ROOM NUMBER S. S. E., Wash. D. C.	
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21 Sept 60

Mr Friedman, I am sorry to be late with this but I had to have it reviewed and also I have been "helping defend ourselves".

I had to remove page 39 in the typed carbon because the classification is higher.

This entire collection is considered Confidential

Sincerely
Tyde

- 4- Page + staff p. 43 4
- 2- Hall (p. 17) 2
- 1- Ewing (p. 16) (1)
- 5- 13040 telegram WW (p. 43)
- 3- 7500 version plain text draft 1st decrypt (p. 23) 3
- 9- 7500 " " " " final p. 55
- 8- 13040 Section of decode page p. 49
- 6- 13040 version plain text by itself ?? (p. 43) (to come)
- ~~5- Ambassador Page + staff p. 43~~
- 7- German text of 13040 version p. 44 (to come)

Page 39 removed because of its
classification.

65

See
p. 34
final typed &
edited version

THE INFLUENCE OF C-POWER* ON HISTORY.LECTURE NO. 3MAKING THE MOST OF A CRYPTOLOGIC OPPORTUNITY.PART 1 - INTRODUCTION

The Walter Cronkite Television Story Entitled
"The Secret Message that Plunged America into War!" -
one of the episodes of his "You are There!" Series
presented over the Columbia Broadcasting System TV network
on
23 October 1955; repeated on 4 August 1957.

It's a nice thing to solve an enemy's cryptosystem and as a result glean information which in pretty nearly all cases is indubitably authentic because it comes right out of the horse's mouth; but if you can't use the information without arousing the enemy's suspicion as to its origin, what good is it except, perhaps, for historical purposes? In other words, it's one thing to have COMINT--and another, to use it properly, that is so as to continue to receive the blessings which flow from your ^{cryptologic} ~~crypto~~-astuteness and good security. Another way of putting the matter I'm going to discuss at some length today is to say that in the COMINT business we try our best to eat our cake and still have it; and we try this neat trick pretty nearly every day. Our score hasn't been too bad and now we're going to observe

* "C-power" = Cryptologic power.

✓ an excellent case illustrative of these two phenomena which are so often hard
 ✓ to join in an enduring cryptologic marriage, viz, using COMINT to its utmost
 advantage and at the same time protecting it so as not to dry it up at its source.

I imagine that the name Alfred Zimmermann for many of you is not one that
 arouses much interest these days; in fact, I doubt that the name means anything
 to a great many of you. Yet, this gentlemen, of whom I find it difficult to say
 "may his soul rest in peace", was the German Minister of Foreign Affairs in Berlin
 in the years 1914-1917, a diplomat whose unimaginative conduct of German foreign
 affairs in the three critical years I've mentioned constituted a fine example
 of how not to make friends and influence people; in fact, it can and has been said
 by many historians that Herr Zimmermann's culminating caper in a career of
 clumsiness brought the United States of America into World War I as an active
 belligerent on the side that was wrong for his country, that is, on the side of
 the Allies; and this, within a month after what he did became known to the Americans.
 The military ^{might of the United States} could have easily been thrown to the other side--during the critical
 months of the year 1916--had the Germans and, particularly Zimmermann, been more
 astute. I lived through that period and I know from first-hand experience that

there were several occasions when it wouldn't have taken much to tip the balance in favor of our joining Germany. The consequences of such an event can hardly be gauged; it would be an understatement to say that the course of history could have been changed in a most spectacular manner.

What did Herr Zimmermann do or fail to do to merit so strong a statement as the one I've just made? What did he do or fail to do that tipped the balance suddenly in favor of Britain? What he did was to send a telegram on 16 January 1917 to the German Ambassador in Washington with instructions to forward its contents to the German Minister in Mexico. The telegram was in a German foreign office code and it was intercepted and solved by the British cryptanalytic unit in London. What Herr Zimmermann failed to do was, first, to realize how violent the American reaction might be if they learned the contents of his message before what he proposed in it could be brought to pass; and, secondly, to see to it that the cryptosystem that had to be used to encrypt his message was technically sound enough to protect its contents against cryptanalysis and premature disclosure.

In the aftermath of the discovery of his diplomatic dumbness he did and failed to do something else in connection with his now famous message--but of that, more later.

In order to prepare a proper background for the Zimmermann Telegram of 16 January 1917--that's what it's called in history--I will give a brief picture of the situation from the outbreak of the war, on 1 August 1914, up to about the

time the telegram was sent.

By 1914 England had become so dependent on sea-borne imports that her people couldn't live, let alone wage war, for more than four or five weeks after her sea-routes were broken. Keeping these routes open was therefore the principal task of the British Navy. On the other hand, her principal enemy, Germany, was not dependent on sea-borne imports, so that the British Navy's historic function of arresting an enemy's sea-borne trade lapsed after German shipping had found refuge in neutral ports.

There were, then, the British Grand Fleet and her hardly much inferior protagonist, the German High Seas Fleet, both glaring at each other at a distance, and, although the Grand Fleet was becoming impatient and spoiling for a fight, the Germans didn't dare risk their fleet in major battle. They confined their attacks to sporadic forays by fast units and to minelaying.

German hopes of quick victory were shattered when the heroic resistance of Englishmen and Frenchmen in trench warfare in France brought the war to a stalemate. With each passing month it became clear that there could be no German victory unless British overseas trade was cut off. Even in 1915, in certain German circles, there were those who had what appeared to be a good idea, viz.,

to give highest priority to building submarines and use them to destroy British and, if necessary, all other shipping to the British Isles. In short, these people thought that the successes of the German small submarine flotilla of 1914 pointed the way out without risking their German High Seas Fleet. But the time was not yet ripe for such violent measures.

The time wasn't ripe because civilized rules of maritime warfare required that no merchant ship be sunk without warning; time was to be given for the crew to take to life boats. These rules were being respected by both belligerents but for the Germans this severely reduced the destructive power of their submarines and from time to time their commanders either on their own initiative ignored or they were ordered to ignore them. That this was true especially in the case of the British merchantment goes almost without saying. But there were bound to be mistakes and sometimes the ships of neutrals were also sunk, with the result that the German unrestricted submarine warfare, as it came to be called, brought a wave of resentment against the German Government. Many bitter and acrimonious notes were sent to that government, especially by our Government, when our ships were sunk and specious excuses were given for such sinkings. Germany decided that it couldn't pay the price of unrestricted submarine warfare in the form of

universal condemnation, and soon gave up the practice. But as regards American ships there continued to be trouble and American antagonism was heightened by the discovery of plots and sabotage activities of German agents in America. The powerful German submarine offensive in 1916, even though unrestricted, soon began to take a dreadful turn for the British. Soon the daily toll of shipping losses became so heavy that it began to be obvious that unless some new tide set in--or unless the United States of America could be drawn into the war on the Allied side-- there could be only one end to the war, and that end would come soon.

Britain's problem was then two-fold: First, to labor prodigiously to gain mastery over the German submarines; but this, it was recognized, would be a slow, a very slow, process. Second, to try not to irritate or antagonize the United States, and certainly not to exasperate America as were the Germans. The hope was, of course, that the Germans would sooner or later, the sooner the better, goad us into joining the war against Germany. The British were fortunate in both respects. It turned out that thanks to the tremendous exertions of their ship-builders, scientists, and sailors, mastery over the submarines was attained, but

that didn't come until early in 1918. With this phase of the British problem as I've just stated it, we shall not concern ourselves today. It is with the other phase of it that my talk will deal.

Let's see how the Germans behaved so as to outrage nearly all Americans and practically force President Wilson to ask Congress to declare war on them.

We know from autobiographies of certain persons such as Hindenburg and Ludendorff that an important question began to be discussed within the German High Command in August 1916. The question was whether or not to resume unrestricted submarine warfare. In December Ludendorff made a tour of the entire front and returned profoundly pessimistic. Radical steps would have to be taken. And on 9 January 1917 Emperor Wilhelm held a council of war at Pless. The Navy practically guaranteed the success of unrestricted submarine warfare. The Military High Command joined in urging its adoption and the

German Chancellor Bethmann-Holweg yielded. Notes were sent out on 31 January 1917 to all neutrals that beginning on 1 February 1917, German submarines would sink at sight ALL ships met on the high seas; in short, the German Government officially proclaimed that unrestricted submarine warfare was being resumed. And it was-- without further ado.

What did President Wilson do on receipt of the German proclamation? Why, two days later, on 3 February, he informed German Ambassador von Bernstorff that the United States was cutting diplomatic relations with Germany. Von Bernstorff's career in the United States was over; he wasn't given much time to pack his belongings and go home. And, of course, American Ambassador Gerard in Berlin was called home. But note that severing diplomatic relations doesn't mean war-- and it didn't in this case.

It was only natural for Britain to hope that we would now join her in the war against Germany, but, sad to say, we held back. To many of us our position was quite humiliating because it was clear that we were unable to give our own merchantmen any protection whatever, that is, it seemed that we just couldn't provide protection without going to war, and that was something President Wilson had promised not to do; he said he was going to keep us out of the war. But one

thing he hadn't promised was to keep our merchantmen sailing on the high seas where they had every right to be. Hence, after the German declaration of unrestricted submarine warfare there was nothing our ships could do except keep within American harbors; they were afraid to leave because they would certainly become helpless victims of submarine torpedoes--with large losses in life to be expected. This situation was unbearable but, as I've said, President Wilson was determined to keep us out of war--just as the Scandinavian and certain other countries in Europe were keeping out of it.

On the whole, our sympathies were with the Allies but certain additional factors were involved in the situation. For a large part of the United States, especially the Middle and Far West, the war in Europe was thousands of miles across the Atlantic. It might as well have been on another planet so far as they were concerned. Moreover, the feelings of a large German-American population had to be taken into account, especially when British high-handed action, every once in a while, severely prejudiced their case. Still, the President held back. One writer, commenting on President Wilson's conduct, said that he "was hesitating on the brink of war, reluctant to plunge into it, clinging painfully to the idea of strict neutrality which seemed to be almost a part of his

religion."

But maybe a bit of politics got mixed up with the religion because, as some of you may remember, the Democratic slogan for President Wilson's campaign for a second term was: "he kept us out of war". And let's not forget the other famous explanation he gave for keeping out of war: his statement that "there is such a thing as being too proud to fight!" I won't try to defend that.

After severing diplomatic relations with Germany something had to be done, of course, to try to give our merchant ships some protection and the question of arming them to protect themselves was discussed. The idea was to let the Navy provide guns and trained gunners to handle them, and on 26 February, President Wilson addressed Congress in joint session to advocate that course of action. A bill known as the Armed Ship Bill was introduced in both Houses of Congress, and on 1 March it passed the House by a vote of 403 to 13. In the Senate it was less fortunate; it became the subject of acrimonious debate which finally developed

into a filibuster led by Senator La Follette of Wisconsin. The filibuster was successful and succeeded in preventing passage of the bill Wilson wanted. But the President still had a way open to him to do what he wished done--his constitutional powers to direct the Navy to furnish the guns and gunners for American ships that had to pass through the German-declared war zones. "While the Armed Ship Bill was under discussion in Congress another event occurred which caused the greatest excitement throughout the country and aroused the people of the United States even more," Secretary of State Lansing wrote, "than the announced policy of submarine ruthlessness." What was this event? It was the one which involved what ~~I've termed~~ ^{first for us a first} "a cryptologic opportunity" ~~in~~ the title of my talk. It was an event which almost overnight it seems changed the picture ^{event and the} entirely. What was the/opportunity? It was the disclosure of the interception and solution by the British of the Zimmermann Telegram.

