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In the Matter Of:

J. ROBERT OPPENHEIMER

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UNITED STATES ATOMIC ENERGY COMMISSION

PERSONNEL SECURITY BOARD

In the Matter of

J. ROBERT OPPENHEIMER

Room 2022,
Atomic Energy Commission,
Building T-3,
Washington, D. C.
Tuesday, April 27, 1954.

The above entitled matter came on for hearing, pursuant to recess, before the Board, at 9:30 a.m.

PERSONNEL SECURITY BOARD:

MR. GORDON GRAY, Chairman.
DR. WARD T. EVANS, Member.
MR. THOMAS A. MORGAN, Member.

PRESENT:

ROGER ROBB, and
C. A. ROLANDER, JR., Counsel for the Board.

J. ROBERT OPPENHEIMER.
LLOYD K. GARRISON,
SAMUEL J. SILVERMAN, and
ALLAN B. ECKER, Counsel for J. Robert Oppenheimer.
HERBERT S. MARKS, Co-Counsel for J. Robert Oppenheimer.

I N D E X

* * * * *

P R O C E E D I N G S

MR. GRAY: The Chairman wishes the record to show that following Dr. Bacher's appearance as a witness, the Chairman conferred with Mr. Garrison and Mr. Robb. The Chairman suggested to counsel that the Board was willing to strike that portion of Dr. Bacher's testimony which related to the memorandum in the AEC files, dated March 14, largely on the ground that the memorandum in question was unsigned and unidentified.

The Chairman stated that his suggestion was also related to Mr. Garrison's objection that the memorandum in question introduced into the record statements about the Serbers which were unidentified in origin. The Chairman made it clear to counsel that the Board does not feel there is any question of impropriety, but wished to take into account fully every possible consideration of fairness as far as the record is concerned.

Mr. Robb indicated that he had no objection to this procedure. Mr. Garrison felt that it would be a mistake, once the record was formed, tostrike this portion of the record.

Is that correct, or is any of that incorrect? I would like help on this, because I am simply trying to reflect what the facts are.

MR. ROBB: It is entirely correct as far as I am concerned.

MR. GARRISON: Mr. Chairman, I think I would just say that while I objected to the introduction of the document and the questions based on it, I still hold the views that I then expressed. The matter in fact having come before the Board and testimony having been had before us, I think that it should stand in the record.

MR. GRAY: Under the circumstances, the record will stand.

MR. GARRISON: Mr. Chairman, before we begin with the witness, I would just like to ask if the minutes of that August 6, 1947, meeting that I asked for yesterday are available?

MR. ROBB: Mr. Chairman, I am informed by Mr. Mitchell, the General Counsel, that he has taken the matter up with the Commission. Both he and I have recommended that they be made available, but they will not meet until this afternoon, at which time they will make the decision.

MR. GRAY: I think the record ought to clearly show that only the Commission can make this decision.

MR. ROBB: That is correct.

MR. GARRISON: The Board can, however, Mr. Chairman, I take it join in the request to the Commission and make it available.

MR. GRAY: I think it is understood that the Board did join in that request.

MR. ROBB: I think there is no question about that.

MR. GRAY: General, I would like to ask whether you wish to testify under oath. You are not required to do so. I think in fairness I should say that all witnesses have so testified.

GENERAL McCORMACK: I am perfectly willing.

MR. GRAY: Would you be good enough to raise your right hand, General? What is your full name?

GENERAL McCORMACK: James McCormack, Jr.

MR. GRAY: James McCormack, Jr., do you swear that the testimony you are to give the Board shall be the truth, the whole truth, and nothing but the truth, so help you God?

GENERAL McCORMACK: I do, sir.

Whereupon,

JAMES McCORMACK, JR.

was called as a witness, and having been first duly sworn, was examined and testified as follows:

MR. GRAY: Will you be seated, please.

I am required to remind you of the existence of the so-called perjury statutes. May we assume that you are familiar generally that there are perjury statutes?

THE WITNESS: I am familiar, yes, sir.

MR. GRAY: I am prepared to review the penalties, if you wish.

THE WITNESS: It won't be necessary.

MR. GRAY: May I ask, General McCormack, if in the course of your testmony it becomes necessary for you to refer to or disclose restricted data, you notify me in advance so that we might take the necessary and appropriate steps in the interest of security?

THE WITNESS: All right, sir.

MR. GRAY: Finally, I should say to you what I try to remember to say to all witnesses, that we consider these proceedings a confidential matter between the Commission and its officials on the one hand, and Dr. Oppenheimer and his representatives and witnesses on the other. The Commission is making no releases about these proceedings. On behalf of the Board, I express the hope that witnesses will take the same view of the matter.

THE WITNESS: If I may ask, this is as regards public statements.

MR. GRAY: That is correct.

THE WITNESS: Thank you.

MR. GRAY: I should say further that in your case, there is no military requirement involved about participating in these proceedings and what you might say about them. I think I covered it as well as I could by saying that the Board considers these proceedings a confidential matter between the Commission and Dr. Oppenheimer, and their various representatives

THE WITNESS: I had not meant to confuse, sir, but

before coming, I told my immediate commander where I was going and the purpose. I wanted you to know that.

MR. GRAY: That is essential, I think. You have to tell him when you return where you have been and what you have been doing, perhaps?

THE WITNESS: Your experience would indicate that.

DIRECT EXAMINATION

BY MR. SILVERMAN:

Q General McCormack, for the record will you state your rank and branch of service, and your present post, please?

A I am a major general in the U. S. Air Force. My present position is Vice Commander of the Air Research and Development Command, stationed at Baltimore, Maryland.

Q You are appearing as a witness at the request of the attorneys for Dr. Oppenheimer?

A That is right.

Q Could you tell us a little bit about your present command, what the Air Research and Development Command is?

A The Air Force, unlike the Army or Navy, has consolidated all of its research and development creative engineering activities in a single command, and all of its procurement, production, supply and service activities in another The first is the Air Research and Development Command, and the second is the Air Materiel Command. These two functions are put together in separate packages in the Navy, in the

Bureau of Ordnance, Bureau of Aeronautics, and so forth.

The Air Force as the field operating organization and not as Washington policy staff, we have purview over all research and development activities directly supported and sponsored by the Air Force, and are responsible for liaison with corresponding corellary complementary activites of interest to us in other services and indeed in science and industry and throughout the government.

Q Does this command include such portions of research and development as have to do with development and use of atomic weapons?

A We carry the Air Force responsibility in that field, although the major responsibility of course rests with the Atomic Energy Commission.

Q About how large is the personnel of this command?

A Approximately 40,000 total on the government rolls, roughly half military and half civilian, of whom some 25,000 could be said to be engaged in research, development and testing activities. The rest are supporting groups.

Q You formerly were Director of the Division of Military Application of the Atomic Energy Commission?

A From February 1947 to August 1951.

Q And was it in that connection that you had your contacts with Dr. Oppenheimer?

A Yes, principally. I have seen him a few times since

leaving the Commission, but not at all during the past year.

Q During the time when you were Director of the Division of Military Application of the Atomic Energy Commission, did you have occasion to observe the work of the General Advisory Committee in so far as that affected matters with which you were familiar, and particularly the work of Dr. Oppenheimer?

A I would say I got a rather good view of it. It was the usual practice -- I don't know how many departures there were -- to invite me or my staff in when the General Advisory Committee was discussing in preliminary fashion matters affecting my operating responsibility.

Q Would you care to comment on the contribution of the General Advisory Committee, and particularly of Dr. Oppenheimer toward helping the atomic energy program, and in particular as far as you could observe it.

A I have worked with a number of advisory committees in my business. I think the General Advisory Committee was the outstanding one of my experience in terms of its qualifications, its interest in the work, and its consistent effort to be helpful in broadening the base of weapons development, of pushing out into other areas of military interest, generally to the full extent.

I speak in terms of my own responsibility which was below the policy level as regards the Commission, Just generally I would say the committee was continuously interested

in doing the very best they could by the weapons program. A committee, of course, is limited in the impact it can have as opposed to the administrative organization.

Q Did you work fairly closely with the committee and Dr. Oppenheimer during this four years or so that you were director of the Division of Military Applications?

A I saw the committee very frequently. The record would indicate how many meetings they held during that period but I have it in mind that it must have been four to six a year. In addition to that, I saw members of the committee passing through Los Alamos, through the Commission Building in Washington.

