

## German History in Documents and Images

Volume 7. Nazi Germany, 1933-1945 Transcript of Surreptitiously Taped Conversations among German Nuclear Physicists at Farm Hall (August 6-7, 1945)

At the beginning of the war, Germany's leading nuclear physicists were called to the army weapons department. There, as part of the "uranium project" under the direction of Werner Heisenberg, they were charged with determining the extent to which nuclear fission could aid in the war effort. (Nuclear fission had been discovered by Otto Hahn and Lise Meitner in 1938.) Unlike their American colleagues in the Manhattan Project, German physicists did not succeed in building their own nuclear weapon. In June 1942, the researchers informed Albert Speer that they were in no position to build an atomic bomb with the resources at hand in less than 3-5 years, at which point the project was scrapped.

After the end of the war, both the Western Allies and the Soviet Union tried to recruit the German scientists for their own purposes. From July 3, 1945, to January 3, 1946, the Allies incarcerated ten German nuclear physicists at the English country estate of Farm Hall, their goal being to obtain information about the German nuclear research project by way of surreptitiously taped conversations. The following transcript includes the scientists' reactions to reports that America had dropped an atomic bomb on Hiroshima. The scientists also discuss their relationship to the Nazi regime and offer some prognoses for Germany's future. As the transcript shows, Otto Hahn was especially shaken by the dropping of the bomb; later, he campaigned against the misuse of nuclear energy for military purposes.

#### I. Preamble.

- 1. This report covers the first reactions of the guests to the news that an atomic bomb had been perfected and used by the Allies.
- 2. The guests were completely staggered by the news. At first they refused to believe it and felt that it was bluff on our part, to induce the Japanese to surrender. After hearing the official announcement they realized that it was a fact. Their first reaction, which I believe was genuine, was an expression of horror that we should have used this invention for destruction.

#### [...]

#### II. 6th August, 1945.

1. Shortly before dinner on the 6th August I informed Professor HAHN that an announcement had been made by the B.B.C. that an atomic bomb had been dropped. HAHN was completely shattered by the news and said that he felt personally responsible for the deaths of hundreds of thousands of people, as it was his original discovery which had made the bomb possible. He told me that he had originally contemplated suicide when he realized the terrible potentialities of his discovery and he felt that now these had been

realized and he was to blame. With the help of considerable alcoholic stimulant he was calmed down and we went down to dinner where he announced the news to the assembled guests.

2. As was to be expected, the announcement was greeted with incredulity. The following is a transcription of the conversation during dinner.

[...]

HEISENBERG: I don't believe a word of the whole thing. They must have spent the whole of their £500,000,000 in separating isotopes; and then it's possible.

WEIZSÄCKER: If it's easy and the Allies know it's easy, then they know that we will soon find out how to do it if we go on working.

HAHN: I didn't think it would be possible for another twenty years.

WEIZSÄCKER: I don't think it has anything to do with uranium.

[...]

DIEBNER: We always thought we would need two years for one bomb.

HAHN: If they have really got it, they have been very clever in keeping it secret.

WIRTZ: I'm glad we didn't have it.

WEIZSÄCKER: That's another matter. How surprised BENZER(?) would have been. They always looked upon it as a conjuring trick.

WIRTZ: DOEPEL, BENZER(?) and Company.

HAHN: DOEPEL was the first to discover the increase in neutrons.

HARTECK: Who is to blame?

(?) VOICE: HAHN is to blame.

WEIZSÄCKER: I think it's dreadful of the Americans to have done it. I think it is madness on their part.

HEISENBERG: One can't say that. One could equally well say "That's the quickest way of ending the war."

HAHN: That's what consoles me.

[...]

HAHN: I was consoled when, I believe it was WEIZSÄCKER said that there was now this uranium – I found that in my institute too, this absorbing body which made the thing impossible consoled me because when they said at one time one could make bombs, I was shattered.

WEIZSÄCKER: I would say that, at the rate we were going, we would not have succeeded during this war.

HAHN: Yes.

WEIZSÄCKER: It is very cold comfort to think that one is personally in a position to do what other people would be able to do one day.

HAHN: Once I wanted to suggest that all uranium should be sunk to the bottom of the ocean. I always thought that one could only make a bomb of such a size that a whole province would be blown up.

[...]

WIRTZ: We only had one man working on it and they may have had ten thousand.

[...]