Now, historians may disagree as to why the United States became a belligerent in World War I; even some of them still believe we went in on the wrong side. But I think that most historians ~~would~~ now agree that it was the interception and solution of the Zimmermann Telegram and the brilliant way in which the British used it, that brought us into the war just in the nick of time, and on the right

side--the side of the Allies. And because the U.S. was and still is the leading power in the Western Hemisphere, the Zimmermann telegram helped to bring Argentina, Bolivia, Brazil, Cuba, and Panama into the Allied camp. There could now be no doubt whatever as to the outcome of the war.

The whole episode, replete with drama, forms one of the most dramatic of the historical episodes recounted by television on Walter Cronkite's "You are There!" series. Some of you may have seen it when the program was presented "live" over WTOP-TV; some of you may have seen it as recorded on motion picture film, a copy of which is owned by NSA and which I've borrowed from the Office of Training. That sound-track film we now are about to see and hear. I'd like to add that the Zimmermann Telegram of 16 January 1917 was the subject of a radio broadcast by the British Broadcasting Corporation as recently as on 26 May 1958. I'm trying to get a transcript of that broadcast. I mention this to show you that the subject is still quite a live one today--more than 40 years later!

Now let's have Walter Cronkite's film. After that I'll take up the background and detailed account of this spectacular and fateful cryptologic episode of World War I.

* * * * *

The Cronkhite film is for the most part a strictly authentic and truthful account. I hardly need comment that it well portrays the importance which the Zimmermann Telegram exercised upon history because what almost immediately followed the disclosure of its contents, ~~must inevitably be considered in any study of the causes which led to our entry into World War I and the role played by our country.~~

Just before the film started I said I'd go into the background of this episode and give you a detailed account of this, the most spectacular and fateful single cryptologic episode of World War I, or of World War II, for that matter. I think that an episode of such importance in cryptologic history warrants careful study by cryptologists as well as historians. It is a story replete with lessons on the disastrous consequences of weakness in "C-power", as well as on the opportunities attendant upon strength in "C-power".

The fact is, however, that the Zimmermann Telegram was sent on 16 ~~February~~ 1917, its decrypted plain text was published on March 1st, and within a little over one month after publication, on April 6th, we declared war on Germany.

According to practically all historians there seems to be little doubt that we entered the war when we did because of the Zimmermann Telegram. Perhaps we in the cryptologic field should be a bit more specific and say that we entered ^{when we did} ~~as~~

~~a consequence~~ ^{because} ~~on the one hand~~ of German obtuseness in affairs diplomatic

and naivete in affairs cryptologic; and, we should add, that we entered into it,

~~on the other hand~~, first because of British astuteness in affairs diplomatic and

~~second~~, because of their brilliance in affairs cryptologic. Or, should these ^{two last-mentioned}

two reasons be interchanged in their order. I'll let you be the judges.

disclosing the contents of the Zimmermann Telegram had on Congress. It was only

to be expected that question and doubt should be raised as to its authenticity.

The newspapers were full of denunciations and discussions of what people regarded

at first a complete hoax, a patent fraud. In the Congressional Record the debate

on March 1st, 1917, the day the Associated Press story appeared, takes up 22 whole

pages--all devoted to the question of the authenticity of the Zimmermann

Telegram, which had so far nothing to back it except the word of the Washington

Correspondent of the Associated Press, for, mark you, the disclosure had not been

made on the authority of the State Department at all! Strange as it may seem,

it had appeared merely as an Associated Press dispatch which was widely dis-

tributed apparently upon its own responsibility. You will recall this point

in the Cronkhite film and I'll add that the principal idea of my talk is ~~to explain~~

~~reasons for~~ the delay between the date the Zimmermann Telegram was sent,

16 January 1917, and the date its contents were communicated to the American

Ambassador, 24 February, a period of almost six weeks. Why did it take so long?

This was a question many persons asked. Wasn't that ^{lengthy delay a bit} suspicious? What kind of

British skullduggery was being covered up? Walter Cronkhite tried to give an

explanation. He said or rather hinted that the story was held back until the

Germans changed their code. Then the Zimmermann Telegram could be published

without harm to British intelligence. Well, let's see. ~~At this point perhaps~~

✓ ~~But now~~ let's ~~lift~~^{draw} the curtain that for so many years shrouded the Zimmermann Telegram in a tight veil of secrecy. Let's begin with a brief story about how the British cryptologic organization got started. I should tell you that according to the historical accounts, and I know they're true, the British Government had no cryptanalytic organization in being when World War I broke out. Oh, yes! I know there had previously been a long long tradition of code and cipher solving by British Intelligence agencies--and this, too, is true. But that's another story and I don't wish to go into it at this time. All I want to say at this moment is that there was no cryptanalytic organization in being in the British Government when war came in 1914--just as there was no official cryptologic agency in being in Washington. (When we entered World War I as a belligerent in April 1917. In both cases there had to be improvisation--

with amateurs taking the leading roles, not professionals. Let me read from a letter dated ~~April~~ ^{this well} August 23, 1958, written to me by Cmdr. A. G.

Denniston, who was for a number of years before World War II and for a couple

of years during that war the head of the British cryptanalytic organization, *and with my son Sid described the time when Denniston was working for you, who was in England.*
 "But do remember also the origin of '40 O.B.' - a collection of

*Simple
to
understand*
 amateurs with a good knowledge of German and no experience of cyphers

collected by Sir A. Ewing in August 1914 to study the vast amount of W/I

material which was coming into the Admiralty Within a few weeks Naval material

was sorted out and the First Lord (Churchill) instructed us to make a

profound study of the mind and methods of the German Admiralty!

which
 "We carried this out successfully and the staff grew and by the middle

of 1915 we began to seek fresh fields where we could tackle the Germans.

But we all had to learn the technical side of our job! No easy work even

for enthusiastic amateurs. Out of that small body and a similar party in

the War Office studying the German Army, ~~and~~ you know as well or better

than I what has grown up from these seedlings!"

Cmdr Denniston's mention of Sir Alfred Ewing requires a bit of elaboration.

You'll find a good deal of information about him in a book by his son, published

in 1939, after some clearance bouts with the authorities. The book is entitled

The Man of Room 40: The Life of Sir Alfred Ewing (Hutchinson & Co., London, 1939).

He's mentioned in several other books, and, in particular, a book published

in 1955 by Admiral Sir William James, entitled Eyes of the Navy, devotes a good

deal of space to the part played by Ewing in World War I. Let me quote from

that book:

"When Hall became Director of Intelligence in November 1914 he found, to his surprise, that a small body of picked men under the direction of Sir Alfred Ewing were at work on intercepted German naval wireless signals and, having discovered the method of cyphering, were supplying the Operations Division with information about the movements of the German Fleet. This work had been kept so secret that only a few officers in the Admiralty and no officers outside the Admiralty knew that signals were being intercepted, let alone that they were being read."

After a few paragraphs on codes and ciphers, there follow ~~this~~ paragraphs:

"Though the work of Ewing's small band had been kept so secret, all the Great Powers, with the exception of ourselves, maintained a department for the decyphering of foreign codes in their peace-time organization, the Russian and French departments being especially efficient.

"The outbreak of war found our Navy fully mobilized and at its war bases at a peak of battle efficiency, but our naval intelligence service, on which so much would depend, was not so well prepared.

"Our Intelligence Department had amassed very useful information about Germany's war potential, but the problem of how to keep watch on the German Fleet had not been studied.

"Ever since the advent of large minefields and the submarine it had been obvious that the centuries-old method of keeping watch on the enemy's Fleet by look-out vessels cruising off the enemy's ports was no longer possible. That some of the senior officers had not imbibed this evident fact and were still living in the past was apparent when the cruisers Hogue, Cressy, and Aboukir, cruising slowly up and down a patrol line by Admiralty orders, were all sunk by one submarine."

* * * * *

"With the exception of Ewing, who had at one time been interested in cyphers, not one of the pioneers, or for that matter not one of the men and women who joined them later, had any previous knowledge of codes, cyphers, or wireless procedure.

"The Admiralty staff first worked on messages from a high-power German station to stations in the German colonies, and though, with the help of Mr. Bradfield of the Marconi Company, code signals were identified and code-books of German commercial firms were collected and studied, no real progress was made for several weeks.

"Meanwhile the War Office staff were attempting to analyse the messages and separate military messages from those in naval code. About the middle of September the French gave our G.I.G. the key of the military cyphers and valuable information was soon being passed to the Army command."

* * * * *

~~"When Hall became Director of Intelligence in November, the small band of pioneers were supplying the Operations Division with some intelligence of the German Fleet, but it had so far been entirely a private enterprise effort, and the small organization did not come under any Director or Sea Lord."~~

A radio receiving station specifically for intercepting enemy radio signals was set up--by amateurs, too, but we won't go into that--and this first station was eventually expanded into 14 stations in the British Isles. Later three overseas stations were established.

"A stream of messages on the lower naval wave-length was now arriving in Ewing's room, and the research workers had their first stroke of fortune when a German Mercantile Signal-book arrived from Australia. It had been taken from a German merchant vessel at the outbreak of war, and had been sent by the quickest route to the Admiralty. It was the book used by German outpost vessels and airships.

"In the middle of October they had another stroke of fortune. On August 28 the German light cruiser Magdeburg had been destroyed by Russian ships in the Gulf of Finland. A few days later the body of a German signalman was washed ashore, and clasped in his arms was a copy of the German Naval Signal-book. The Russians realizing the value of this book to the British naval authorities, sent it to England, where it arrived on October 13.

"Fleet Paymaster Rotter, the principal German expert in the Intelligence Division, now joined Ewing's staff, and applied himself to discovering the method of cyphering the groups in the book. With his naval knowledge to help him to guess the possible purport of the signals, Rotter, by a brilliant piece of deduction, produced the key. It was a substitution table (a = r, b = h, etc.), and at that time in force for three months. Later on it was changed every week, and still later every twenty-four hours. The time had come for the men working at the War Office to return to the Admiralty; there was now more than enough work for all the men Ewing had at his disposal.

"When Hall became Director of Intelligence in November, the small band of pioneers were supplying the Operations Division with some intelligence of the German Fleet, but it had so far been entirely a private enterprise effort, and the small organization did not come under any Director or Sea Lord."

Mark what Admiral Jellicoe said:

~~Believe it or not~~, Ewing's work for a number of months was entirely a private enterprise effort. It is not clear whether he and his small band of amateurs were paid--I must assume they were, somehow or other ^{but} Ewing's small organization did not come under any Director or Sea Lord. This situation was changed when Ewing's group became a section of Naval Intelligence under the over-all direction of ~~a man who soon after the war gained a great deal of publicity as a result of the work of the people under him, Admiral Sir~~ ^{Reginald} Hall. Ewing continued to be the technical head of the group until he became Chancellor of Edinburgh University two years later.

Ewing and his small team were University men--not naval officers; as a result their translations of German naval signals were strange things in the eyes of the very few men in the Naval Operations Staff to whom the translations

vent. And, of course, the gifted amateur cryptanalysts became the butt of jokes and it was a long time before Admiral Hall was able to break down the prejudice against their work. The amusing thing to note is that Hall had assigned a Navy Captain to put the translations into proper naval language--but that officer wasn't permitted to have access to the room where the cryptanalysts worked or to have any personal contact with them until 6 November 1914, when he not only was allowed in Room 40 but became Hall's representative in charge of the staff of cryptographers. It is also reminiscent of certain early days in the history of our own cryptanalytic organization to learn that for a good many months one and only one person was permitted to receive the translations--the Chief of Staff, to whom they were personally handed in a locked book! But now it's high time I got down to the real cryptologic details of the Zimmermann Telegram, details which had been completely shrouded in mystery for almost ten years before the veil of secrecy was lifted a bit by a story in the November issue of a now defunct American magazine called World's Work in which was published the final installment of a book by Burton J. Hendrick entitled The Life and Letters of Walter H.