Q And that included Dr. Oppenheimer?

A Yes, I saw a great deal of Dr. Oppenheimer.

Q Were you familiar with Dr. Oppenheimer's views on the relative division of atomic weapons between strategic air use and use for tactical purposes and continental defense, or is that a very mixed up question? If you understand, will you answer the question I should have put?

A I take your question to relate to the division of weapons in the stockpile or the division of effort for developing new weapons.

Q Perhaps you will answer both.

A I don't think the General Advisory Committee or Dr. Oppenheimer were concerned with the division of actual weapons

in stockpile. That is much the question of the design of the weapon for the purpose for which it was created which was one in accordance with military requirements and the program laid out on that basis.

With regard to contemplating future uses of fissionable material when weapons might be developed and fabricated, my recollection is that the General Advisory Committee and of course Dr. Oppenheimer as its leader and spokesman, were very strongly in favor of developing new types which would open new uses for tactical applications, particularl My recollection may be faulty on this point but I think up to the time I left the Commission, the use of atomic weapons in air defense was not a clear enough picture for any strong views one way or another.

Q Was it your impression that Dr. Oppenheimer was in favor of limiting the use of atomic weapons for strategic air purposes or strategic air bombing?

A Setting up a limit which would be effective in a campaign? Not to my knowledge.

Q Was he in favor of cutting down the proportion of fissionable materials that went into strategic air bombing?

A As best I can remember this arose only once during the period of my association with Dr. Oppenheimer, and it had more to do with contemplated future uses, if I can make this clear. I recall Dr. Oppenheimer's being a proponent of the

school that if you are to get the full military developmental and operational interest in atomic weapons for tactical use, you had to give them something realistic to put in their thinking, such as an understanding that as these uses are developed, material will be available.

This is my statement of the thesis, not Dr. Oppenheimer's. My recollection is that this was a line of his thinking as I understood it.

Q Did that involve cutting down the amount of material available for strategic air bombing or did he think there would be enough for both?

A I had not recalled the thesis as being an arbitrary reduction as against some future date, but rather as a factor for planning. War plans are different.

Q I am not talking about war plans.

A What you use weapons for when you actually start using them is what the situation requires. I don't recall Dr. Oppenheimer ever denying that.

Q Did he indicate that this use of atomic weapons was an ever-expanding business, and you have enough materials both for tactical uses and strategic?

A That I think is a fair statement.

Q By the way, your present command covers both so-called continental defense and tactical and strategic use of atomic weapons in so far as the Air Force is concerned?

A That is right.

Q In the course of your meeting and acquaintanceship with Dr. Oppenheimer, did you feel you came to know him quite well?

A Oh, yes.

Q Do you have an opinion as to Dr. Oppenheimer's loyalty to the United States?

A I never had a question as to it.

Q Do you have an opinion as to whether he is a security risk, as to his discretion in the use of classified materials, whether it is safe to trust him with such?

A Nothing in my associations with him would raise the question with me.

MR. SILVERMAN: That is all.

CROSS EXAMINATION

BY MR. ROBB:

Q General, you spoke of the role of the GAC towards helping the atomic energy weapons program. I assume that you followed the debate in the GAC in October 1949 with respect to the development of the thermonuclear weapon?

A Yes, although I was not specifically present at the time. Perhaps I was not entirely clear in my previous answer, although I think I was. That debate was a debate at the Commissions'policy level. I was speaking of my relations with the GeneralAdvisory Committee in carrying out the policies

that were decided upon.

Q Were you supposed to represent the views of the military at that time in respect to the thermonuclear weapon?

A No. The Military Liaison Committee is the normal organization under the law. I was an operating staff officer of the Commission. I did my best to carry military thinking into the Commission, yes, but the formal responsibility rested with the Military Liaison Committee.

Q What was the military thinking in October 1949 with respect to the development of the thermonuclear weapon?'

A In my understanding the military interest was a very definite interest in going forward with it if indeed it proved to be technically feasible, although questions of scale and rate of effort and what you cut off your programs to encompass new efforts, these were questions. But on the broad question of going ahead, I think the military interest was solid.

Q In other words, it was a weapon the military wanted?

A If it could be made, yes.

Q After the meeting of the GAC of October 29, 1949, and the report which they made on that meeting, did you read the report of the GAC?

A I must have, although I don't recall any of its particulars. The only thing that is sharp in my memory is that there was a dissent, but even the details of the dissent,

I would not be a very competent witness on.

Q In all events, you were familiar in general with the decision of the GAC?

A I was generally familiar with it, yes, although I should definitely stipulate that it was not entirely clear to me at the time, nor would it be now, because I have not been in the business for some time, precisely what the question was that the GAC had before it. Whether it was a yes or no decision, shall we or shall we not, or crash versus no increase in the program. I imagine it was a rather complex question.

Q Was the position of the GAC on the thermonuclear pleasing to the military and to you as a member of the military?

A I beg your pardon. I didn't hear it.

(Question read by the reporter.)

THE WITNESS: I was in disagreement with it.

BY MR. ROBB:

Q Would you mind telling us why you were in disagreement with it?

A I think my thought was just about as simple as this. If the weapon is there, if it can be had, how can we afford not to try for it.

Q Have you remarked, General, in substance that the position of the GAC in that matter was either silly or sinister?

A I thought as a sort of a professional staff officer that the quick action on a problem which obviously loomed so

large, if I had to choose between the words, I would say silly. I drew no sinister implications. Indeed, I could not have stayed with the Commission had I done so, because some of my bosses --

Q I am not suggesting that you did draw such implications, but have you not remarked that either one of two alternatives was offered; either it was silly or it was sinister?

A I think that is about it, yes, sir.

Q So in respect of that action by the GAC, it could not be said that the GAC was in your opinion doing its best by the military weapons program, could it?

A I had notthought that was necessarily a part of the package. I speak of the General Advisory Committee, and the help they tried to give me in the programs for which I was responsible as being consistent throughout. There was a very large policy question up for discussion. The General Advisory Committee talked it out among themselves, and with the Commission, and initially recommended against a full blast ahead program, anyway. Once the decision was over, I suppose those who had reservations continued to hold them, and certainly enthusiasm for the program fluctuated as the prospects of early technical success fluctuated. But I was not aware of any member of the General Advisory Committee trying to hold back the program.

So far as my efforts to push the program forward, I would always have liked to have had more help from everybody, budget and everything else. I was not aware of anyone trying my feet.

Q I was talking to you about the decision. I think you have answered the question.

General, you were asked your opinion with respect to Dr. Oppenheimer's trustworthiness and whether you trust him, and you said you would, is that right?

A From any facts known to me, I would, sir.

Q Beg pardon?

A From all the facts known to me, I would, yes, sir.

Q Have you heard anything about the episode which occurred in 1943 when Dr. Oppenheimer had a conversation with a man named Chevalier in which the possibility of passing information to the Russians was mentioned?

A I know what I have heard about it since this Board was established; that is all.

Q What have you heard, General?

A I have heard that Chevalier, who was a friend of Dr. Oppenheimer's in some rather obscure way suggested that there was a channel through which information on the project which Dr. Oppenheimer was by then in charge of, I believe, at Los Alamos, although I think it had not grown up, there was a channel for passing information from this project to the

Communist apparatus. I have heard that Dr. Oppenheimer told him that was a horrid idea, but that he waited until some time later before he reported it then to the security organization of the Manhattan Project, and having reported it, then, tried for a while anyway to shield his friend, Chevalier, whom he thought was not really involved in it until General Groves asked him a direct question at which time he told the whole story. I am repeating my recollection of reading newspapers and hearing conversations on the matter.

Q Of course, you are not familiar with what Dr. Oppenheimer may have testified about that incident here in these hearings, are you?

A Not in specific detail, no.

Q I would like to read you a portion of Dr. Oppenheimer' testimony and get your views on that. I might tell you so that this will be intelligible to you that Dr. Oppenheimer was interviewed by Colonel Pash of the security organization about this matter, and then by Colonel Lansdale.

MR. GARRISON: Mr. Chairman, I think this raises the same question that I raised earlier. I have no objection -- we all have been putting hypothetical questions to witnesses -- but it seems to me to extract a piece of the testimony and only one piece, and then to ask opinions upon that without having the whole testimony. That is an unfair method of procedure. I think I made this objection at the

outset, and it was after that that the questions began to be put in a different form. I do very much object to just a piece of the transcript being read from the evidence without the context of the whole.