HEISENBERG: There is a great difference between discoveries and inventions. With discoveries one can always be skeptical and many surprises can take place. In the case of inventions, surprises can really only occur for people who have not had anything to do with it. It's a bit odd after we have been working on it for five years.

[...]

HARTECK: One would have had to have a complete staff and we had insufficient means. One would have had to produce hundreds of organic components of uranium, had them systematically examined by laboratory assistants and then had them chemically investigated. There was no one there to do it. But we were quite clear in our minds as to how it should be done. That would have meant employing a hundred people and that was impossible.

HAHN: From the many scientific things which my two American collaborators sent me up to 1940, I could see that the Americans were interested in the business.

WEIZSÄCKER: In 1940 VAN DER GRINTEN wrote to me saying that he was separating isotopes with General Electric.

HARTECK: Was VAN DER GRINTEN a good man?

WEIZSÄCKER: He wasn't really very good but the fact that he was being used showed that they were working on it.

HAHN: That wicked BOMKE was in my Institute.

HARTECK: I have never come across such a fantastic liar.

HAHN: That man came to me in 1938 when the non-aryan Fraulein MEITNER was still there – it wasn't easy to keep her in my Institute. I will never forget how BOMKE came to us and told me that he was being persecuted by the State because he was not a Nazi. We took him on and afterwards we found out that he was an old fighting member of the Party.

WEIZSÄCKER: Then we might speak of our "BOMKE-damaged" Institutes. (Laughter).

3. All the guests assembled to hear the official announcement at 9 o'clock. They were completely stunned when they realized that the news was genuine. They were left alone on the assumption that they would discuss the position and the following remarks were made.:—

HARTECK: They have managed it either with mass-spectrographs on a large scale or else they have been successful with a photo-chemical process.

WIRTZ: Well I would say photo-chemistry or diffusion. Ordinary diffusion. They irradiate it with a particular wave-length. – (all talking together).

HARTECK: Or using mass-spectrographs in enormous quantities. It is perhaps possible for a mass-spectrograph to make one milligram in one day – say of '235'. They could make quite a cheap mass-spectrograph which, in very large quantities, might cost a hundred dollars. You could do it with a hundred thousand mass-spectrographs.

HEISENBERG: Yes, of course, if you do it like that; and they seem to have worked on that scale. 180,000 people were working on it.

HARTECK: Which is a hundred times more than we had.

BAGGE: GOUDSMIT led us up the garden path.

HEISENBERG: Yes, he did that very cleverly.

HAHN: CHADWICK and COCKROFT.

HARTECK: And SIMON too. He is the low temperature man.

KORSHING: That shows at any rate that the Americans are capable of real cooperation on a tremendous scale. That would have been impossible in Germany. Each one said that the other was unimportant.

GERLACH: You really can't say that as far as the uranium group is concerned. You can't imagine any greater cooperation and trust than there was in that group. You can't say that any one of them said that the other was unimportant.

KORSHING: Not officially of course.

GERLACH: (Shouting). Not unofficially either. Don't contradict me. There are far too many other people here who know.

HAHN: Of course we were unable to work on that scale.

HEISENBERG: One can say that the first time large funds were made available in Germany was in the spring of 1942 after that meeting with RUST when we convinced him that we had absolutely definite proof that it could be done.

BAGGE: It wasn't much earlier here either.

HARTECK: We really knew earlier that it could be done if we could get enough material. Take the heavy water. There were three methods, the most expensive of which cost 2 marks per gram and the cheapest perhaps 50 pfennigs. And then they kept on arguing as to what to do because no one was prepared to spend 10 million if it could be done for three million.

HEISENBERG: On the other hand, the whole heavy water business which I did everything I could to further cannot produce an explosive.

HARTECK: Not until the engine is running.

HAHN: They seem to have made an explosive before making the engine and now they say: "in future we will build engines".

HARTECK: If it is a fact that an explosive can be produced either by means of the mass spectrograph we would never have done it as we could never have employed 56,000 workmen. For instance, when we considered the CLUSIUS – LINDE business combined with our exchange cycle we would have needed to employ 50 workmen continuously in order to produce two tons a year. If we wanted to make ten tons we would have had to employ 250 men. We couldn't do that.

WEIZSÄCKER: How many people were working on V 1 and V 2?

DIEBNER: Thousands worked on that.

HEISENBERG: We wouldn't have had the moral courage to recommend to the Government in the spring of 1942 that they should employ 120,000 men just for building the thing up.