Page. I think Walter Cronkhite's story used a lot of information that

appeared first in this Hendrick account, *but then much later and in --*
~~And in passing I might quote from an~~
~~the~~ account in Admiral James' book is better so I'll quote
 somewhat extensively from it. -21- in much that will follow.

We shall not concern ourselves at the moment with the steps taken by President Wilson and Secretary Lansing, culminating in the publication by the Associated Press of the text of the Zimmermann Telegram. Our attention will be concentrated first upon the minute details of the manner in which the message was intercepted and solved. *Ed's continues with Hendrick's account.*

Continued

"The manner in which the British had acquired this message is disclosed in Page's telegram. It was 'bought' in Mexico. That is, the British secret service had obtained it evidently from some approachable person in the Mexican capital--a practice which, it appears from Page's communication, had been going on for some time. An interesting additional fact is that this is not the only way in which the British obtained this priceless treasure. The German Government was so determined to make this Mexican alliance that it did not depend upon a single route for transmitting the Zimmermann message to Von Eckhardt. It dispatched it in several other ways. For one it used the wireless route from Nauen, Germany, to Sayville, Long Island.

"In the early days of the war, the American Government prohibited the use of this Sayville line except under American supervision; how little this prohibition interfered with the Germans is shown by the use they made of the Long Island station for this, the most fateful message sent to America during the war. . . . "In the British Admiralty this Nauen-Sayville thoroughfare was known as the main line; it was the most direct and consequently the one most used for sending German dispatches to the United States."

Hendrick cites no authority for the statement that the Zimmermann Telegram was transmitted by radio from Nauen to Sayville. There is very good reason to doubt it.

A few hours after outbreak of war the British, who've always recognized the importance of control of communication channels as well as sea lanes took immediate steps to isolate Germany from the rest of the World that lay beyond the

oceans, by cutting and diverting to her own service the two German cables across the Atlantic, leaving only indirect channels of communication with her ambassador at Washington. These were four in number:

(1) By radio from Hauen, Germany, to Sayville, Long Island, New York, and Tuckerton, New Jersey. Both routes were supervised by the United States and were well supervised to protect our neutrality.

(2) By cable from Germany via Berlin-Stockholm-Buenos Aires, Washington-- but this route was secret from the United States Government, although there is positive evidence that it was quite well-known to the British from the first days of its use. You see, the cable from Stockholm to Buenos Aires passed through England; and the route was jocularly called by Room 48 people, so Denniston told me, as "the Swedish Roundabout."

(3) Another cable route via Berlin and Copenhagen, to Washington. This cable also touched English soil. This was a very unusual channel for the Germans because it could be used only with the knowledge and cooperation of the United States Government. More about that channel later.

(4) The last route involved inserting secret text in ordinary news dispatches. We learned about this route and method only after the war was all over, when it was disclosed ~~by~~ ^{by} Denniston himself.

dispatches, ~~and we learned about it when this method was disclosed after the war~~
~~by Bernstein himself. This was what we may call a "concealment method."~~

~~Now as to the first method,~~ ^The use of the radio channel from Nauen to
 Sayville or Tuckerton ~~was~~ ^{was} prohibited except under American supervision
 and I ^{can tell you most emphatically} ~~am glad to say~~ that the supervision ~~exercised by American authorities~~ was
 very detailed and effective. ~~Hendrik is absolutely wrong when he says (p.25, 1st~~
~~column) that~~

~~"How little this prohibition interfered with the Germans is shown
 by the use they made of the Long Island station for this, the most fateful
 message sent to America during the war."~~

^{German as well as American}
 I have very carefully searched every available record and have found not

the slightest evidence that this channel was actually used for the Zimmermann

Telegram. ~~As seen in the German~~

~~The German accounts have been examined by us as well as the American~~

~~accounts.~~ If you're interested in learning just how the supervision was

exercised I suggest you study this brochure on the Zimmermann Telegram (pages

7 and 8). I think you'll agree that great care was taken by the authorities

who had the responsibility of seeing to it that we lived up to our international

obligations under strict neutrality.

~~No, the Zimmermann Telegram wasn't sent via that route, although~~
Hendrick's story of ~~how~~ the Zimmermann Telegram says that it was sent via that route and he
~~Hendrick's account makes it plausible by saying:~~

"On the 16th of January, 1917, the ever-watchful ears of the British wireless operators detected the characteristic spluttering which informed them that another German message was speeding through the air. When decoded, the British found that they possessed this somewhat disjointed but still extremely valuable document: I won't read the message; I'll show it to you.

[I will show slides]

"Zimmermann to Bernstorff for Eckhardt

W 158

16th January, 1917.

"Most secret for Your Excellency's personal information and to be handed on to the Imperial Minister in ? Mexico with Tel. No. I. . . . by a safe route.

"We purpose to begin on the 1st February unrestricted submarine warfare. In doing so, however, we shall endeavor to keep America neutral. . . .? If we should not (succeed in doing so) we propose to (? Mexico) in alliance upon the following basis.

(joint) conduct of the war
 (joint) conclusion of peace.

"Your Excellency should for the present inform the President secretly (that we expect) war with the U. S. A. (possibly) (. . . Japan) and at the same time to negotiate between us and Japan . . . (Indecipherable sentence meaning please tell the President) that our submarines . . . will compel England to peace in a few months. Acknowledge receipt.

ZIMMERMANN

Hendrick continues:

"This somewhat confused messages gives an idea of the difficulty of picking up wireless symbols sent across the Atlantic--at that time--in midwinter. But there is a conspicuous discrepancy between this telegram and the more complete and finished one sent to Bernstorff by way of the Washington cable office and by him relayed to the City of Mexico. The plan for dismembering the United States and making President Carranza a free gift of Texas, New Mexico, and Arizona does not appear in it. Whether this omission was the result of defective wireless work or has another explanation is not yet clear."

Does Hendrik ^{us to believe that} want to ^{himself} imply Bernstorff added this precious bit of enticement?

^{Perhaps so, but}
 this lure which the Mexican President Carranza was to swallow? ^c ~~the~~ Hendrik's

explanation is quite wrong; it is, in fact, misleading and perhaps intentionally

disingenuous. We shall soon learn the real explanation for the gaps and doubtful points in the text of the message as first intercepted, *as well as the reason for* ~~it will go a long way~~ *which made people suspicious, as I've said.* ~~to explaining the 6-weeks' delay we've been trying to explain.~~

Let's continue with the Handrick story.

"We come now to the second communication channel used by the German Government to communicate with Bernstorff, the route via Berlin, Stockholm, Buenos Aires, Washington. This channel was made available by the good offices of the Swedish Foreign Office and its representatives abroad. Hints as to the use of this channel may be found in Bernstorff. For example, on page 65: 'We had to fall back exclusively on the wireless stations, when, as frequently happened, we were unable to make use of the circuitous routes via neutral countries.' Again on page 149: 'Telegraphic communication between the German Government and the Embassy at Washington was carried out by a circuitous route, which made it extremely slow.'"

I've already mentioned

~~There is plenty of evidence~~ that the British came to know all about this

circuitous route a few days after it was instituted; decodes of messages that

passed over it later appeared among the hundreds in Admiral Hall's affidavit

in the records of the Mixed Claims Commission set up after the war to fix the

amount of money the German Government owed in damages for the destructive

in the United States

sabotage workings of their agents. And that, by the way, involves another very

interesting study in cryptology. Many messages passed over "the Swedish

Roundabout" the Berlin-Stockholm-Buenos Aires-Washington route. ~~What the~~

received this special routing treatment ^{REF ID: A62864} its delivery but it is clear

from the German records alone that the transmission of important messages by more than one route was routine procedure in German Foreign Office communications.

~~But Hendrick says~~

"Evidently Herr Zimmermann still feared that his instructions to Eckhardt would not reach their destination, for this very painstaking Foreign Secretary sent them by a third route. In the British Admiralty this Nauen-Sayville thoroughfare was known as the 'main line'; it was the most direct and consequently the one most used for sending German dispatches to the United States. But the Foreign Office had another way of communicating with its Ambassador in Washington. The extent to which Swedish diplomatic agents were transmitting German messages constituted one of the gravest scandals of the war. That the Swedish Foreign Office was so used is now no secret; in fact, the American Government itself disclosed the part Sweden was playing, when, in the summer of 1917, it published the notorious 'sink without a trace' messages of the German Minister at Buenos Aires.

"The fact seems to be that the Swedish Court was openly pro-German; that popular opinion in Sweden similarly inclined to the German side; and, by January, 1917, the Swedish Foreign Office had become almost an integral part of the German organization. In many capitals German messages were frequently put in Swedish cipher and sent to Swedish Ministers in other countries and by them delivered to their colleagues. Herr Zimmermann, in his desire to make certain that his Mexican telegram should reach Washington, again fell back upon the assistance of his Swedish confreres. He handed his message to the Swedish Minister to Berlin; this functionary sent it to Stockholm, Sweden; from this point it was cabled to Buenos Aires, Argentina, and from that city cabled in turn to Washington. The journey was a roundabout one, covering about ten thousand miles. Yet nothing that was sent through the air or under the sea seemed to escape the watchful attention of the British Naval Intelligence, and this Swedish message was captured almost at the same moment as that one which was going by the 'main line'."

Hendrick ~~states~~ ^{that} "In many capitals German messages were frequently put in Swedish cipher and sent to Swedish Ministers...." ^{If this statement} implies that the British read Swedish codes, too.

Now it would be easy to believe that the British obtained and read messages in Swedish code, for their intercept service pretty well covered the earth. It is, however, intrinsically unlikely that the Germans would give the Swedes the text of a message to be put into Swedish code for transmission. Why reveal their secrets to the Swedish Government? It was so much easier merely to ask Stockholm to forward a message in German code--precisely as they asked the Americans to do, as we shall soon see. Not only, however, do probabilities point away from any idea that a Swedish code was used, but we have two pieces of evidence on this matter the authenticity of which cannot be questioned. The first is ~~that the British intercepted the message~~ ^{that the British intercepted the message} ~~from the Swedish Minister to Berlin~~ ^{from the Swedish Minister to Berlin} ~~that they could not read Swedish code messages when they were sent them by accident by Secretary of State Lansing.~~ ^{that they could not read Swedish code messages when they were sent them by accident by Secretary of State Lansing.}

The second piece of evidence is also in the form of a statement from Room 40, a technical statement this time, sent after we entered World War I. It was a statement to accompany the very code in which the Zimmermann Telegram was sent, Code 13040. The statement was that German messages sent by Swedish officials were enciphered in German code in a manner intended to disguise the fact that they were in German code. You might be interested in the ^{procedure} disguise they adopted; what they did in Berlin, for instance, was to hand

Minister to Germany; he embodied the German code groups in a message to Stockholm addressed to his home office; from Stockholm it went to the Swedish Ambassador in Buenos Aires, who turned it over to his German colleague in that city. The

German Minister in Buenos Aires then forwarded the message to Bernstorff in

Washington, but before doing so he applied a process of systematic alteration

to the code groups, hoping that the differences between Swedish and German code ^{in Buenos Aires} The same process would be applied to messages from Bernstorff to Berlin via the groups would not be noted. There is a note in our old records on this point. It

says of this disguise that it was used "no doubt . . . to protect the Swedish

intermediary, as it might otherwise have been noticed that the same set of figures

which arrived at Buenos Aires as a Swedish telegram was sent (further) as a

German one." But I think the British were getting copies of ^{"Swedish"} messages instead out of the

Buenos Aires, and could compare them with messages intercepted out of London--remember that the cable from Stockholm to Buenos Aires touched England.