MR. ROBB: I am going to read a rather substantial piece. Of course, Mr. Chairman, Mr. Garrison framed his hypothetical questions, and that has been all right with me. I think I have a right to ask this witness on the basis of questions and answers right in this record whether his answer would be the same.

MR. GARRISON: This is not a hypothetical question.

MR. ROBB: No, this is a definite question.

MR. GARRISON: This is a slice out of the transcript.

MR. GRAY: I would like to ask Mr. Garrison whether his point is that the witness is not hearing everything that Dr. Oppenheimer testified before this Board, or whether the witness is not hearing everything he said with respect to this particular incident?

MR. GARRISON: Everything he said before the Board with respect to this incident. It seems to me to lift a part of it out, and ask the witness' opinion about that is to present him only a fraction of the total in what could be a misleading light. I don't know what fraction it is. I think it is quite different from putting a question if it has been established here that such and such took place before the

Board. I think that is different. It is quite clearly put as not the evidence itself. I never attempted to say to a witness what the evidence here had been.

MR. ROBB: I think my methid is more accurate. I am going to read him the actual questions and answers.

MR. GARRISON: In my questions I tried to summarize the best I could the way it looked to me. I appreciate that on each occasion Mr. Robb quite properly reserved his own feeling or position that the story as he might relate it would be a little different.

MR. GRAY: I am going to ask Mr. Robb if he can put his question in hypothetical terms as he would see the question and not be confined to any hypothetical questions which counsel for Dr. Oppenheimer would.

MR. ROBB: Very well. I wil attempt to summarize the testimony which I have in mind.

BY MR. ROBB:

Q General, I will ask you, sir, to assume that when questioned before this Board about that episode and his interview with Colonel Pash, he was asked whether he told Colone Pash the truth about the episode, and he said no. He was asked if he lied to Colonel Pash, and he said yes. When asked why he did that, he said, "Because I was an idiot." He said, "I was also reluctant to mention Chevalier"and somewhat reluctant to mention himself.

Assume further that he was asked whether or not if the story he told to Colonel Pash had been true, it would have shown that both Chevalier and Dr. Oppenheimer were deeply involved in an espionage conspiracy. He agreed that was so.

A May I ask you to repeat this last statement of yours?

Q He was asked whether or not if the story which he told to Pash had been true, instead o f as he said false, that story would have shown that both Dr. Oppenheimer and Chevalier were deeply involved in an espionage conspiracy.

MR. GARRISON: Mr. Chairman, I certainly don't recall that.

MR. ROBB: Since my friend objects --

MR. GRAY: I would say to Mr. Garrison that he certainly has the privilege of making a statement that Mr. Robb has made in each case with respect to a hypothetical question.

MR. GARRISON: Yes, but this is so obviously a paraphrase of the transcript. It is not an attempt at a summary. It seems to me it doesn't even attempt to give the witness a picture of what took place.

MR. ROBB: I can see, Mr. Chairman, I should have interrupted Mr. Garrison's question and raised technical questions about it, too, but I didn't do it.

MR. GRAY: Proceed, Mr. Robb.

BY MR. ROBB:

Q Did you have the last in mind, General?

A If I have heard you correctly in answer to a question whether had he told the truth it would have shown him, Dr. Oppenheimer, and Mr. Chevalier to be deeply in espionage.

Q Yes.

A And he answered yes, he would have.

Q Yes.

MR. SILVERMAN: No.

MR. GARRISON: Mr. Chairman --

MR. ROBB: Wait a minute, Mr. Garrison.

MR. SILVERMAN: You misunderstood.

BY MR. ROBB:

Q I am going to explain it. Assume that the story he actually told Colonel Pash was true, then would that not have shown that he was deeply involved in an espionage conspiracy? Do I make myself plain?

MR. GARRISON: Mr. Chairman, I don't think it is plain, and I don't think it is in the record.

MR. ROBB: Very well. I will read this to you. "In other words, if X (meaning Chevalier) had gone to three people, that would have shown, would it not --

"OPPENHEIMER: "That he was deeply involved.

"-- that he was deeply involved. That is, was not just a casual conversation.

"OPPENHEIMER: Right."

Now, am I justified?

MR. GARRISON: No, because you indicated that Dr. Oppenheimer would then be involved. That is what I very deeply object to.

MR. ROBB: Page 488:

"Q You will agree, would you not, sir, that if the story you told to Colonel Pash was true, it made things very bad for Mr. Chevalier?

"A For everyone involved in it.

"Q Including you.

"A Right."

Now, may I proceed?

MR. GARRISON: Mr. Chairman, he said that the story was an invention and the implication here to the witness is that he lied about something which would have implicated himself in espionage. I don't think that implication ought to be in this record at all.

MR. ROBB: That is exactly what he said.

BY MR. ROBB:

Q General, will you further assume --

MR. GRAY: Well --

MR. ROBB: Pardon me.

MR. GRAY: Could you state the last assumption that you made?

BY MR. ROBB:

Q Would you assume that the testimony was to that effect?

A I am clear on what this point is now.

Q Fine. Would you further assume, sir, that Dr. Oppenheimer knew that by refusing to name the man we referred to as "X", who afterwards turned out to be Chevalier, Dr. Oppenheimer knew by refusing to name him, he was impeding the investigation by the security officers into this espionage conspiracy?

Assuming those things, General, would you care to amend your answer with respect to the trustworthiness of Dr. Oppenheimer?

A I spoke of my opinion in the period in which I was associated with him, and knowledge from my associations. From that time, 1943, I would have said this was a very foolish action. I could not have -- I could not now believe that Dr. Oppenheimer would have acted that way at the later time when I was associated with him. I think probably he had learned a great deal about the mechanics of security in the intervening years.

Q Does it come as a shock to you to hear that occurred?

A When I first read it in the newspaper --

Q No, sir, I am talking about what I have just told you about it. Does it come to you as a shock to hear that happened?

A It is not a comfortable thought that one should have

been, to use Dr. Oppenheimer's word, such an idiot at that time. It would certainly come as a shock to me if there were evidence that he still operated that way in 1947 and afterwards when I knew him.

Q As a military man, General, and a professional soldier, suppose you found out that someone in yourcommand had conducted himself in that way in an interview with a security officer; what would you do?

A As of now in the context to the past, I would want to get all the facts bearing on it before I spoke. Years have passed.

Q Suppose you found out today that someone in your command had conducted himself in that way last week in an interview with one of your security officers; what would youdo?

A I would take immediate action.

Q You would court martial him, wouldn't you?

A The formalities are that I would suspend him and turn his case over to the OSI.

Q For an investigation?

A Yes.

Q Looking to a court martial, would you not?

A Depending on the facts.

Q Because you would take a very serious view about it?

A I would, indeed.

Q To a military man, General, lying is never

justified. I mean to one of your own security officers. You could not justify that, could you?

A False official statements are not condoned, no.

MR. ROBB: That is all. Thank you.

MR. GRAY: General McCormack, your recent experience has been a very great deal of research and development, is that correct? That has been your primary concern in recent years?

THE WITNESS: From the administrative side. I am not a technical person.

MR. GRAY: I understand. This is one of your responsibilities in so far as you have ultimate responsibility. One of them is in the general field of research and development. I am going to ask you a question now which reflects some confusion on my part about the well known October 1949 meeting of the General Advisory Committee, and the circumstances surrounding it -- the events leading up to it, and subsequent events.

It is clear, I believe, that the recommendation of the General Advisory Committee was not to proceed with an all out program for the production of this weapon. Is that a fair statement as you understood it?

THE WITNESS: That was surely a part of the decision, yes, sir. The other things that went around, I would have to go and read the record.

MR. GRAY: But that was clear. Another alternative, I suppose, which would have been at any time before the GAC was the alternative of not proceeding at all with research, development or production, leading to the weapon under discussion.

THE WITNESS: In theory that was an alternative, yes, sir. In practical fact, science goes on, of course.

MR. GRAY: Is there in your opinion anything that the General Advisory Committee might have done in October 1949 which would have represented a middle ground between these two extreme positions?

THE WITNESS: Yes, sir.