WEIZSÄCKER: I believe the reason we didn't do it was because all the physicists didn't want to do it, on principle. If we had all wanted Germany to win the war we would have succeeded.

HAHN: I don't believe that but I am thankful we didn't succeed.

[...]

HEISENBERG: It is possible that the war will be over tomorrow.

HARTECK: The following day we will go home.

KORSHING: We will never go home again.

HARTECK: If we had worked on an even larger scale we would have been killed by the 'Secret Service'. Let's be glad that we are still alive. Let us celebrate this evening in that spirit.

DIEBNER: Professor GERLACH would be an Obergruppenfuehrer and would be sitting in LUXEMBOURG as a war criminal.

KORSHING: If one hasn't got the courage, it is better to give up straightaway.

GERLACH: Don't always make such aggressive remarks.

KORSHING: The Americans could do it better than we could, that's clear.

(GERLACH leaves the room.)

HEISENBERG: The point is that the whole structure of the relationship between the scientist and the state in Germany was such that although we were not 100% anxious to do it, on the other hand we were so little trusted by the state that even if we had wanted to do it, it would not have been easy to get it through.

DIEBNER: Because the official people were only interested in immediate results. They didn't want to work on a long-term policy as America did.

WEIZSÄCKER: Even if we had got everything that we wanted, it is by no means certain whether we would have got as far as the Americans and the English have now. It is not a question that we were very nearly as far as they were but it is a fact that we were all convinced that the thing could not be completed during this war.

HEISENBERG: Well that's not quite right. I would say that I was absolutely convinced of the possibility of our making a uranium engine but I never thought that we would make a bomb and at the bottom of my heart I was really glad that it was to be an engine and not a bomb. I must admit that.

[...]

(HAHN leaves the room)

WEIZSÄCKER: If we had started this business soon enough we could have got somewhere. If they were able to complete it in the summer of 1945, we might have had the luck to complete it in the winter 1944/45.

WIRTZ: The result would have been that we would have obliterated LONDON but would still not have conquered the world, and then they would have dropped them on us.

WEIZSÄCKER: I don't think we ought to make excuses now because we did not succeed, but we must admit that we didn't want to succeed. If we had put the same energy into it as the Americans and had wanted it as they did, it is quite certain that we would not have succeeded as they would have smashed up the factories.

DIEBNER: Of course they were watching us all the time.

WEIZSÄCKER: One can say it might have been a much greater tragedy for the world if Germany had had the uranium bomb. Just imagine, if we had destroyed LONDON with uranium bombs it would not have ended the war, and when the war did end, it is still doubtful whether it would have been a good thing.

[...]

HEISENBERG: Yes. (Pause) About a year ago, I heard from SEGNER (?) from the Foreign Office that the Americans had threatened to drop a uranium bomb on Dresden if we didn't surrender soon. At that time I was asked whether I thought it possible, and, with complete conviction, I replied: 'No'.

WIRTZ: I think it characteristic that the Germans made the discovery and didn't use it, whereas the Americans have used it. I must say I didn't think the Americans would dare to use it.

- 4. HAHN and LAUE discussed the situation together. HAHN described the news as a tremendous achievement without parallel in history and LAUE expressed the hope of speedy release from detention in the light of these new events.
- 5. When GERLACH left the room he went straight to his bedroom where he was heard to be sobbing. VON LAUE and HARTECK went up to see him and tried to comfort him. He appeared to consider himself in the position of a defeated General, the only alternative open to whom is to shoot himself. Fortunately he had no weapon and he was eventually sufficiently calmed by his colleagues. In the course of conversation with VON LAUE and HARTECK, he made the following remarks:—

GERLACH: When I took this thing over, I talked it over with HEISENBERG and HAHN, and I said to my wife: "The war is lost and the result will be that as soon as the enemy enters the country I shall be arrested and taken away". I only did it because, I said to myself, this is a German affair and we <u>must</u> see that German physics are preserved. I never for a moment thought of a bomb but I said to myself: "If HAHN has made this discovery, let us at least be the first to make use of it". When we get back to Germany we will have a dreadful time. We will be looked upon as the ones who have sabotaged everything. We won't remain alive long there. You can be certain that there are many people in Germany who say that it is our fault. Please leave me alone.

6. A little later, HAHN went up to comfort GERLACH when the following conversation ensued:—

HAHN: Are you upset because we did not make the uranium bomb? I thank God on my bended knees that we did not make a uranium bomb. Or are you depressed because the Americans could do it better than we could?