It wasn't long before they discovered and uncovered the disguise, which, by the way, the disguise was pretty thin: only the three central letters of

5-digit code groups were changed--and systematically. It didn't dawn on the

Germans that their code could be unravelled and read by anybody not possessing

a copy of the codebook--certainly not by stupid Englishmen. And also, by the

way, I found that the disguise procedure began as early as in the summer of 1915.

the summer of 1915. The fact that the practice was not stopped for 2 years are more, though the British must have been fully aware of it, speaks for itself. The British authorities must have realized soon after ~~this~~ ^{the} protest, which was no doubt made early in the cryptologic war, that the information they were gleaming from the study of these messages was too valuable to lose, even taking into account the fact that the messages were of considerable use to their enemies. It is more than likely that the information was at least as useful to the British as it was to the Germans themselves. In some cases there is no doubt that it was even more useful.

*Triple
space
do not
indent*

We come now to the third and most interesting of the Zimmermann Telegram

routings--the one that the Cronkhite story reported so dramatically as that

used with cooperation of the State Department. I quote from the Hendrik ^C_A narrative:

The German Government forwarded this dispatch to Washington in still another way. Indeed, the most remarkable incident in this remarkable transaction remains to be told. Evidently the German Foreign Office feared that transmission by wireless and cable transmission to Buenos Aires--by grace of the Swedish Government--might fail them. The prohibition the American Government had placed upon the use of wireless from Nauen to Sayville, Long Island, might naturally cause apprehension as to the delivery of messages sent by this route. The cable line from Stockholm to Buenos Aires and thence to Washington and Mexico was a roundabout one, and a message transmitted that way might conceivably fail to reach its destination.

The dispatch of this telegram, however, was at that moment the most important business before the German Foreign Office and its safe arrival in the city of Mexico must be assured at any cost. There was one method that was absolutely sure, though the fact that this should have occurred to Zimmermann must be regarded as one of the most audacious and even reckless strokes of the war. Humor of any kind the Germans seldom displayed at crises of this sort, yet the mechanism adopted to make certain that this plot against the American people would safely land on Bernstorff's desk evinces and unmistakable gift--even though an unconscious one--for the sardonic.

The transaction reflects so seriously upon the methods of the State Department that it would probably never have seen the light had the Germans not made it public themselves. In 1919-20 the German Constituent Assembly held an elaborate investigation into the responsibility for the war. In this the Zimmermann telegram played its part. Among its published documents is a note which reveals one route by which this document found its way across the Atlantic. It says:

"Instructions to Minister von Eckhardt were to be taken by letter by way of Washington by U-boat on the 15th of January; since the U-boat Deutschland did not start on her outward trip, these instructions were attached on January 16th to telegram No. 157 and through the offices of the American Embassy in Berlin telegraphed to Count Bernstorff by way of the State Department in Washington."

What this means is that the German Foreign Office used the American Government as an errand boy for the transmission of a document that contained a plot against its own territorial integrity.

The German Government, many times in the course of the war, used the good offices of the American State Department for transmitting messages to Ambassador Bernstorff. Germany had no cable communication with the United States; the wireless was unreliable and not always available; occasionally therefore, the Germans would request Washington to serve in this capacity. As all such messages touched England before starting across the Atlantic, the consent of the British Government was necessary before the favor could be performed. That the British graciously permitted the Germans to use their cable facilities may possibly have seemed, at the time, an act savoring of the magnanimous; the fact, however, that the British possessed the German cipher and read all these messages as they sped through England creates the suspicion that they may have regarded this as a way of obtaining valuable information."

highly confidential

Hendrick makes it appear that obtaining permission to use the American State Department facilities was a rather simple matter and that many messages were sent by the State Department for the Germans in this way, without realization on the part of State Department officialdom of the possibly serious consequences that might ensue. That this is far from the truth will appear later. His statement, too, that "As all such messages touched England before starting across the Atlantic, the consent of the British Government was necessary before the favor could be performed" is meaningless when one considers the matter. It is obvious first of all that had the American Government been so naive as to ask the British Government's consent to such a procedure the latter would certainly have refused. It is likewise obvious that when Bernstorff wanted to send a code message to the Foreign Office in Berlin, the State Department could not simply address a telegram to the American Ambassador, Gerard, in plain language asking him to "Forward the following code message to the German Foreign Office." The British would naturally not pass such messages even though the greatest neutral country asked such a favor. Such a procedure is not a diplomatic possibility in time of war. If not in plain language, the forwarding by the State Department of German code messages had to be done through the intermediacy of State Department code. Assuming that official messages of the American Government to her ambassadors and ministers in Europe were not subjected to any study whatsoever by the British Cryptographic Bureau (which is difficult to believe), it is possible that this practice might not have been detected immediately by the British. But the manner in which the messages were actually drawn up was such that the discovery of the practice should and must have been particularly easy if American messages were even hastily scanned. Here is an example of the plain text of such a message, copied from the files of the State Department:

Amlegation
Copenhagen
Forward Berlin
3883

Deliver to German Foreign Office the following message from
Ambassador Bernstorff.
(Add German Cipher.)

LANSING

*triple
double
space*

Lacking a copy of the telegram as actually filed for transmission, the form the code message took when filed cannot here be indicated; but we have on this point the positive statement of Mr. David A. Salmon, then ~~as now~~ Chief of the Division of Communications and Records of the State Department, to the effect that the code groups of the German code message were not reencoded in the State Department code, or changed in any way whatever: they were merely added to the preamble requesting the forwarding of the message. This preamble was in code--American State Department code. Now the code groups of the American code were most commonly in letters, while those of the German code were in figures. Furthermore, the code groups of the German code were characterized by being composed of three, four, and five digits, whereas in most codes of even those days all of the code groups uniformly contained five letter, or five figures. Hence the subterfuge was sure to be detected almost immediately by the British. Still they made no protest. Why? The answer must surely be obvious: they were glad to have access to this leakage of valuable information, and to lodge a protest would at once dry it up at the source.

Whereas Hendrick makes it appear that our State Department handled many messages for the Germans, Lansing in his account of the matter makes it ~~appear~~ *clear* that ~~though~~ the transmission of the Zimmermann telegram via State Department channels was an isolated incident, or at least that this ~~method~~ of communication ~~was~~ placed at the disposal of Bernstorff only toward the end of the period of strained relations. *But he is over-zealous in his refusal to transmit a message because it didn't appear to him that the situation was one of urgency. So quite*

At eleven-thirty I went to the White House and for an hour discussed with the President the substance of the (Zimmermann) telegram and the way to use it. The President said that he had been wondering how Bernstorff got the message from Berlin, and that the closing of secret lines of communication with his government made him a little uncertain as to its authenticity.

I told him that I thought it could be easily explained, my opinion being that it was done in the following manner: During the early part of January Count von Bernstorff, at the instance of Colonel House, had been laboring with his government to obtain concrete terms of peace. The Ambassador had complained of his inability to communicate secretly and therefore freely with Berlin, which he considered essential in order to accomplish his purpose. In view of this reasonable statement we had consented very reluctantly to send (that is, in a cipher, of which the Department did not have the key) messages for him through our Embassy. This we did several times, permitting the German Foreign Office to reply in the same way. On January seventeenth an exceptionally long message (some one thousand groups) came through from Berlin. On the eighteenth this message was delivered to the Ambassador. On the nineteenth the telegram from Bernstorff to Mexico was filed. From these facts I drew the conclusion that in the long secret message delivered to him on the eighteenth was the message for the German Minister besides other orders as to what to do in case of a severance of diplomatic relations.

The President two or three times during the recital of the foregoing exclaimed "Good Lord!" and when I had finished said he believed that the deduction as to how Bernstorff received his orders was correct. He showed much resentment at the German Government for having imposed upon our kindness in this way and for having made us the innocent agents to advance a conspiracy against this country.

Careful study of available records shows that ^{although} ~~while~~ this channel of communications was used on more than a single occasion, it was used not nearly so frequently as Hendrick implies and that its employment was confined to periods of strained relations.

I am in a position to say categorically that the State Department was indeed careful in placing its communication facilities at the disposal of the Germans. Mr. Lansing not only realized the full implications of the unusual procedure but also refused to transmit a message on at least one occasion on the ground that there appeared "to be no particular urgency for the transmission of the message on account of either of the subjects mentioned."

It must also be noted that the State Department transmitted messages not only for the German Government, but also for the Austrian, as is proved by a telegram dated February 4, 1917, from Lansing to Ambassador Penfield at Vienna.

We come now to a study of the code or codes used for the Zimmermann Telegram.

Note the plural - "codes" - that's very important in this case, as you shall see. First, as to the code used for its passage from Berlin to Washington:

there can be no question that the message which carried the Zimmermann Telegram ^{to Minister Eckhardt} to

(it bore the no. 158) was the one which had been appended to Berlin-Washington message No. 157, and which was sent via State Department channels. As I've already said, the British Government has officially never published any account of the interception and solution of the Zimmermann Telegram by its cryptanalysts in Room 40. But when we study very intently the telegrams that passed between

the British and American Governments dealing with the Zimmermann Telegram, ⁱⁿ

particular there are things in Admiral James' book ~~which~~ ^{which} throw light on dark points in the story. Perhaps this shedding of light was unintentional. Admiral James says in his foreword

World War that now draw readers. As I had no access to unreleased official papers and the framework of this book is a distillation of a mass of material scattered through standard works which were best-sellers twenty years ago, it was not necessary for me to obtain official approval or support for publication. I was, indeed, in a better position to judge what could and what should not be published than anyone to whom the First World War is only a boyhood's memory, if a memory at all, because I knew how much of Hall's work was known to our enemies during the war and how much had been published to the world since the war.

"I had also the advantage of having taken some part, when at the Admiralty, in passing for publication books and articles covering various aspects of the 1914-18 war and informing authors what, for security reasons, could not yet be published, and, more important, the advantage of personal knowledge of the men and events I would be describing, which would enable me to distinguish fact from fiction and to judge when reference to the shortcomings of individuals should be omitted."

omit

"In recalling his diplomatic triumphs I was on well-worn ground. The story of the 'Zimmermann telegram', whose exposure brought America into the war, is in standard histories in all languages; the 'Luxburg telegrams', whose exposure had a profound influence on public opinion throughout the American continent, were published in newspapers all the world over before they passed into the pages of history; the 250 telegrams concerning the plots of the German saboteurs in America which were exhibits at the famous Black Tom case, heard at the International Court of Justice at the Hague, are quoted in several books about the case.

"In recalling the work of Hall's naval section I was also on well-worn ground; the text of intercepted and decyphered signals is given in British, American, and German official histories."

typo
sp But Admiral James was careful. Even though, as he says, he had no access to unreleased official papers and therefore it wasn't necessary for

him to obtain official approval for publishing his book, he did submit it for

some sort of blessing, if not approval. This I learned in a report dated

15 December 1955 from our Liaison Officer in London, who said:

Zimmermann Telegram.