MR. GRAY: Do you mean by that, that perhaps they could have emphasized more strongly and recommended more enthusiastically research and development perhaps short of the allout production program which was at least one issue with respect to which they took a position?

THE WITNESS: Oh, yes, sir. There is a vast amount of middle ground between the two alternates as you stated them at the end of the spectrum.

MR. GRAY: Did you feel at the time that perhaps the GAC might consistent with the technical uncertainties, which clearly existed, have recommended more of an effort that this action of October 1949 seemed to you to suggest?

THE WITNESS: Yes, sir, I do. In fact, the program

as it proceeded was a question of picking up steam as you could do it. Greater expenditures of effort as useful places to expand that effort appeared in the course of the research.

MR. GRAY: In your judgment could the GAC have at that time recommended actions involving this greater effort without serious impairment or without impairment of the on-going fission program at the time?

THE WITNESS: The question of scale and rate of effort, yes, sir. Anything that we did immediately that we had not been doing before required either new resources to do it with, or it had to displace something. So the phasing out of the old programs and the phasing in of expanded effort in the thermonculear field was more or less a normal process, although it proceeded at very high priority, as high as we could put on it.

MR. GRAY: I am now going to ask a question with respect to which you have not testified this morning, that is, do you feel that the military at that time was well informed about the possible and appropriate and sensible use of atomic weapons?

THE WITNESS: Knowledge was far less complete than it is today, and probably less complete today than it will be at some time in the future.

MR. GRAY: Do you feel that the lack of knowledge on the part of the military was a factor in whatever delay

there might have been in the development of this weapon?

THE WITNESS: Lack of knowledge on the part of the military services as to just what the technical prospects were, I would say, yes, sir. I would give the same reply, I think, with regard to the more advanced fission weapons that have come out since that time. So much of this was --

DR. EVANS: You mean the fusion weapon or the fission?

THE WITNESS: I said fission, then, sir. It is all a part of it --

DR. EVANS: Yes, I understand.

THE WITNESS: Of a single problem. The atomic weapon field has gone forward very rapidly compared in contract with our experience in the development of the other machines of war that the foreseeing uses, the techniques of their use, their application to given battle situations, had to be developed as the weapons developed. It was my constant experience as long as I was with the Commission that the invention had to precede in part a clear and detailed plan for its use.

Take the use of the weapon carried under a fighter aircraft, for example; you had to have some idea of what you had in the way of energy release in the weapon before you could develop the fighter tactics and before the fighter tactics are clear in mind, the Air Force is in a poor position to say to the infantry on what you can do in putting atomic

explosions down on the battle line.

MR. GRAY: What was the function of the Military Liaison Committee?

THE WITNESS: Under the original law, it was appointed by the Secretary of War and Navy and in the revision of the law that happened after the unification of the armed forces, the Chairman of the Military Liaison Committee was made an appointment for confirmation by the Senate, and he represents the Secretary of Defense.

MR. GRAY: Was it one of the functions of that committee to keep the military advised in these respects with respect to the matters about which you said they might have known more than they did?

THE WITNESS: Theirs was the formal responsibility. There were many of us working on it, of course. It was in large part a process of mutual education.

MR. GRAY: In your opinion and recollection, General McCormack, is it possible that we would ever have found ourselves in a period or at a position in this government in which the military might have been stating no military requirements because they believed there was no technical feasibility and the Commission and its agencies might have been not pressing for development on the ground that there was no military demand?

THE WITNESS: I think in the practical workings of

the organization as it then existed, sir, that in so far as we were wise, in so far as we knew what to do, this gap could not have existed. I, for instance, could not have sat in my office i n the Commission knowing that there was a prospect in any field that might be of some military interest without seeking out the military service, or that segment of one of the military services that might be most interested in and make sure they got as clear a look at it as they could have had at that time. This was on the informal basis. Our formal dealings through the Military Liaison Committee will reflect the big issues. They will not reflect the myriad of contacts and interchange, the stationing of military officers at Los Alamos, the loaning of Los Alamos personnel to the target planners in the Pentagon, the interchanges of visits and so on. This was a very broad thing. By these means we tried to grow up with the situation as fast as the situation was growing.

MR. GRAY: As a practical matter, you think the answer to my questionwould be no?

THE WITNESS: To the limit of our wisdom and ability to do it.

MR. GRAY: I am making the assumption that those concerned with the program were of course doing their duty as they saw it best under the circumstances. I mean by that it is unreasonable to suppose that many in the military could understand some of the technical implications, especially

those who were not themselves scientists. You do not feel that there was delay because of any possible misunderstandings by the military about scientific feasibility and at the same time misunderstanding by the scientific advisors as to military requirement?

THE WITNESS: I think an honest answer in the light of history, sir, is that there must have been delays. I would not know how to put my finger on them. Had we known where they existed at the time, we would have cured them. But in fact, they must have existed in a sense not entirely different from the normal business where I am now, where there are delays getting a new aircraft in operation because its operating characteristics exceed the experience of the pilots until they have had a chance to work on it. Therefore, you go down to the production line with things that you have to re-do, and this introduces delays.

MR. GRAY: Thank you, sir.

REDIRECT EXAMINATION

BY MR. SILVERMAN:

Q With respect to the question Dr. Gray was asking you about delays, and your answer, would you say that the delays in the development of the thermonuclear weapon, so far as you knew about them, were greater than just the normal delays that one would expect, because one is venturing into a new field?

A First, other than counting off the period of the debate as a delay, if you wish, I am not aware of any delays in the thermonuclear program that occurred for any reason other than just not knowing how to do the next step. I know the resources that were available to us to put in the program were freely available at all times. Los Alamos competence built up, and we drew in others to work on it. With that stipulation, I don't have any delay to put my finger on. I would have to say that the thermonuclear program went well indeed, even with shifts in the lines of technical attack. It still kept apace which I thought was admirable at the time and met the expectations that were at least apparent to us at the beginning.

Q I think Dr. Gray asked you about whether you felt the military was well informed with respect to the development of thermonuclear weapons and the possibility of developing thermonuclear weapons -- something of that order -- and as I got your answer, it was that we are better informed today and we will be better informed at some future date.

A I was merely trying to indicate that being informed and not being informed is a very relative term if you are going back to the beginning of a program of inventions which had not yet been invented.

Q With respect to the period of October 1949, did you feel that the military was well informed as to the feasibility

and the possibilities of use of atomic and thermonuclear weapons in the light of what was then known with respect to the feasibility of such weapons?

A If there was anything known in the Commission organization or its laboratories of importance about the prospects of thermonuclear weapons feasibility that was not known to the military services, I was certainly unaware of it. But little was known as a fact. We were dealing with very large conjectures.

Q With respect to the Chairman's question of a possible middle ground between the two ends of the spectrum, was it your feeling that the GAC was in favor of a program of research on the feasibility of thermonuclear weapons?

A There was a research program in thermonuclear weapons and had been since I first reported in to the Commission. It had not picked up much headway until the whole situation was catalyzed by the news of the Russian fission explosion. I have no specific memory at this time of the reaction of the General Advisory Committee, or any of its individuals, as to the degree to which thiw program might be expanded, yet falling short of the program which they recommended against.

Is this responsive? It is to me a very complicated question.

Q I think it is probably as responsive as you can make it to me. With respect to the remark about the GAC report or

recommendation being silly or sinister --

MR. ROBB: Did you say and or or?

MR. SILVERMAN: I said "or".

MR. ROBB: That is what I said. That is what he said.

BY MR. SILVERMAN:

Q What did you think it was?

A Perfectly frankly, I thought the rush action was silly.

Q Did you think it was sinister?

A I did not. As I stated earlier with several of my immediate superiors in the Commission holding a view which I understood to be similar to the General Advisory Committee, I would have moved out immediately had I thought there was a sinister implication in the opposition.

Q With respect to how well informed the military was on the prospects of the thermonuclear weapon, do you recall a panel report to the War Department prepared late in 1945 describing the prospects of the Super?

A I do not recall a report under that name. There were papers in the Commission which had been prepared some time back when I joined it at the beginning of 1947, and this was a new paper prepared at the beginning of 1947 for the use of the new Commission which rounded them up as they then appeared and all of these papers in my memory anyway read about the same as the state of knowledge, as far as I understood it certainly as far as I recall it, had not advanced substantially

from 1945 to 1947. Nor indeed was there any big break through from the research program between 1947 and the time after the program had beenaccelerated, although there were new ideas coming along.