GERLACH: Yes.

HAHN: Surely you are not in favor of such an inhuman weapon as the uranium bomb?

GERLACH: No. We never worked on the bomb. I didn't believe that it would go so quickly. But I did think that we should do <u>everything</u> to make the sources of energy and exploit the possibilities for the future. When the first result, that the concentration was very increased with the cube method, appeared, I spoke to SPEER's right hand man, as SPEER was not available at the time, an Oberst GEIST first, and later SAUCKEL at WEIMAR asked me: "What do you want to do with these things?", I replied: "In my opinion the politician who is in possession of such an engine can achieve anything he wants". About ten days or a fortnight before the final capitulation, GEIST replied: "Unfortunately we have not got such a politician".

HAHN: I am thankful that we were not the first to drop the uranium bomb.

GERLACH: You cannot prevent its development. I was afraid to think of the bomb, but I did think of it as a thing of the future, and that the man who could threaten the use of the bomb would be able to achieve anything. That is exactly what I told GEIST, SAUCKEL and MURR. HEISENBERG was there at STUTTGART at the time.

(Enter HARTECK)

Tell me, HARTECK, isn't it a pity that the others have done it?

HAHN: I am delighted.

GERLACH: Yes, but what were we working for?

[...]

GERLACH: We must not say in front of these two Englishmen that we ought to have done more about the thing. WIRTZ said that we ought to have worked more on the separation of isotopes. It's another matter to say that we did not have sufficient means but one cannot say in front of an Englishman that we didn't try hard enough. They were our enemies, although we sabotaged the war. There are some things that one knows and one can discuss together but that one cannot discuss in the presence of Englishmen.

HAHN: I must honestly say that I would have sabotaged the war if I had been in a position to do so.

7. HAHN and HEISENBERG discussed the matter alone together. HAHN explained to HEISENBERG that he was himself very upset about the whole thing. He said he could not really understand why GERLACH had taken it so badly. HEISENBERG said he could understand it because GERLACH was the only one of them who had really wanted a German victory, because although he realized the crimes of the Nazis and disapproved of them, he could not get away from the fact that he was working for GERMANY. HAHN replied that he too loved his country and that, strange as it might appear, it was for this reason that he had hoped for her defeat. HEISENBERG went on to say that he thought the possession of the uranium bomb would strengthen the position of the Americans vis-a-vis the Russians. They continued to discuss the same theme as before, that they had never wanted to work on a bomb and had been pleased when it was decided to concentrate everything on the engine. HEISENBERG stated that the people in Germany might say that they should have forced the authorities to put the necessary means at their disposal and to release 100,000 men in order to make the bomb and he feels himself that had they been in the same moral position as the Americans and had said to themselves that nothing mattered except that HITLER should win the war, they might have succeeded, whereas in fact they did not want him to win. HAHN admitted however that he had never thought that a German defeat would produce such terrible tragedy for his country. They then went on to discuss the feelings of the British and American scientists who had perfected the bomb and HEISENBERG said he felt it was a different matter in their case as they considered HITLER a criminal. They both hoped that the new discovery would in the long run be a benefit to mankind. HEISENBERG went on to speculate on the uses to which AMERICA would put the new discovery and wondered whether they would use it to obtain control of RUSSIA or wait until STALIN had copied it. They went on to wonder how many bombs existed.

# [...]

HEISENBERG: Perhaps they have done nothing more than produce 235 and make a bomb with it. Then there must be any number of scientific matters which it would be interesting to work on.

HAHN: Yes, but they must prevent the Russians from doing it.

HEISENBERG: I would like to know what STALIN is thinking this evening. Of course they have got good men like LANDAU, and these people can do it too. There is not much to it if you know the fission. The whole thing is the method of separating isotopes.

HAHN: No, in that respect the Americans and in fact all the Anglo–Saxons are vastly superior to them. I have a feeling that the Japanese war will end in the next few days and then we will probably be sent home fairly soon and everything will be much easier than it was before. Who knows that it may not be a blessing after all?

8. The guests decided among themselves that they must not outwardly show their concern. In consequence they insisted on playing cards as usual till after midnight. VON WEIZSÄCKER, WIRTZ, HARTECK, and BAGGE remained behind after the others had gone to bed. The following conversation took place:

BAGGE: We must take off our hats to these people for having the courage to risk so many millions.

HARTECK: We might have succeeded if the highest authorities had said 'We are prepared to sacrifice everything'.