I quote now
~~Let's begin by quoting~~ from Admiral James' account.

"Then, early in the New Year, came the 'Zimmermann telegram', and though the first knowledge of this surprising communication was derived from European sources, Hall's friends in Mexico City were soon playing an important part in the complicated business that followed. On Wednesday morning, January 17, Hall was at work at the usual dockets and papers when at about half-past ten, a member of the political section came in and told him that he and one of his colleagues had partly decyphered a message from the German Foreign Office to Bernstorff which, if made known to the American Government, would probably bring America into the war.

"The two men who, by solving this cypher, altered the course of history died several years ago, and their names have already been published. So in their case it is justifiable to ignore the canon that the names of those engaged on secret work should not be disclosed. They were Nigel de Grey, a publisher, and after the war a Director of the Medici Society, and the Rev. W. Montgomery, of Westminster Presbyterian College, Cambridge.

"This was the message Hall read: *[I won't quote it - you've already seen it James adds.]*
 BERLIN TO WASHINGTON. W 158. 16 January 1917.

"Most secret for Your Excellency's personal information and to be handed on to the Imperial Minister in (?) Mexico with by a safe route.

omit
 "We propose to begin on the 1st February unrestricted submarine warfare. In doing this however we shall endeavour to keep America neutral (?) If we should not (?) succeed in doing so) we propose to (?) Mexico) an alliance upon the following basis:

(joint) conduct of war
 (joint) conclusion of peace . . .

"Your Excellency should for the present inform the President secretly (?) that we expect) war with the U.S.A. (possibly) (. . . Japan) and at the same time to negotiate between us and Japan . . .

omit
 . . . Please tell the President that . . . our submarines . . will compel England to peace within a few months. Acknowledge receipt.

ZIMMERMANN"

"So not only had the great decision been taken to begin unrestricted submarine warfare, but the Germans were proposing to bring Mexico into the war on their side.

X

omit

"The message was sent by cable through Stockholm to Buenos Aires for onward transmission to Washington, but it was of such importance that it was sent by two other routes, one of which could not possibly fail: Zimmermann attached the telegram to another telegram which the American Embassy in Berlin was telegraphing for him to Count Bernstorff by way of the State Department in Washington. Dr. Page describes this as one of the most audacious and reckless strokes of the war. The German Foreign Office had used the American Embassy as an errand boy to transmit a message that contained a plot against its own territorial integrity.

"This piece of effrontery can never have been equalled in the history of political intrigue."

I'm fortunate to be able to show you what Mr. de Grey looked like. In my

many talks with him not once did he mention the role he played in reading the Zimmermann Telegram--nor did anyone else in the organization in which he was Deputy to Sir Edward Travis, the Chief. I have no photograph of the Reverend Montgomery to show you. But Nigel de Grey was and looked the part of a character in Dickens or in a spine-chilling mystery in book or on stage.

There are reasons to believe that the version of the Zimmermann Telegram you've just seen came from the State Department message containing Berlin's Nos. 157 and 158 to Washington--but I don't think it would be polite even now to intimate that the British were also intercepting and studying messages of the United States Government! I wouldn't even mention such an idea were it not a fact that soon after we came into the war our ally Britain officially told us that our codes weren't safe!

Admiral James continues:

"Hall at once realized that Zimmermann's message to Mexico was by far the most important message that had so far come into his hands; he also realized that it would require the most careful handling. He gave orders that all copies except the original message and one decyphered copy were to be destroyed, locked them in his desk, and sat down by himself to evolve a plan of campaign.

"What was the position? Within a fortnight's time the fact that Germany was proposing to declare immediate unrestricted warfare would be communicated by Bernstorff to the United States Government. Would this be sufficient to convince President Wilson that the Germans would stick at nothing? His most recent note had shown something of the way in which his mind was working. It seemed that he drew little distinction between the behaviour of the Allies and that of the Germans, or, indeed, between the justice of our cause and of theirs. If this new declaration was sufficient, well and good; we need not run risks, and the Zimmermann telegram need never be used at all. On the other hand, the new submarine warfare might not, in itself, be sufficient to convince the President, and in that case this information about the Mexican plan must be made use of if we could safeguard ourselves. Publication of the telegram in the United States would almost certainly rouse the whole of the United States, and might well force the President to declare war, but it would be at the cost of hazarding the most vital part of our Intelligence service--a hazard that he would not take.

"Beyond the fact that the message gave the date on which unrestricted submarine warfare would begin, it was of no immediate naval interest, and the proper procedure would have been for Hall to pass the message to the Foreign Office. He deliberately withheld all information from those best entitled to receive it, and assumed a responsibility which ought never to have been his, because he would not run the smallest risk of the message becoming known to somebody who, not being familiar with every branch of his activities, might all unwittingly compromise some part or all of the work of Room 46.

"Yet some plan had to be evolved, and, while mentally following the route that the Zimmermann telegram would take, Hall saw that the Bernstorff-Eckhardt messages which H. had secured might solve his problem, because the Zimmermann telegram, when forwarded on, as it must be, from Washington to Mexico, would be only another in that service. If he could secure a copy, it could be made to appear that the message when passing from Washington to Mexico had been copied and decyphered by the American Intelligence Service, and that we had had nothing to do with it.

"He was certain, that even if somebody whom President Wilson implicitly trusted, like Mr. Balfour, gave his personal assurance that the telegram decyphered by deGrey was genuine, the President would demand the most definite proof that the message bore the meaning ascribed to it, and it would not be easy to convince the President and the Americans that the Zimmermann telegram was not a hoax.

"There was no need for an immediate decision, as he could not take any active steps until after the declaration on February 1. Meanwhile

it was essential to keep the closest possible watch on Bernstorff and the American situation, in order to be ready at any given moment with alternative plans."

Bernstorff tried desperately to have Berlin change its decision about unrestricted submarine warfare--to no avail.

On 1 February, Bernstorff officially handed in his government's announcement that unrestricted submarine warfare would begin that day. As we have already noted, President Wilson broke off relations two days later, on 3 February. Let's continue with the story as Admiral James tells it:

"To Hall's dismay, but not altogether to his surprise, matters went no further. Cables from Washington and New York warned him that there would be delays, and perhaps no more positive action than a proclamation of 'armed neutrality' by the President. The time had come to take action, and on February 5 Hall saw Lord Hardinge, the Permanent Secretary at the Foreign Office, and showed him an amplified decypher of the Zimmermann telegram which deGrey had now been able to produce. He put forward several suggestions. In the first place, it would be necessary to obtain a copy of the telegram from Mexico City. H. was no longer there, but his place had been taken by T., who was fully aware of what was afoot in the telegraph office, and Hall did not anticipate much trouble there."

Hall then took steps to obtain the additional evidence that he required

he made certain arrangements in Mexico City
in the event of an exposure and telegraphed to a Mr. "T", his secret agent in

(*Mexico City*) to get all copies of Bernstorff's telegram to Eckhardt since

18 January 1917. These were to be sent to the British military in Washington and

were then to be forwarded by cable to London in British cipher. No hitch

developed in this nice arrangement. At this point I want to tell you about *that part*

of them ~~was arranged~~ which involved a man whose identity ^{simply as} ~~James Connelley~~,
 the "Mr. T" referred to in what I've just said. Mr. "T" ~~was~~ a British

~~operative or~~ secret agent in Mexico City. In a rather odd way and quite by

accident he turned out to be a most useful character in the drama of the

Zimmermann Telegram. *Here's the story:*

"Since the outbreak of war there had been several revolutions in Mexico, and as each new conqueror had taken charge of the capital city, one of his first actions had been to declare the currency of his predecessor to be valueless and issue one of his own. All that was necessary was to print something on small bits of cardboard, resembling railway-tickets, and called 'cartones', and call them money. Most of these were worth no more than a penny or two, but there were numerous forgeries always in circulation, and the matter had become so serious that President Carranza had given orders that any such forgery should be punishable by death.

"It was shortly after this order had been made that a printer, an Englishman, happened to return to his workshop unexpectedly one Saturday afternoon. His workmen, all of them Mexicans, were taking their half-day off. To his astonishment and dismay he found on a table a neat pile of these cartones and the plates from which they had been printed. In his excitement he made the worst possible mistake, and locked up the forgeries and plates in his safe. He then rushed out to consult a friend on what he should do next.

"Meanwhile the workman who had made the forgeries returned for the cartones and, realizing what must have happened sought to save his own skin by getting in first with a denunciation of his master. The unfortunate printer was arrested the same afternoon, ordered to open his safe, and then hurried off to a drumhead court-martial and condemned to be shot at dawn on the Monday.

"On hearing of the arrest, H. went to the British Minister, who at once got in touch with the Mexican authorities and obtained their agreement that he should be responsible for the 'criminal'. He then pointed out that if an Englishman intended to commit a forgery he would aim higher than penny or twopenny notes, and persuaded the authorities to examine the case more closely. The printer was shortly afterwards released.

"It was an unpleasant affair while it lasted, but it was to provide Hall with the messages he was anxious to obtain, because the printer and his friend were both anxious to show their gratitude, and the friend was working in the telegraph office."

Secret agent

When "H" was replaced by ~~secret agent~~ "T", the good work went on, and

that's how Hall in London was able to get a copy of the Zimmermann Telegram in

the form in which it was sent from Bernstorff in Washington to Eckhardt in

Mexico City. The possession of that version of the message turned out to be

of crucial importance! ~~As~~ Admiral James ~~confirmed~~

"On February 8 the political section decyphered a second telegram from Zimmermann sent direct to Mexico:

8th February, 1917.

Most Secret. Decypher personally.

Secret
Provided there is no danger of secret being betrayed to U.S.A. you are desired without further delay to broach the question of an Alliance to the President. The definite conclusion of an alliance, however, is dependent on the outbreak of war between Germany and U.S.A. The President might even now, on his own account, sound Japan.

If the President declines from fear of subsequent revenge you are empowered to offer him a definite alliance after conclusion of peace provided Mexico succeeds in drawing Japan into the alliance.

ZIMMERMANN

Two days later Hall learnt that T. had secured the cables which he wanted."

"So much progress with the reconstruction of the code had been made

identical to original
that by February 19 Hall had in his hands an almost perfect transcript"; and

complete and perfect
James then gives the ^{complete and perfect} text of the Zimmermann Telegram as generally published in

the history books. *We needn't repeat the message here, you've seen it in full.*

Admiral
But James is throwing a little dust in our eyes. The version of the

Zimmermann Telegram that was finally published was not the version that was in

the telegram from Zimmermann to Bernstorff. The latter was in a comparatively new 18,888-word, two-part code known as Code 7588, whereas the telegram from Bernstorff to Eckhardt, although quite similar in content, was in a much older and much simpler one-part code known as Code 13848:

Let's continue with Admiral James:

19.1.17.

"We intend to begin on the first of February unrestricted submarine warfare. We shall endeavour in spite of this to keep the U.S.A. neutral. In the event of this not succeeding we make Mexico a proposal of alliance on the following terms:-

Make war together.
Make peace together.

Final
"Generous financial support and an undertaking on our part that Mexico is to reconquer the lost territory in Texas, New Mexico and Arizona. The settlement in detail is left to you.

"You will inform the President of the above most secretly as soon as the outbreak of war with U.S.A. is certain, and add the suggestion that he should on his own initiative invite Japan to immediate adherence and at the same time mediate between Japan and ourselves.