MR. SILVERMAN: I have no further questions.

RECROSS EXAMINATION

BY MR. ROBB:

Q General, when you spoke a minute ago of the rush action, did you refer to the action by the Committee?

A It all happened very quickly.

Q Yes.

A Yes, as I recall the Committee and the Commission acted jointly , and went to the President with their combined opinion or separate opinions. They were not unanimous, of course.

Q General, I take it you are not a nuclear physicist?

A I am not, sir.

Q You said I think in response to a question by Mr. Silverman that the thermonuclear program went very well indeed.

A In terms of timing and eventually meeting our expectations. It had its ups and downs, of course.

Q What time were you referring to when you said that?

A From the beginning of 1950 until what I regarded as a successful milestone just before I left the Commission in 1951.

Q Yes. That is what I thought.

Was there a considerable stepping up in the efforts to develop the thermonuclear subsequent to the President's statement in January 1950?

A Indeed there was, sir. We stepped it up in all ways of which we were capable.

Q Would you care to give us an opinion, recognizing of course that you are not a nuclear physicist, as to what might have been the result had that stepped up program been started in 1945 or 1946? Might you have gotten the end result sooner?

A Putting the same effort into it that we were able to put into it in 1950?

Q Yes, sir.

A Speaking non-expertly from the scientific point of view in any event, I think it could not have helped speeding the time when there would have been a thermonuclear weapon, looking back on it. I can easily see why General Groves and the Commission later with all of the other urgent work to do in rebuilding Los Alamos and getting the fission weapon program straightened out, did not feel up to making a gamble certainly as early as 1945.

MR. ROBB: I am not debating that. I merely want to get your opinion as to the time element.

Thank you very much, General.

MR. GRAY: Thank you very much, General McCormack.

(Witness excused.)

MR. GRAY: We will take a recess.

(Brief recess.)

MR. GRAY: Dr. von Neumann, do you wish to testify under oath?

DR. VON NEUMANN: Yes.

MR. GRAY: You are not required to do so. The other witnesses have.

DR. VON NEUMANN: I am quite prepared.

MR. GRAY: Would you be good enough to stand and raise your right hand, and give me your full name?

DR. VON NEUMANN: John von Neumann.

MR. GRAY: John von Neumann, do you swear that the testimony you are to give the Board shall be the truth, the whole truth and nothing but the truth, so help you God?

DR. VON NEUMANN: I do.

Whereupon,

JOHN VON NEUMANN

was called as a witness, and having been first duly sworn, was examined and testified asfollows:

MR. GRAY: Will you be seated, please.

I am required to remind you of the existence of the so-called perjury statutes. I shall be glad to review them with you if necessary.

THE WITNESS: I think I am aware of them.

MR. GRAY: May I ask if in the course of your testimony it becomes necessary for you to refer to or disclose restricted data, you notify me in advance, so we can take appropriate and necessary steps in the interest of security.

Finally, Doctor, I would say to you, as I say to each of the witnesses on behalf of the Board, that we consider these proceedings a confidential matter between the Atomic Energy Commission and its officials on the one hand, and Dr. Oppenheimer, his representatives and witnesses on the other hand. The Commission is making no releases with respect to these proceedings, and we express the hope that the witnesses will take the same view.

THE WITNESS: Yes, sir.

DIRECT EXAMINATION

BY MR. SILVERMAN:

Q Dr. von Neumann, what is your present non-governmental position?

A I am professor of mathematics at the Institute for Advanced Study at Princeton.

Q How long have you been that?

A Since 1933.

Q That was before Dr. Oppenheimer came there?

A Yes.

Q I understand you were for two years president of the American Mathematical Society.

A That is correct.

Q You have been a member of the National Academy of Science, I understand, since 1937?

A Yes, since 1937.

Q Will you state your present governmental positions?

A I am a member of the General Advisory Committee of the Atomic Energy Commission. I have been that since 1952. I have been a consultant to the Los Alamos Laboratory since 1943. Outside the Commission, I am a member of the Scientific Advisory Board of the Air Forces. I have also a few other governmental advisory positions.

Q Would you tell us the story of when you first knew Dr. Oppenheimer and what contacts you have had with him since?

A I think that Dr. Oppenheimer and I first met in Germany in 1926. It was in Goettingen, to be precise. We were both I think immediately after our respective Ph. D.'s and we were both there. There was a great center of theoretical physics in Goettingen, and we were both there at the time.

Then between 1926 and 1940, we may or may not have met. I think we did not, although I knew about Dr. Oppenheimer and I knew about his work.

In 1940 we met in Los Angeles, and we had several conversations. We also met at that time in Seattle. We met again in early 1943, at which time Dr. Oppenheimer told me that he wanted me to join a project which he could not describe

at that moment.

Then I went to England and came back in the fall, and then I was asked officially to go to Los Alamos. After that, our contacts have been practically continuous, with a slight interruption between 1945 and 1947, when we both had left Los Alamos and Dr. Oppenheimer had not yet come to Princeton.

Q Since 1947 you have both been?

A I would say our association has been practically continuous since 1943.

Q You referred to meeting Dr. Oppenheimer in 1940 in Los Angeles, and did you say at Seattle, also?

A Yes, it was outside of Seattle.

Q Was that after the fall of France, or about the time of the fall of France?

A This was in May or June of 1940. It was in the period during which France was collapsing, and the conversation I had mentioned we then had and which I assume is relevant in this context, it was one we had about the political situation then. What I do recall very clearly is that Dr. Oppenheimer was for intervention on the side of the western allies. This was of course a very acute question at the moment, and I asked practically everybody I met how he felt so this I remember quite clearly.

Q There has been, I guess, a fair amount of testimony

that would be an understatement -- about the GAC report of October 1949, with respect to the hydrogen bomb and the thermonuclear program. Dr. von Neumann, did you agree with the GAC report and recommendations?

A No. I was in favor of a very accelerated program. The GAC at that point recommended that the acceleration should not occur.

Q Very accelerated hydrogen bomb or thermonuclear program?

A Yes, it is all the same thing.

Q Would it be fair to say one might say in the opposite camp on the question?

A Yes, that is correct.

Q Did you consider that the recommendations of the GAC and in particular Dr. Oppenheimer were made in good faith?

A Yes, I had no doubt about that.

Q Do you have any doubt now?

A No.

Q You knew, of course, that Dr. Oppenheimer was not the only person who was opposed to the program?

A No, the whole group of scientists and military who were keenly in this matter -- of course, there had been a lot of discussion and practically everyone of us knew very soon fairly precisely where everybody stood. So we knew each other's opinions, and very many of us had discussed the matter with each other. Dr. Oppenheimer and I had discussed

it with each other, and so we knew each other's views very precisely.

My impression of this matter was, like everybody else, I would have been happy if everybody had agreed with me. However, it was evidently a matter of great importance. It was evidently a matter which would have consequences for the rest of our lives and beyond. So there was a very animated controversy about it. It lasted for months.

That it lasted for months was not particularly surprising to my mind. I think it was perfectly normal that there should be a controversy about it. It was perfectly normal that emotions should run rather high.

Q Have you yourself participated in the program of the development of thermonuclear weapons and the hydrogen bomb?

A Yes.

Q After the President's decision in January of 1950, is it your impression that the GAC and particularly Dr. Oppenheimer was holding back in the effort to develop the bomb?

A My impression was that all the people I knew, and this includes Dr. Oppenheimer, first of all took this decision with very good grace and cooperated. The specific things I know were various actions which were necessary in 1951. At that time there were a number of technical decisions that had to be made about the technical program. I know in considerable detail what Dr. Oppenheimer did then, and it was

certainly very constructive.

Q Can you tell us any of that in unclassified terms?

MR. ROBB: Excuse me. Could I ask what date he is referring to?

THE WITNESS: I am referring particularly to a meeting in Princeton in June 1951.

MR. ROBB: Thank you.

BY MR. SILVERMAN:

Q I don't know whether you can expand on this in unclassified terms or not.