WEIZSÄCKER: In our case even the scientists said it couldn't be done.

BAGGE: That's not true. You were there yourself at that conference in Berlin. I think it was on 8 September that everyone was asked – GEIGER, BOTHE and you, HARTECK, were there too— and everyone said that it must be done at once. Someone said 'Of course it is an open question whether one ought to do a thing like that.' Thereupon BOTHE got up and said 'Gentlemen, it <u>must</u> be done.' Then GEIGER got up and said 'If there is the slightest chance that it is possible – it must be done.' That was on 8 September '39.

WEIZSÄCKER: I don't know how you can say that. 50% of the people were against it.

HARTECK: All the scientists who understood nothing about it, all spoke against it, and of those who did understand it, one third spoke against it. As 90% of them didn't understand it, 90% spoke against it. We knew that it could be done in principal, but on the other hand we realized that it was a frightfully dangerous thing.

BAGGE: If the Germans had spent 10 milliard marks on it and it had not succeeded, all physicists would have had their heads cut off.

WIRTZ: The point is that in Germany very few people believed in it. And even those who were convinced it could be done did not all work on it.

[...]

WIRTZ: KORSHING is really right when he said there wasn't very good co-operation in the uranium group as GERLACH said. GERLACH actually worked against us. He and DIEBNER worked against us the whole time. In the end they even tried to take the engine away from us. If a German Court were to investigate the whole question of why it did not succeed in Germany it would be a very, very dangerous business. If we had started properly in 1939 and gone all out everything would have been alright.

HARTECK: Then we would have been killed by the British 'Secret Service'.

WIRTZ: I am glad that it wasn't like that otherwise we would all be dead.

[...]

9. GERLACH and HEISENBERG had a long discussion in GERLACH's room which went on half the night. In the course of this conversation they repeated most of the statements that had been made in the course of the general conversation downstairs and have been already reported. The following are extracts from the conversation:

GERLACH: I never thought of the bomb, all I wanted was that we should do everything possible to develop HAHN's discovery for our country.

[...]

HEISENBERG: I am still convinced that our objective was really the right one and that the fact that we concentrated on uranium may give us the chance of collaboration. I believe this uranium business will give the Anglo–Saxons such tremendous power that EUROPE will become a bloc under Anglo–Saxon domination. If that is the case it will be a very good thing. I wonder whether STALIN will be able to stand up to the others as he has done in the past.

[...]

GERLACH: If Germany had had a weapon which would have won the war, then Germany would have been in the right and the others in the wrong, and whether conditions in Germany are better now than they would have been after a HITLER victory –

HEISENBERG: I don't think so. On the other hand, the days of small countries are over. Suppose HITLER had succeeded in producing his EUROPE and there had been no uranium in EUROPE.

GERLACH: If we had really planned a uranium engine – in the summer of 1944 we would not have had a bomb – and that had been properly handled from a propaganda point of view –

HARTECK: That might have been a basis for negotiation. It would have been a basis for negotiation for any other German Government, but not for HITLER.

GERLACH: I went to my downfall with open eyes, but I thought I would try and save German physics and German physicists, and in that I succeeded.

HEISENBERG: Perhaps German physics will be able to collaborate as part of a great Western group.

[...]

HEISENBERG: It seems to me that the sensible thing for us to do is to try and work in collaboration with the Anglo–Saxons. We can do that now with a better conscience because one sees that they will probably dominate EUROPE. It is clear that people like CHADWICK and CHERWELL have considerable influence.

[...]

10. WIRTZ and WEIZSÄCKER discussed the situation together in their room. VON WEIZSÄCKER expressed the opinion that none of them had really worked seriously on uranium with the exception of WIRTZ and HARTECK. He also accused GERLACH and DIEBNER of sabotage. WIRTZ expressed horror that the Allies had used the new weapon. They went on to discuss the possibility of the Russians discovering the secret and came to the conclusion that they would not succeed under ten years. They went on as follows:

WIRTZ: It seems to me that the political situation for STALIN has changed completely now.

WEIZSÄCKER: I hope so. STALIN certainly has not got it yet. If the Americans and the British were good Imperialists they would attack STALIN with the thing tomorrow, but they won't do that, they will use it as a political weapon. Of course that is good, but the result will be a peace which will last until the Russians have it, and then there is bound to be war.

At this point HEISENBERG joined WIRTZ and WEIZSÄCKER. The following remarks were passed:

[...]