"Please call the President's attention to the fact that the ruthless employment of our submarines now offers the prospect of compelling England in a few months to make peace.

ZIMMERMANN

"It had always been his intention that his friends at the American Embassy should share, unofficially, what was so essentially an 'American' secret at the first possible moment, and as soon as he had read the completed draft he asked Mr. Edward Bell of the American Embassy to come and see him.

"Mr. Bell's first fury at learning that Germany was urging the Mexicans to 'reconquer the lost territory in Texas and Arizona' turned, very naturally, into the belief that it was a hoax. The Germans had made some bad mistakes in their time, but this was incredible.

"Hall was able to assure him that the message was far from being a hoax, and Bell then said that publication would certainly mean war, and asked if the message was to be given to the Embassy. Hall explained that the Foreign Office had not yet come to a decision whether the message should be shown only to the President or given to the American people. He asked Bell to tell the Ambassador what he had seen, but at the same time begged him to make no use of the information until Mr. Balfour had made his decision.

"For the past week or so Hall had been visiting the Foreign Office every day to discuss methods of handling the telegram, but no satisfactory solution had been found. Lord Hardinge was averse from any step which could possibly convey the impression in Washington that there was a chambre noir in the Foreign Office or that the British Government was endeavouring to influence a neutral state in its favour."

But by this time Hall had information that the German-Americans in the United States were extremely active in their endeavors to stay the President's hand. He felt that the time had come for immediate action and formally pressed for a decision as regards bringing the Zimmermann Telegram to the attention of President Wilson. On 28 February he received Balfour's authority to handle the whole matter as he saw fit. Jones continues the story:

"Prolonged discussion with Dr. Page and Mr. Bell followed. The Ambassador was in no doubt about the best method to adopt with regard to the handing over of the telegram itself. He was sure the effect on the President's mind would be infinitely greater if the documents were to be given to him officially by the Foreign Secretary, and this Mr. Balfour agreed to do.

"The vexed questions of an absolute cover for Room 40; the necessity for our doing nothing on American soil to which the American people could object; the possible refusal to accept the genuineness of the message, and the steps which would have to be taken in the event of Zimmermann himself denouncing the telegram as a forgery were not so easily resolved.

"The advantages that were to flow from having obtained a copy of the telegram in Mexico and not in the United States were now evident. There was nothing to prevent the American authorities from obtaining their own copy in the Washington cable office, and the fact that the British Government had officially provided a decoded transcript would satisfy them of its genuineness. But there was still the possibility that the American Government would demand absolute proof, and that would mean handing over to them de Grey's reconstructed code, which Hall would never do.

"Then, on a sudden, a possible solution suggested itself, which was so simple that Hall, the Ambassador, and Mr. Bell wondered why it had not occurred to any of them before. If President Wilson, when he exposed the

telegram, was in a position to state that it had been obtained and decyphered by Americans, on American soil, all would be well, and this could be achieved if Mr. Bell decyphered the message sent from Washington to Mexico under deGrey's tuition in the American Embassy, which, technically speaking, was American ground. As for Zimmermann's possible denial, it seemed better to wait until after the exposure before taking any decision.

"After that, things happened speedily enough. On Saturday, February 24, while the newspapers in Washington were asserting that in official circles there was still hope for averting trouble, Dr. Page called at the Foreign Office and was officially handed the message. He lost no time and within a few hours a cable was on its way to the State Department:

Confidential for the President and Secretary of State.

Balfour has handed me the translation of a cypher message from Zimmermann, the German Secretary of State for Foreign Affairs, to the German Minister in Mexico, which was sent via Washington and relayed by Bernstorff on January 19th.

You can probably obtain a copy of the text relayed by Bernstorff from the cable office in Washington. The first group is the number of the telegram, 138, and the second is 13842, indicating the number of the code used. The last but two is 97556, which is Zimmermann's signature.

I shall send you by mail a copy of the cypher text and of the decode into German, and meanwhile I give you the English translation as follows:

(Here follows the text as printed above.)

The receipt of this information has so greatly exercised the British Government that they have lost no time in communicating it to me to transmit to you in order that you may be able, without delay, to make such dispositions as may be necessary in view of the threatened invasion of our territory.

The following paragraph is strictly confidential.

Early in the war the British Government obtained possession of a copy of the German cypher code used in the above message and have made it their business to obtain copies of Bernstorff's cypher messages to Mexico, amongst others, which are sent back to London and decyphered here. This accounts for their being able to decypher this message from the German Government to their representative in Mexico and also for the delay from January 19 until now in their receiving the information.

This system has hitherto been a jealously guarded secret and is only divulged now to you by the British Government in view of the circumstances and their friendly feelings towards the United States. They earnestly request that you will keep the source of your information, and the British Government's method of obtaining it profoundly secret, but they put no prohibition on the publication of Zimmermann's telegram itself.

The copies of this, and other telegrams, were not obtained in Washington, but were bought in Mexico.

I have thanked Balfour for the service his Government has rendered us and suggest that a private official message of thanks from our Government to his would be appreciated.

I am informed that this information has not yet been given to the Japanese Government but I think it not unlikely that, when it reaches them, they will make a public statement on it in order to clear up their position regarding America and prove their good faith in their allies.

"It was not the case that the British Government had obtained a copy of the German cypher code, but it was the explanation Hall decided to give to the American Government. Risk of the loss of code-books was being taken throughout the war by every one of the belligerents, and it would be much better for the President to suppose that a copy of the code-book had come in to our hands than that, without such assistance, we had been able to read the messages.

"Hall afterwards described the next few days as the most anxious time of the whole war for him personally. He had assumed a great responsibility. Would it be justified? Had he done all that was possible to safeguard Room 40? Was there a chance that the Zimmermann telegram would misfire?

When Ambassador Page sent his telegram containing the English text of the Zimmermann message, he said:

"I shall send you by mail a copy of the cipher text and of the decode into German.

These were sent from London on March 2, but of course could not have reached Washington in less than a week. In the meantime, still worried about the authenticity of the telegram, Washington asked for a copy of the German code, as is evidenced by the following telegram:

Washington, Feb 28, 1917
8 p.m.

4493. Your 5747, February 24 - 1 p.m. Please endeavor to obtain copy of German code from Mr. Balfour, decode following messages and telegraph translations. All three messages are dated January 17, signed Bernstorff, and addressed to the German Legations at Bogota, Port-au-Prince, and Santiago, Chile, respectively.

(Here follow code messages.)

Effort will be made to secure copies of all German cipher messages as far back as possible and if the Department were in possession of the code there would be a great saving of time and expense. Contents of messages decoded here would of course be communicated to the British Government.

Publication of Z(immermann)'s telegram to Mexico tomorrow.

LANSING

Page replied:

London, March 1, 1917 - 11 p.m.
(Received March 2, 12:35 a.m.)

Your 4493, February 28 - 8 p.m. The three messages were deciphered today and are practically identical. They contain instructions to the three legations to use a certain variation of the cipher code when communicating with Berlin. The one to Santiago was to be repeated to other missions in South America. The question of our having a copy of the code has been taken up, but there appear to be serious difficulties. I am told actual code would be of no use to us as it was never used straight, but with a great number of variations which are known to only one or two experts here. The can not be spared to go to America. If you will send me copies of B(ernstorff)'s cipher telegrams, the British authorities will gladly decipher them as quickly as possible giving me copies as fast as deciphered. I could telegraph texts or summaries in matters of importance and send the other by pouch. Neither Spring Rice nor Gaunt known anything about this matter.

PAGE

Mr. Page's informant was misinformed or was misleading Mr. Page. The code

used is described by Mr. Page in his original announcement concerning the

Zimmermann telegram:

The first group is the number of the telegram, 138 (sc. in the German numbering and dating code, in which the group 138 means "Number 3"; the Zimmermann telegram was therefore message No. 3 from Washington to Mexico City), and the second is 13842, indicating the number of the code used. The last group but two is 97556, which is Zimmermann's signature.

This description tallies exactly with the copy of the telegram as secured by Mr. Polk from the Washington telegraph office. The message was in straight unenciphered German code, and could be read by any one in possession of both the telegram and the code book. Not only was the Zimmermann telegram as sent from Washington to Mexico City in this unenciphered 13848 code, but a whole multitude of messages between Washington and Berlin were sent in the same way.

Nobody can blame Hall for trying to place around the cryptanalytic feat every security safeguard he could devise. If necessary he would put off on the wrong trail anybody he thought might jeopardize security so as to cover the tracks of Room 48. At the time this brochure (hold up the F-M brochure) was written we didn't know all the facts--we were using inferences and making deductions. We said:

Admiral Sir Reginald Hall, in his affidavit before the Mixed Claims Commission, said of this code (Claimant's Exhibit 328, p. 776);

The German cipher book covering this system of ciphering is in our possession, it having been captured by the British authorities in the baggage of a German consul named Wasmuss who was stationed at Shiraz while Wasmuss was engaged in an endeavor to cut a British oil pipe line.

It seems unlikely that a German consul engaged in an expedition to cut a pipe line should carry a diplomatic code book in his baggage. Moreover, the British copy of 13040 is fragmentary, and gives every evidence of having been gradually reconstructed in a cryptographic bureau through the decipherment of messages. A glance at the copy given by the British to the United States after America's entrance into the war will demonstrate this fact. This copy contains about half the vocabulary, but is not a transcript of part of the code book, since it comprises some words and phrases from all the pages. Some of the identifications, too, are marked doubtful. An actual copy of a code book would certainly not exhibit missing and doubtful sections.

We felt that the statement that a "cipher book"--or at least some sort of cryptographic document--was found or captured must have contained an element of truth, but we didn't know just how much, and when the British, soon after we entered the war, turned over to us a copy of their 13040 code, they didn't say anything about its having been reconstructed upon the basis of another code that they'd captured. But that's exactly what they'd done, as I have since then established. For instance, in Ewing (p. 187) we read the following:

"When the storm broke in 1914--and before it broke--the country was fortunate, Ewing has often said, in having the office of First Lord held by a man with the initiative and strength of Mr. Churchill. As First Lord, Churchill had watched the development of Room 40 with constant interest and had done much to foster it. It was typical of his care and foresight that he spent almost his last official hours during the political crisis in seeing that his successor--Mr. Balfour--should know fully what those in Room 40 were doing and what it implied.

"To Mr. Balfour's receptive mind, it also made an immediate appeal. He was quick to see its value, and, for that reason, gave it his continual attention.

"Apart from the home naval signals, which were their first concern, Room 40 also intercepted much long-distance wireless--correspondence with Madrid, Athens, and Sofia, Constantinople, and other places. There were

many messages from German agents in North and South America. From time to time Captain Hall gave Ewing material that proved to be political in origin and substance.

"During the summer months, code-books which had been captured in the German Consulate at Bushire, were made use of. Soon it was found that much of the enemy's diplomatic correspondence could be read, thus providing a starting-point from which to penetrate, one after another, the German Foreign Office ciphers. The correspondence of that office, with its agents abroad, gave very useful information as to the enemy's intentions, and a good deal of insight into its methods and psychology."

Note the illuminating statement that the captured material enabled the workers in Room 40 to read much enemy diplomatic correspondence, "thus providing a starting-point from which to penetrate, one after another, the German Foreign Office Ciphers."

Admiral James, too, gives us much more specific and valuable information on this point:

"In April something of even greater importance happened. There came into Hall's hands a copy of the German diplomatic code-book-treasure trove from Persia.