A I think the details of why there was a need for technical decisions at that moment and exactly how far they went and so on, I assume is classified, unless I am otherwise instructed. But it is a fact. You must expect in any program of such proportions that there will be as you go along serious technical decisions that have to be made. This was one. There was a meeting at Princeton which was attended I think by part of the GAC. I think it was the Weapons Subcommittee of the GAC which is in fact about two thirds of the group, plus several Commissioners, plus several experts which included Dr. Bethe, Dr. Teller, myself, Dr. Bradbury -- I am not sure whether Dr. York was there, Dr. Nordheim and possibly others. This meeting was called by Dr. Oppenheimer and he certainly to the extent which anybody was directing it, he was directing it. This was certainly a very necessary and

constructive operation.

Q At that meeting did he express himself as being in favor of going ahead?

A In all the discussions at that point there was no question of being or not being in favor. In other words, it was a decided technical policy. I didn't hear any discussions after 1950 whether it ought to be done. There certainly were no such discussions at this meeting. The question was whether one should make certain technical changes in the program or not.

All I am trying to say is that at that point there was a need for technical changes. If anybody wanted to misdirect the program by very subtle means, this would have been an occasion.

Q Did Dr. Oppenheimer cooperate in making it easier for you and others to work at Los Alamos for Los Alamos on the hydrogen bomb program?

A I certainly never had the slightest difficulty. One thing is that I think if Dr. Oppenheimer had wanted to create difficulties of this kind, as far as I am concerned, it would have been possible. Also, our relations would probably have deteriorated. There was absolutely nothing of that. Our personal relations stayed very good throughout. I never experienced any difficulty in going as much to Los Alamos as necessary.

Q There was no suggestion by Dr. Oppenheimer that this was interfering with your work at the Institute?

A None whatsoever, absolutely none.

Q And did you spend a good deal of time at Los Alamos?

MR. ROBB: Could we have the times fixed on these? I am sorry to keep interrupting.

BY MR. SILVERMAN:

Q After 1949?

A Yes. It may have averaged two months a year. Not all in one, but say in two pieces of three weeks and various shorter visits. I must say this was uniform from 1945 to almost now. I have been somewhat less in Los Alamos lately because I have other commitments.

Q And I take it there was no objection to your doing any work that might be helpful to Los Alamos at Princeton?

A Absolutely none whatsoever.

Q Did Dr. Oppenheimer attempt to dissuade you from working on the hydrogen bomb program?

A No. We had a discussion. Of course, he attempted to persuade me to accept his views. I equally attempted to persuade him to accept my views, and this was done by two people who met during this period. I would say apart from the absolutely normal discussion on a question on which you happen to disagree, there was absolutely nothing else. The idea that this might be pressure I must say did not occur to me ever.

Q Do you now think that it was pressure?

A No. I think it was the perfectly normal desire to convince somebody else.

Q During what period was this discussion?

A This was in 1949, December 1949. I remember quite clearly two discussions, one which was about half an hour at which time I saw the GAC opinion and we discussed it.

Q You had a Q clearance at that time?

A Yes. We discussed the same subject again about a week later, again for about 20 minutes or half an hour, I don't know. We probably also talked about the subject on other occasions, but I don't recall.

Q Wasn't the dscussion about whether you personally should work on the hydrogen bomb program?

A Absolutely not. The only question was whether it was or was not wise to undertake that program.

Q You have known Dr. Oppenheimer, I think you said, substantially continuously since 1943 to the present date?

A Yes.

Q With the exception of the period from 1945, the end of the Los Alamos days, until 1947, when Dr. Oppenheimer came to the Institute as Director.

A That is correct.

Q During that period you have really lived in the same small town.

A Yes.

Q And been friends and known each other quite well during all that time?

A Yes.

Q Both professionally and socially?

A Yes, that is correct.

Q Do you have an opinion about Dr. Oppenheimer's loyalty to the United States, his integrity?

A I have no doubts about it whatever.

Q Your opinion I take it is quite clear and firm?

A Yes, yes.

Q Do you have an opinion as to Dr. Oppenheimer's discretion in the handling of classified materials and classified information?

A Absolutely. I have personally every confidence. Furthermore I am not aware that anybody has questioned that.

Q There seems to be some question among my associates whether I asked this. Do you have an opinion about Dr. Oppenheimer's loyalty?

A Yes.

Q What is that?

A I would say he is loyal.

Q Do you have any doubt on that subject at all?

A No.

MR. SILVERMAN: I have no further questions.

CROSS EXAMINATION

BY MR. ROBB:

Q Dr. von Neumann, you stated that Dr. Oppenheimer attempted to persuade you to accept his views, and you attempted to persuade him to accept your views in December 1949?

A Yes.

Q Would you tell us briefly what his views were as you understood them?

A Well, that it would be a mistake to undertake an acceleration of the hydrogen bomb, the thermonuclear program for the following reasons: Because it would disorganize the program of the AEC because instead of developing fission weapons further, which one knew how to do and where one could predict good results fairly reliably, one getting back on a crash program which would supersede and damage everything else, and the results of the crash program would be dubious. That furthermore, from the military point of view, making bigger explosions was not necessarily an advantage in proportion to the size of the explosion. Furthermore, that we practically had the lead in whatever we did, and the Russians would follow, and that we were probably more vulnerable than they were for a variety of reasons, one of which is that we can probably saturate them right now-- I meant right then -- whereas they could not at that moment. Therefore, a large increment on both sides would merely mean that both

sides can saturate the other. Also, that since there was now this possibility of a large increment in destructive power, this was now for the second time, and possibly for the last time an opportunity to try to negotiate control and disarmament.

I think this was by and large the argument. There are a few other angles which are classified which I think are not very decisive.

Q Doctor, was there anything in his argument about the immorality of developing the thermonuclear?

A I took it for granted that it was his view. It did not appear very much in our arguments, but we knew each other quite well. My view on that is quite hardboiled, and that was known.

Q What was Dr. Oppenheimer's view, soft-boiled?

A I assume, but look, now, I am going by hearsay. I have not discussed it with him.

Q I understand.

A I assume that one ought to consider it very carefully whether one develops anything of this order of destruction just per se.

Q Yes, sir. Doctor, in response to a question from Mr. Silverman, you said you had no question about Dr. Oppenheimer's integrity, did you not?

A Yes.

Q By that you meant his honesty, did you not?

A Yes.

Q Doctor, do you recall having heard anything about an incident which occurred between Dr. Oppenheimer and a man named Chevalier?

A Yes, but that was lately. I do not know for absolutely sure when I first heard it. I saw the letter of charges and there it occurs. When I read it, I had the vague impression that I had heard this before, but I think that this was in the last few years.

Q You saw the letter of General Nichols and Dr. Oppenheimer's response?

A Yes. I am not absolutely certain whether I saw the complete original or whether I saw somebody's excerpts of relevant parts.

Q What is your present understanding about that incident that I referred to -- the Chevalier incident? What do you have in mind about what happened?

A What I understand happened was -- and please correct me if my recollection is inexact -- my impression is that Chevalier was a man who had been Dr. Oppenheimer's friend in earlier years, who in 1942, I think, or early 1943, when Dr. Oppenheimer was already associated with the atomic energy project which was not yet the Manhattan District, made an approach and suggested to him that somebody else, whose name I have forgotten, was working for Russia and would be able to

transmit scientific and technical information to Russia.

Iunderstand that Dr. Oppenheimer essentially told him to go to hell, but did not report this incident immediately, and that when he later reported it, he did not report it completely for some time, until, I think, ordered by General Groves to do so.

BY MR. ROBB:

Q Your memory is pretty good, Doctor. Do you recall the name of the other person was Eltenton?

A Yes, Eltenton.

MR. ROBB: Mr. Chairman, I would like to ask the witness a hypothetical question. I assume, Mr. Garrison would file a caveat to it but I venture to suggest in the interest of entirety to assist the Board and the witness, it would be most helpful if Mr. Garrison allowed me to state me question before he made his objections.

BY MR. ROBB:

Q I want you toassume now, Dr. von Neumann, that Dr. Oppenheimer reported and discussed this incident with two security officers, one named Colonel Pash and one named Colonel Lansdale, and will you please assume that Dr. Oppenheimer has testified before this Board that the story of the Chevalier incident which he told to Colonel Pash on August 26, 1943, and affirmed to Colonel Lansdale on September 12, 1943, was false in certain material respects.