WEIZSÄCKER: Our strength is now the fact that we are 'un-Nazi'.

 $[\ldots]$ 

WEIZSÄCKER: I admit that after this business I am more ready to go back to GERMANY, in spite of the Russian advance.

WIRTZ: My worst fears have been realized with regard to the complications which will now arise about us.

HEISENBERG: I believe that we are now far more bound up with the Anglo–Saxons than we were before as we have no possibility of switching over to the Russians even if we wanted to.

WIRTZ: They won't let us.

HEISENBERG: On the other hand we can do it with a good conscience because we can see that in the immediate future GERMANY will be under Anglo–Saxon influence.

WIRTZ: That is an opportunist attitude.

HEISENBERG: But at the moment it is very difficult to think otherwise because one does not know what is better.

WEIZSÄCKER: If I ask myself for which side I would prefer to work of course I would say for neither of them.

11. DIEBNER and BAGGE also discussed the situation alone together as follows:

BAGGE: What do you think will happen to us now?

DIEBNER: They won't let us go back to GERMANY. Otherwise the Russians will take us. It is quite obvious what they have done; they have just got some system other than ours. If a man like GERLACH had been there earlier, things would have been different.

BAGGE: GERLACH is not responsible, he took the thing over too late. On the other hand it is quite obvious that HEISENBERG was not the right man for it. The tragedy is that KORSHING is right in the remarks he made to GERLACH. I think it is absurd for WEIZSÄCKER to say he did not want the thing to succeed. That may be so in his case, but not for all of us. WEIZSÄCKER was not the right man to have done it. HEISENBERG could not convince anyone that the whole thing depended on the separation of isotopes. The whole separation of isotopes was looked upon as a secondary thing. When I think of my own apparatus – it was done against HEISENBERG's wishes.

DIEBNER: Now the others are going to try and make up to the Major and sell themselves. Of course they can do what they like with us now; they don't need us at all.

[...]

BAGGE: You can't blame SPEER as none of the scientists here forced the thing through. It was impossible as we had no one in GERMANY who had actually separated uranium. There were no mass—spectrographs in GERMANY.

DIEBNER: They all failed. WALCHER(?) and HERTZOG(?) wanted to build one, but they didn't succeed.

12. Although the guests retired to bed about 1.30, most of them appear to have spent a somewhat disturbed night judging by the deep sighs and occasional shouts which were

heard during the night. There was also a considerable amount of coming and going along the corridors.

### III. 7 August.

1. On the morning of 7 August the guests read the newspapers with great avidity. Most of the morning was taken up reading these.

[...]

- 4. GERLACH and VON LAUE discussed the position of Niels BOHR and the part he had played. GERLACH said he was very upset about this as he had personally vouched for BOHR to the German Government. VON LAUE said that one could not believe everything that appeared in the newspapers.
- 5. In a conversation with VON LAUE, VON WEIZSÄCKER said it will not be long before the names of the German scientists appear in the newspapers and that it would be a long time before they would be able to clear themselves in the eyes of their own countrymen. He went on to quote from the newspaper that we were unable to control the energy, from which he assumed that we were not yet in possession of a uranium engine, so that their work would still be of considerable value. He ended by saying:

WEIZSÄCKER: History will record that the Americans and the English made a bomb, and that at the same time the Germans, under the HITLER regime, produced a workable engine. In other words, the peaceful development of the uranium engine was made in GERMANY under the HITLER regime, whereas the Americans and the English developed this ghastly weapon of war.

 $[\dots]$ 

7. In a conversation between WIRTZ, VON WEIZSÄCKER and HEISENBERG, HEISENBERG repeated that in July 1944 a senior SS official had come to him and asked him whether he seriously believed that the Americans could produce an atomic bomb. He said he had told him that in his opinion it was absolutely possible as the Americans could work much better and quicker than they could. VON WEIZSÄCKER again expressed horror at the use of the weapon and HEISENBERG replied that had they produced and dropped such a bomb they would certainly have been executed as War Criminals having made the "most devilish thing imaginable".

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Source: Operation "Epsilon" (6<sup>th</sup>-7<sup>th</sup> August 1945) National Archives and Records Administration, College Park, MD, RG 77, Entry 22, Box 164 (Farm Hall Transcripts).

Source of German transcript: Dieter Hoffman, *Operation Epsilon: Die Farm Hall Protokolle oder die Angst der Alliierten vor der deutschen Atombombe*. Berlin: Rohwohlt, 1993, pp. 145-77.