"How this book reached Hall is one of the strangest stories of the war. A naval officer, invalided from the Persian Gulf, came to Hall one day and told him about a raid on the Abadan pipeline that had been planned by a German vice-consul, named Wasmuss. News of the impending raid was received in time to attack the raiding party in their camp, and the German vice-consul got away in his pyjamas on horseback, leaving his baggage behind. Hall was quick to see that the baggage might contain useful information, and, as a result of his inquiries, it was found in the cellars of the India Office. He sent over Mr. Cozens Hard, who was then working with him, to examine the baggage, and he returned with the code-book.

"The code-book was the one used for messages between Berlin and Madrid, and Berlin and Constantinople, and it was via Madrid that the German Foreign

Office sent their messages to their diplomatic representatives in North and South and Central America. Ever since the special stations had been intercepting German wireless traffic, a continual flow of messages, which from their constructions were obviously not naval messages, had been arriving in Room 40, and had been stowed away in cupboards. The time had come to retrieve these piles of messages, sort them, and begin work on them."

With the aid of our able archivists I've been able to dig out of the old files of World War I German Code 13040; here it is. It's an interesting document.

But to get back to the Zimmermann Telegram itself again, you will recall that I said it was published in all the important newspapers in the world on March 1st, 1917. In pro-German circles the telegram was immediately denounced as a forgery. After acrimonious debate a resolution was passed by the Congress that the President be asked to state the source of the information. He replied the same evening through his Secretary of State as follows:

"The Government is in possession of evidence which established the fact that the note referred to is authentic, and that it is in the possession of the United States, and that the evidence was procured by this Government during the past week, but that it is in my opinion incompatible with the public interest to send to the Senate at the present time, any further information in possession of the Government of the United States relative to the note mentioned in the resolution of the Senate.

ROBERT LANSING."

"This utterly disconcerted the pro-German press, and most of these newspapers were forced to recant. Yet, in private, the word 'forgery' was still being freely used, and it continued to be used until, late on the evening of March 2, the German official wireless contained Zimmermann's frank admission that the note was genuine:

"The American Press contains reports about instructions from the Ministry of Foreign Affairs to the German Minister at Mexico City in case Germany after the proclamation of unrestricted submarine warfare should fail to keep the United States neutral.

"These reports are based on the following facts:-

"After the decision taken to begin unrestricted submarine warfare on February 1st, we had, in view of the previous attitude of the American Government, to reckon with the possibility of a conflict with the United States. That this calculation was right is proved by facts, because the American Government severed diplomatic relations with Germany soon after the proclamation of the barred zone and asked other neutrals to join in this demarche.

"Anticipating these possibilities, it was not only the right but the duty of our Government to take precautions in time, in the event of a warlike conflict with the United States, in order to balance if possible the adhesion of our enemies to a new enemy. The German Minister in Mexico was therefore, in the middle of January, instructed, should the United States declare war, to offer the Mexican Government an alliance and arrange further details.

"These instructions, by the way, expressly enjoined the Minister to make no advances to the Mexican Government unless he knew for a certainty that America was going to declare war. How the American Government received information of instructions sent by a secret way to Mexico is not known, but it appears that treachery (and this can only be the case) has been committed on American territory."

In short, Herr Zimmermann brazenly admitted he'd sent the telegram and he made the foolish apology for his inept conduct. This was his second grave error because if he'd been really smart he would have denounced the telegram as a forgery, a fraud, the product of British duplicity and chicanery--even if only to smoke the British out and make them prove the authenticity of the telegram by disclosing exactly how the message and the information contained in it had been obtained.

How could such a naive man as Herr Zimmermann was rise to be head of the Foreign Office of a great and powerful state? It will hardly astonish you that Zimmermann continued to use Code 13040--and that he soon lost his job as Foreign Minister.

"American reaction to the publication of the telegram can be seen in a message sent to Hall by Gaunt on March 6:

GAUNT TO HALL.

"On the Friday night March 2nd I was the guest of the 'Round Table', which of course is the hottest stuff in New York in that line: it consists of about thirty members, and about eighteen attended. Choate was in the chair, and Root, Wickersham, Olin, Milburn and other men of that type were in the party. After dinner they all drew their chairs up round the fire and went for me. Choate openly said that the Zimmermann note was a forgery, and was practically unanimously supported by the whole bunch. I pointed out that both the President and his right hand man had given their word that they knew it was not, and that it should be accepted as genuine. Choate then said that he thought a committee of Congressmen and Senators should be given the proofs, and I stuck to it that it would be most unwise where men's lives were involved to give any details to men like Stone, Follette, O'Gorman, etc., and that turned the tide in my favour. They had to admit that I was right. Root then turned to me and asked me if I was satisfied that it was a genuine thing--and at the same time Choate asked me point blank whether I knew anything about it. I objected to the latter question, but as my reply left them fairly convinced that I did know, I then told them that information had been conveyed to me by U.S. authorities, that I was satisfied that the note was correct, and a little surprised that they should cross-examine me on it instead of accepting the word of their President. That carried the day completely. The above is an illustration of the way it was received over here, nineteen out of twenty men believed it was a forgery, and had not Zimmermann come out with his statement on Saturday, I think it would have done us a great deal of harm. As it was, it was a complete success, because Viereck, Ritter and all the rest of the inklingers just had time to get their yarn into the papers, pointing out how obviously it was a British fake, when Zimmermann's statement knocked the bottom out of everything."

"When, during the subsequent debate in the Senate on the Armed Neutrality Bill, only thirteen opponents could be found, Hall felt fairly confident. This 'little group of wilful men', as the President called them, were able to talk out the measure, but the feeling of the American nation had been shown in no uncertain manner.

"War was inevitable, but Hall was still a prey to anxiety lest all his efforts to safeguard Room 49 would prove to be inadequate. He knew the Germans would make strenuous efforts to discover the truth. It was important to prevent publication of the German text of the message in its entirety, and this Hall was able to do. Dr. Page wrote to Lansing:

"The authorities directly concerned would prefer that the German text should not be published, as its publication in entirety would indicate that our Government or some other parties are able to decypher the German code used in its transmission from Washington to Mexico and the Germans would then cease using it elsewhere. This is information which, judging by Zimmermann's reported statements, they may suspect would be of great value to them. At present the Germans cannot know exactly where or how the leak occurred; for all they know a copy of the message may have been lost or removed from the German Embassy in Washington, or the leak might have occurred between Berlin and Washington.

"Were serious doubts being cast in America on the genuineness of the instructions to the German Minister in Mexico the authorities here might reconsider their position, but as Zimmermann has admitted their genuineness in the Reichstag this can hardly be the case."

That is what Hall greatly feared would happen--but his fears turned out to be groundless.

Actually the first lifting of the curtain of secrecy was very gentle; it was only a veiled hint, in fact. So far as I've been able to learn from careful research, it occurred in a lecture on 19 July 1921, only 4 years after the events we are considering happened. The lecture was delivered on the occasion of the granting of an honorary degree to Sir Maurice Hankey, G.C.B., secretary of the Committee of Imperial Defense, by Edinburgh University on 19 July 1921. I quote from his address on this occasion as reported in the Scotsman of Edinburgh, on that date:

"There was one other name to which he wished to refer, Sir Maurice said.

There were some in the war who at all times were in the limelight; there were others who worked in obscurity. There was no name which deserved greater honour, and no man did greater service in that category to his country than their Vice-Chancellor and Principal, Sir Alfred Ewing.

This was just a little lifting of the veil. The next lifting of the veil, so far as I have been able to find, was in a similar sort of lecture about two years later, when Mr. Lloyd George, on the occasion of his address as Lord Rector of Edinburgh University, made the following remarks responding to a toast. These I quote from the Edinburgh Morning Post of 2 March 1923:

"University's Contribution to the War.

"In the afternoon Mr. Lloyd George was the guest at luncheon in the Student's Union. There was a company of about 200, presided over by Mr. A. J. M. Butler, President of the Union.

"Mr. Lloyd George, in responding to the toast of his health, spoke of the great part the University had played in the war, not only by the contribution of her sons, but in the realms of science. In the end the brains of Britain's Universities beat those of the Germans. Their Principal's discoveries, the organisation which he set up, what he discovered by means of the organisation, brought to their knowledge things without which the Fleet could not have operated successfully; without which it would have been difficult for the anti-submarine campaign to be carried out. 'I say more than that.' (continued the speaker). 'It is his work that gave us the information which ultimately brought America into the war. (Cheers) That story will one day be told.'"

And about four months later Mr. Churchill, one of those upon whom Edinburgh University was conferring honorary degrees, said the following, as reported in The Scotsman of 12 July 1923:

"Concluding Mr. Churchill paid a tribute to the chairman, (Prof. Ewing) for his services in the Admiralty. The Vice-Chancellor, he said, 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. During the war no one did his bit more thoroughly in the whole of the vast building in Whitehall than Sir Alfred Ewing."

There followed a much more revealing story in the Hendrick account published in the November 1925 issue of World's Work; 13-14 years later the son of Alfred Ewing published his book entitled The Man of Room 40; and finally, 40 years after the event came Admiral James' book. I've used all these sources.

But now I can add a few details which may be interesting in connection with the German diplomatic codes of those days.

The German system of distributing various codes and ciphers provided the embassies, including the military and naval attaches, with first-grade two-part codes of 10,000 groups. There were about ten different ones, for separate geographic areas. Legations and consulates were provided with second-grade codes which were apparently all derived from a basic large one-part code by shuffling or randomizing whole pages of 100 groups, and by a similar sort of shuffling of blocks of 10 on each page. There were several such semi-randomized or derived codes; one for the Near East, for example, known as Code 89736, was

the one captured from Wasmuss, or, as Cmdr. Denniston called him, "Mr. What Must". Another version, known as Code 13040, was for Western Hemisphere communications, and that is why that code was used for the Zimmermann Telegram when Bernstorff in Washington was obliged and regarded it as his duty to forward the contents of the original version of the telegram, a version that was in one of the first-grade 10,000-group, two-part codes known as Code 7500. Why didn't Zimmermann send the message from Berlin directly in Code 13040, instead of making Bernstorff repeat it in another code. I don't know the answer to that. It's possible he did but I very much doubt it. You might ask whether it couldn't have been in its 13040 clothing when it was sent via "the Swedish Roundabout".

Bernstorff says in his book, My Three Years in America (1920), p. 380:

"I had nothing to do with the Mexico telegram, which took me completely by surprise. It was addressed, in the usual way, direct to the legation in Mexico, and passed through the Embassy at Washington on the same day on which I received the notification that the unrestricted U-boat war was to be declared. I had neither the right, nor was it my duty, to hold up the telegram, although I disapproved of its contents. But even if I had held it up, I should have served no useful purpose. As I afterwards heard from a certain Englishman, there was an office in England which deciphered all the telegrams which we sent over the English cable, and this office placed all their intercepts at the disposal of the American Government after the rupture of diplomatic relations. There is nothing surprising in this, for we also deciphered all enemy telegrams which we were able to intercept. Nowadays there is no cipher which is absolutely safe, if it has been in use for some time. At that time, however, I did not know that all our cipher telegrams were being read by the English. If, therefore, I had held up the Mexico telegram in Washington, its contents would have been revealed to the American Government by the English, notwithstanding, and no one would have believed that the message had not been forwarded in some way to Mexico."

Don't you think Bernstorff's remark that he felt it his duty to forward Zimmermann's message to Eckhardt and that if he had held it up in Washington its contents would nevertheless have been revealed to us by the English-- doesn't this practically establish the fact that the code in which it came to him was in Code 7500 and in that code only? I think it does. It also establishes the fact, I feel sure, that if the message really had been sent via "the Swedish Roundabout" it was in Code 7500 and was an exact duplicate of the message he received via the State Department route.