Assume that he has testified here that the story he told to Pash and Lansdale was a cock and bull story, that the whole thing was pure fabrication, except for the one name Eltenton; that he told a story in great detail that was fabricated, that he told not one lie but a whole fabrication and tissue of lies in great circumstantial detail.

Assume that he has further testified here that his only explanation for lying was that he was an idiot, and he was reluctant to name Dr. Chevalier and no doubt somewhat reluctant to name himself.

Assume he has further testified here that if the story he told to Colonel Pash had been true, that it showed thatDr. Chevalier was deeply involved in a conspiracy; that the conversation or the remarks of Dr. Chevalier were not just a casual conversation and it was not just an innocent contact, but that it was a criminal conspiracy on the part of Dr. Chevalier.

Assume that he testified further that if the story that Dr. Oppenheimer told to Colonel Pash was true -- if it was true -- then it made things look very bad for both Dr. Chevalier and Dr. Oppenheimer.

MR. GARRISON: Mr. Chairman, I wish the record to show that I do not accept this assumed version of the testimony as being an accurate summary of the testimony.

MR. GRAY: The record will show that counsel for

Dr. Oppenheimer does not accept the question as put. The witness will consider this a hypothetical question.

THE WITNESS: May I ask, Mr. Chairman, I have not quite understood the meaning of this exchange. Does this mean that the question ought to be answered?

MR. GRAY: Let me state it this way, Dr. von Neumann. You must not assume that this Board has reached any conclusions with respect to any matter before it. Therefore, in statements to you by counsel, either Mr. Barrison or Mr. Robb, and questions put to you by either Mr. Garrison or Mr. Robb which are said to you to be hypothetical, you are asked to reply to that question on an assumption that the facts are true for the purpose of this question, and not to assume that this is a conclusion of the Board.

THE WITNESS: Yes.

MR. GARRISON: May I ask if the question might be re-read at this point?

THE WITNESS: I would also like to ask a few elucidations about the question.

For one thing, Mr. Robb, you have described a hypothetical situation, but if I did not get mixed up, you did not ask the question.

MR. ROBB: I have not askedthe question. I wanted to give Mr. Garrison a chance to object. Would you like the question read back to you?

THE WITNESS: No. I will ask you a few things

about the hypothetical question, because it is pretty complicated.

MR. GARRISON: Before we go further, I want to emphasize my point that I want it clearly understood that the question that was put involved asking the witness if the false story which he had told had been true, there would have been a criminal conspiracy and make it clear that even if the false story that was true there was no suggestion by Dr. Oppenheimer that he was involved in espionage.

MR. ROBB: Mr. Garrison, I will ask the witness.

MR. GRAY: I would suggest you proceed with your question.

MR. ROBB: thank you.

BY MR. ROBB:

Q Dr. von Neumann, my question is, assuming that Dr. Oppenheimer testified before this Board as I have indicated to you, would that shake your confidence in his honesty?

A May I ask you again, if I understood correctly --

Q Yes.

A -- if I understood correctly, the hypothetical representation to the Board would have been something like this: That a false statement was made because Dr. Oppenheimer wanted to avoid naming Mr. Chevalier and himself. I understood your description first as saying that he said that he is supposed to have said that he made these statements to

security officers because he did not want to mention Chevalier's name and did not want to menion his own name. Is this correct?

MR. ROBB: I wonder if we might have the question read back to the witness?

THE WITNESS: Please read it back.

(Question read by the reporter.)

THE WITNESS: In other words, the hypothetical testimony is that his conduct was first of all due to a desire to make things easier for Chevalier and possibly for himself, but on the other hand, it actually made it much worse. Is this the idea?

MR. ROBB: I hesitate to instruct the witness, Mr. Chairman, beyond the statement of the hypothesis.

MR. GARRISON: I think that is right.

MR. SILVERMAN: You asked the witness a hypothetical question. If the witness is eot entirely clear as to the hypothetical question, if the witness' understanding of it is at all different from that of the hearers, it makes his answer not very competent, and therefore it is important to have it clear.

BY MR. ROBB:

C I think it is slear to say that part of the assumption is that Dr. Oppenheimer testified that one of his explanations for this conduct was that he was reluctant to mention Dr. Chevalier and somewhat reluctant to mention himself.

A But at the same time, he now realized that his statements if true would actually be much worse for Chevalier.

Q I think that is a fair statement, yes, sir.

A So this was an attempt to achieve something of which it actually achieved the opposite, is that the idea?

Q That might be inferred, yes.

A Look, you have to view the performance and the character of a man as a whole. This episode, if true, would make me think that the course of the year 1943 or in 1942 and 1943, he was not emotionally and intellectually prepared to handle this kind of a job; that he subsequently learned how to handle it, and handled it very well, I know. I would say that all of us in the war years, and by all of us, I mean all people in scientific technical occupations got suddenly in contact with a universe we had not known before. I mean this peculiar problem of security, the fact that people who looked all right might be conspirators and might be spies. They are all things which do not enter one's normal experience in ordinary times. While we are now most of us quite prepared to discover such things in our entourage, we were not prepared to discover these things in 1943. So I must say that this had on anyone a shock effect, and any one of us may have behaved foolishly and ineffectively and untruthfully, so this condition is something ten years later, I would not consider too serious. This would affect me the same way

as if I would suddenly hear about somebody that he has had some extraordinary escapade in his adolescence.

I know that neither of us were adolescents at that time, but of course we were all little children with respect to the situation which had developed, namely, that we suddenly were dealing with something with which one could blow up the world. Furthermore, we were involved in a triangular war with two of our enemies had done suddenly the nice thing of fighting each other. But after all, they were still enemies. This was a very peculiar situation. None of us had been educated or conditioned to exist in this situation, and we had to make our rationalization and our code of conduct as we went along.

For some people it took two months, for some two years and for some one year. I am quite sure that all of us by now have developed the necessary code of ethids and the necessary resistance.

So if this story is true, that would just give me a piece of information on how long it took Dr. Oppenheimer to get adjusted to this Buck Rogers universe, but no more. I have no slightest doubt that he was not adjusted to it in 1944 or 1945.

Q Had you completed your answer?

A Yes.

Q In 1943, Dr. Oppenheimer was the Director of the Los Alamos Laboratory, wasn't he?

A Yes.

Q I believe at that time he was 39 years old?

A Yes.

Q You wouldn't say he was at that time an adolescent, would you?

A No. I was trying to make this clearer. There are certain experiences which are new for an adolescent, and where an adolescent will behave in a silly way. I would say these experiences were now for a man of 39, if he happened to be 39 at that moment in history.

Q Do you think, Doctor, that honesty, the ability and the desire to tell the truth, depends upon the international situation?

A It depends on the strain under which you are.

Q The strain?

A Yes.

Q You mean a man may lie under certain strains when he would not under ordinary circumstances?

A Yes, practically everybody will lie under anesthesia.

Q Do you think, Doctor, if you had been placed in the same situation that Dr. Oppenheimer was in 1943, in respect of this matter, that you would have lied to the security officers?

A Sir, I don't know how to answer this question. Of course, I hope I wouldn't. But -- you are telling me now to

hypothesize that somebody else acted badly, and you ask me would I have acted the same way. Isn't this a question of when did you stop beating your wife?

Q I don't think so, Doctor, since you asked me. You do feel that Dr. Oppenheimer as you put it acted badly in the matter?

A The hypothetical action, I take it, is a bad action.

Q Quite serious, isn't it?

A That depends on the consequences, yes.

MR. ROBB: I think that is all I care to ask, Mr. Chairman.

MR. GRAY: Dr. von Neumann, you went to Los Alamos in the fall of 1943?

THE WITNESS: Yes.

MR. GRAY: Did you stay there throughout the war years?

THE WITNESS: Yes. I was not there continuously, but I spent there about one month out of three, and this up to the end of the war.

MR. GRAY: In 1943, did you consider that people who were identified with the Communist Party had any kind of commitment to a foreign power, specifically to the Soviet Union?

THE WITNESS: I think that if somebody was a Party member and under Party discipline, yes.

MR. GRAY: My question is not what you believe now, but what you would have believed then.

THE WITNESS: I so then believed. If somebody was under Party discipline, yes.

MR. GRAY: So you were aware in 1943 of the threats to the security of the country which might come from allowing members of the Party to have access to classified information?