By the way, I think you may be interested to learn that a little further on in his book Bernstorff says:

"From the experience gained during the war, we have learned that the diplomacy of the future will never be allowed to rely, for important matters, upon the secret of a cipher; for skilful experts are now able to discover the most complicated code, provided that they are able to intercept a sufficient number of telegrams."

I'll add a final word on the point why the Zimmermann Telegram was sent from Berlin to Washington in Code 7500 and not in Code 13040. I think it was done for reasons of economy in time, labor, and money. Zimmermann wanted Bernstorff to know what he was cooking up with Eckhardt in Mexico City. Why send two separate telegrams--one to Eckhardt and one to Bernstorff? Why not just one to Bernstorff and give the latter the headache of re-encoding the text

and forwarding that text (in 13040) to Eckhardt. Save money that way, wouldn't he. What did Zimmermann know about cryptography and the danger of sending out the same text in two different forms? Nothing, obviously. Note how the original message from Berlin starts:

"Most Secret. For Your Excellency's personal information and forwarding to the Imperial Minister in Mexico by a safe route."

All the data I've given you prove, I feel quite sure, that the Zimmermann Telegram was never sent from Berlin either to Washington or to Mexico City in Code 13040. Had Bernstorff not forwarded the contents of the message in 7500 it is very doubtful in my mind that the notorious Zimmermann Telegram would have been decoded in nearly so short a time as it was. Also, the solution of Code 7500 would have taken more time--the possession of the 13040 isolog must have helped a great deal. In short, the circumstances, cryptologic and diplomatic, and the communications systems were such that the contents of the Zimmermann Telegram were discovered just in the nick of time.

Code 39726, the one captured from "Mr. West Must", was used in Persia and the Near East. The British had copies of traffic between Berlin and Persia. It

is curious that even then the Germans didn't feel too safe in using it because they used a string of 7 to 17 or more digits as an additive for only the most secret parts of the telegrams. The British solved those adders, too, but they never found out how Berlin sent them to Persia. It may of course be that the Germans didn't fully trust the code clerks and only the Consul or Minister himself had the adders.

Since Room 48 possessed 89736 all traffic received was of course readable and much useful information in the Middle East was obtained. But the workers in Room 48 noted the appearance of 13848 at first in intercepted letters to and from various legations in South America, and later, after they had discovered the liaison between Berlin and Stockholm, they began to collect enough cable material to start research on this new book, and a very small staff, including de Grey and Montgomery undertook this work.

They were of course familiar with 89736 and soon came to the conclusion that the new book was of similar construction but somewhat shorter. Much material was necessary to complete the solution of the book, as every new group identified required confirmation.

Thus, until all the scrambling of pages and blocks of 10's on pages had become unscrambled to produce a clean and straightforward one-part 13040 code, much work had to be done and there had to be a good accumulation of material required for the confirmations of correct numbering of pages and blocks on the pages.

I told you some minutes ago that Sir Alfred Ewing, the man who organized Room 40 and got the work going so successfully, left Room 40 two years later to return to his old University of Edinburgh, where he now took office as Principal. In Ewing's son's book an episode is mentioned (p. 207) which may interest you:

"Some months after (the American declaration of war on Germany), when Page was being presented at Edinburgh with an honorary degree, Ewing was amused, but not at all surprised, to find that the Ambassador knew nothing of his connection with Room 40. Nor was he enlightened--although they had a 'delightful talk on other matters'."

LECTURE NO. 3MAKING THE MOST OF A CRYPTOLOGIC OPPORTUNITY.

PART 1

Introduction to the Walter Cronkite Television Story Entitled"The Secret Message that Plunged America into War!"one of the episodes of his "You Are There" Programpresented over the TV networkon1957.

I imagine that for many of those present this morning the name Alfred

Zimmermann, German Minister of Foreign Affairs in Berlin in the years 1914-1917

is not one that arouses much interest; in fact, I doubt that the name means

anything to most of you. Yet, this gentleman, of whom I find it difficult to

say "may his soul rest in peace", was the diplomat whose [clumsy and] unimaginative

conduct of German foreign affairs in the three critical years I've mentioned *and the*
whose culminating clumsy con

brought the United States of America into World War I as an active belligerent

within *in of the discovery of his diplomatic dipomania.*

on the side of the Allies, The might of the United States could easily have been

thrown on the other side--during the critical months of the year 1916--had

Zimmermann been more astute. The consequences of such an event can hardly be

imagined. I would be an understatement to say that possibly the course of

history would have been changed in a spectacular manner.

What did Herr Zimmermann do or fail to do to merit so strong a statement as the one I've just made? What he did was to send a telegram on 16 January 1917 to the German Ambassador in Washington--a telegram which was in German enciphered code and which was intercepted and solved by the British cryptanalytic unit in London. What he failed to do was to see to it that the cryptosystem that had to be used to encrypt his message was technically sound enough to protect its contents. He did and failed to do something else in connection with his now famous message--but of that, more later.

In order to prepare a proper background for the Zimmermann Telegram of 16 January 1917--that's what it's called in history--I should give you a brief word-picture of the situation from the outbreak of the war, on 1 August 1914, up to the day the telegram was sent. The picture I'm going to depict is a condensation of the excellent story set forth on pages 22 and 23 of Admiral Sir William James' book entitled The Eyes of the Navy, published in London in 1955.

By 1914 England had become so dependent on sea-borne imports that her people couldn't live, let alone wage war, for more than four or five weeks after her sea-routes were broken. Keeping these routes open was therefore the principal task of the British Navy. On the other hand, her principal enemy, Germany, was

not dependent on sea-borne imports, so that the British Navy's historic function of arresting an enemy's sea-borne trade lapsed after German shipping had found refuge in neutral ports.

There were then the British Grand Fleet and her hardly much inferior protagonist, the German High Seas Fleet, glaring at each other at a distance, and, although the Grand Fleet was becoming impatient and spoiling for a fight, the Germans didn't dare risk their fleet in major battle, confining their attacks to sporadic forays by fast units and to minelaying.

German hopes of quick victory were shattered when trench warfare in France brought things to a stalemate, and with the passing of each month it became clear that there could be no victory for Germany unless British overseas trade was cut off. Someone high up in the Government then had what appeared to be a good idea.

The success of the German small sub flotilla of 1914 pointed the way out without risking their High Seas fleets and the good idea was to give highest priority to building submarines and use them to destroy British and all other shipping to and from the British Isles.

Now it happened that civilized rules of maritime warfare required that no merchant ship be sunk without warning, and before the crew could take to life

boats. Observance of these rules had hitherto been required by both belligerents but for Germany this of course severely reduced the destructive power of their submarines and from time to time their commanders were ordered to ignore them in the case of the British merchantmen. But there were bound to be mistakes and the ships of neutrals were sunk. This brought a wave of resentment against the German Government and there were acrimonious notes to that government, especially from the American Government, when her ships were sunk and specious excuses were given for such sinkings. American antagonism was heightened by the discovery of plots and sabotage activities of German agents in America.

The powerful German submarine offensive in 1916 soon began to take a dreadful turn for the British when the daily toll of their shipping losses was so heavy that unless some new tide set in -- or unless the United States of America could be drawn into the war on the Allied side -- there could be only one end to it, and that end would come soon.

The problem then was two-fold: (1) To labor prodigiously to gain mastery over the German submarines, but this, it was recognized, would be a slow, a very slow, process; (2) to try not to irritate or antagonize the United States and certainly not to exasperate America as the Germans were, in the hope that the latter would

sooner or later, the sooner the better, goad the Americans into joining the war against Germany. The British were fortunate in both respects. It turned out that thanks to the tremendous exertions of British shipbuilders, scientists, and sailors mastery over the submarines was attained but not until early in 1918. With this phase of the British problem as I've just stated it, we shall not concern ourselves today. It is with the other phase of it that my talk will deal.

Let's see how the Germans behaved so as to outrage practically all Americans and make President Wilson ask Congress to declare war on them.

During the first year of submarine warfare the German Government respected the rights of neutral nations but when faced with the prospect of losing the war unless all imports to the British Isles were cut off, it made a fateful decision. On 1 February 1917, it announced that as of that date German submarines would sink at sight ALL ships met on the high seas.

What did President Wilson do on receipt of the German proclamation? Why, on 3 February he informed German Ambassador von Bernstorff that his career in the United States was at an end--the United States had severed diplomatic relations with Germany. Von Bernstorff wasn't given much time to pack his belongings and go home.

Of course, Britain had hoped that the United States would now join the war against Germany. The American position was quite humiliating because it was clear that she could not give her own merchantmen any protection whatever, that is, she couldn't without going to war and President Wilson had promised to keep America out of the war. Hence, after the German declaration of unrestricted submarine warfare American ships kept within American harbors because they were afraid to leave and become helpless victims of submarine torpedoes--with large losses in life to be expected. As I've said, President Wilson was determined to keep America out of war; just like the Scandinavian and certain other countries in Europe were keeping out of it. But his position was a very difficult one; his own ambassador in London wrote in his diary:

"I predict that the President cannot be made to lift a finger for war--until the Germans should actually bombard one of our ports. It's cowardice or pacifism that holds him back every time--Jeffersonianism."

On the whole, American sympathies were with the Allies but the feelings of a large German-American population had to be taken into account, especially when British high-handed action, every once in a while, severely prejudiced their case. So the U.S. official attitude and position was, as I've indicated, very difficult. One writer, commenting on President Wilson's conduct, said that he "was hesitating on the brink of war, reluctant to plunge into it, clinging painfully to the idea

of strict neutrality which seemed to be almost a part of his religion."

But maybe a bit of politics got mixed up with the religion because, as some of you may remember, the Democratic slogan for President Wilson's campaign for a second term was "he kept us out of war". And let's not forget the other famous explanation he gave for keeping out of war--his statement that "there is such a thing as being too proud to fight!"

There was another factor we must keep in mind. For a large part of the United States, especially the Middle and Far West, the war in Europe was 3,000 miles across the Atlantic--it might as well have been on another planet so far as the people who lived in those parts of our country were concerned.

Then came the "cryptologic opportunity" which formed the principal part of the title of my talk this morning, and which, overnight, it seems, the episode involving the interception and solution by the British of the Zimmermann Telegram entirely changed the picture.

Now, historians may disagree as to why the United States became a belligerent in World War I; some of them even believe that we went in on the wrong side. But I think that most historians would now agree that it was the solution of the Zimmermann Telegram and the brilliant way in which the British used it that brought the United States into the war when she was brought in, and brought in on the side of the Allies.

The whole episode is replete with drama, and it has been reported in a really dramatic manner on a recently presented TV program that was one in the series of historical episodes recounted on Walter Cronkite's "You are There!" Some of you may have seen it when the program was presented "live"; some of you may have seen it as recorded on motion-picture film, a copy of which I've borrowed from the Office of Training and that film we now are about to see and hear. I'd like to add that the Zimmermann Telegram of 16 January 1917 was the subject of a radio broadcast by the British Broadcasting Corporation only as recently as 26 May 1958. I'm trying to get a transcript of that broadcast. I mention this to show you that the Zimmermann Telegram is quite a live subject today--42 years later!

Now let's have Walter Cronkite's "You are There!" account of the Zimmermann Telegram episode which he presented under the title "The secret message that plunged America into war."