THE WITNESS: It certainly was a security risk, yes. I certainly felt that as a security risk. May I say I had the feeling that this was definitely a three way war. At that moment two of the enemies had to all advantage got into a fight of their own. It was perfectly proper to exploit this. That as far as developing the atomic bomb was concerned, what all of us had in mind in 1943 and 1944 was this. Of course, the German science and technology was enormous. We were all scared to death that the Germans might get the atomic bomb before we did. We found out later that they had somewhat neglected this area, and they didnt' get as far as we thought they would get. I don't think anybody could foresee that. I think it would have been a great mistake to bank on in 1943 and 1944. We all were actuated by a desire which was primarily one to get, if it is possible, an atomic bomb before anybody else does. We certainly all had the feeling that this was paramount, and that it was quite proper to take calculated risks in this regard.

I must say that I considered Russia an enemy from the beginning to the end, and to now, and the alliance with

Russia is a fortunate accident that two enemies had quarreled. However, I think it also was perfectly fair to take advantage of this, that the military commander could perfectly well decide that one should take calculated risks on this, and employing a Communist might at that moment accelerate getting an atomic weapon ahead of Germany.

Of course, it would later be a bad problem from the security point of view. But then the German danger was there, and the other thing was remote, and military information obsolesces rapidly anyhow. So I think it was not unreasonable to take such a step.

MR. GRAY: You might have applied a different test with respect to the calculated risk in 1943 than you would apply today?

THE WITNESS: Entirely.

MR. GRAY: Were you acquainted during your service at Los Alamos with Dr. Hawkins?

THE WITNESS: Yes, I knew him.

MR. GRAY: With your awareness of the existence of the Communist Party, did you in any way have reason to believe that he was a member of the Communist Party at that time?

THE WITNESS: You see, it is a little difficult to be quite sure in 1945 whether you think you learned around 1944, you learned six months earlier or later. I am fairly sure I had no idea of his Communist affiliations when I came to

Los Alamos and first met him . He was not a particularly well known man and not to me. I think I learned that he had had some kind of Communist connection before I left Los Alamos. Exactly how he had that connection I did not learn at that time.

MR. GRAY And if someone had asked you at that time, this would be one of the calculated risks?

THE WITNESS: I would say this was a calculated risk, yes.

MR. GRAY: From what you knew of Dr. Hawkins at the time, was he pretty well an indispensible member of the team out there?

THE WITNESS: If I am not mistaken he was a project historian.

MR. GRAY: I think that was in part --

THE WITNESS: He was not indispensible in the sense in which a man who is primarily interested in a technical sense. He was not a physicist. He was not a chemist or an applied mathematician. I think he was a philosopher.

MR. GRAY: And a mathematician.

THE WITNESS: And some experience in sciences. He was a perfectly suitable person for being a project historian, Exactly how hard or easy it was to get a man who is qualified to do this thing I did not know at that time. I would say it is a job which requires a special kind of talent, and is not

quite easy to fill.

MR. GRAY: Did you know Philip Morrison?

THE WITNESS: Yes, I know Philip Morrison.

MR. GRAY: Did you then know anything about his political affiliations?

THE WITNESS: I am fairly sure that I learned the fact that he had close Communist ties later.

MR. GRAY: And not at the time?

THE WITNESS: This must have been in mid-'45 that I learned this.

MR. GRAY: Were you acquainted with Fuchs?

THE WITNESS: Yes, I knew Fuchs quite well.

MR. GRAY: Did you have any reason to suspect his integrity or dependability or whatever was involved in the subsequent disclosures?

THE WITNESS: Not particularly. He was a rather queer person, but then under these conditions queer persons occur. I did not suspect him particularly. He was clearly not an ordinary person.

MR. GRAY: What I am getting at is whether you had reason to believe he was a Communist.

THE WITNESS: I think I did not know about him, no. I did not know about him, that he was a Communist practically until the whole affair broke.

DR. EVANS: Practically what?

THE WITNESS: Until it became known, until he confessed, or rather until he was shown.

MR. GRAY: At the time you learned about it, were you surprised?

THE WITNESS: Look, I was not surprised in this sense, that he clearly was a peculiar person. So if it turns out about an ordinary run of the mill person that he is a conspirator and spy, you are shocked and surprised. He was a very peculiar person with respect to whom I didn't have much experience. Of course, I was surprised by the fact that there had been such a thing, that a spy had been so well placed.

MR. GRAY: When you said a few moments ago that you didn't know about it until practically at the time the disclosures were made public, does that mean that there was information available to people at Los Alamos about him, about his Communist connections, before the story was known here in Washington?

THE WITNESS: I don't think so.

MR. GRAY: I didn't think you intended to say that.

THE WITNESS: No.

MR. GRAY: I want to make clear that the record did not reflect it until you intended to say it.

THE WITNESS: No, no, absolutely not.

MR. GRAY: You think in that case if people in charge

had known that Fuchs was a member of the Communist Party or had a Communist commitment, that this is the kind of calculated risk that you felt was desirable to take in those days? Was the calculated risk worth it in the case of Fuchs?

THE WITNESS: Clearly not. I don't quite get the question. In the light of hindsight,clearly not.

May I say this was of course a highly empirical subject. Fuchs made a contribution. Of course, the damage he made outweighs the contribution by far, probably. Exactly what concentration of spies one would find among the people with Communist backgrounds nobody knew ahead of time, and quite particularly the technical people didn't know. So I would say this was a decision for security and for whatever branch of the government was involved, which deals with counter-espionage to make.

MR. GRAY: Today you would not recommend employment on a sensitive project of someone known now to be a member of the Communist Party.

THE WITNESS: No.

MR. GRAY: Suppose there was recommended to you an individual for employment who some years ago had what you believed to be close Communist affiliations; what would your response be today?

THE WITNESS: I would certainly not employ him in a sensitive job.

MR. GRAY: A person who had had close Communist affiliations in an earlier period of his life?

THE WITNESS: How early? I thought you said a few years ago. I mean how early. I would say if somebody had close affiliations with the Communist Party after 1945 or later, then I would certainly not employ him in a sensitive job. If he had close affiliations with the Communist Party in the late 1930's, then I would say if he was never a Party member, then I would view the entire situation and I think if there is prima facie evidence of a probability that he had changed his views, I certainly would. If he was an actual member of the Party, I would say that the burden of proof that he is no longer a member is on him. In other words, on his general conduct since then. I think you must consider the total personality and the total life and the probable motivation and interests of the person after 1940.

MR. GRAY: Do you pick 1940 as a particular year?

THE WITNESS: No. It is a vague thing. It is somewhere between 1940 and 1944, I would say.

MR. GRAY: That close affiliations as late as 1944--

THE WITNESS: I would begin to get worried, in fact, seriously worried. The great watershed is evidently the second world war. There are all sorts of things happening there. For instance, the possibility for error is greater in 1943 and 1944 when the Russians were allies, than in 1940, when

they were cooperating with the enemy. So I think dating between 1940 and 1944 is very difficult. But I would say definitely that I would take a lenient view of things before 1940, and a very hard view of things after 1944.

MR. GRAY: Suppose at Los Alamos someone had come to you -- this is purely hypothetical -- and said, although the British are our allies and the official policy of the United States Government is toshare military information of the highest degree of secrecy with the British, this policy is being frustrated in Washington, now I have a way of getting to the British scientists information about what we are doing here in Los Alamos, and don't you think itis up to us to make sure that official policy is not frustrated, and you knew that this person was interested in the British, what would your position have been at that time, Dr. von Neumann?

THE WITNESS: For one thing, I would certainly not have given him information, but I assume that the main question is would I have reported him right away.

MR. GRAY: Yes, let me ask that question. The British were allies, it was official policy, this man frankly said that then if the information were made available, it could be transmitted through channels which were not official channels.

THE WITNESS: I would probably have reported him. I realize, however, that this can lead to a bad conflict. If I

am convinced that the man is honest in his own benighted way, that is an unpleasant conflict situation, I would probably have reported him anyway.

MR. GRAY: The reason I asked the question is not to get an answer from you on the basis of a hypothetical question, but to really ask next whether you would have made a distinction at that time between an approach on behalf of the Russians and an approach on behalf of the British.

THE WITNESS: Yes. I think the probability of being at war with Russia in the next ten years was high, and the probability of being at war with England in the next ten years was low.

MR. GRAY: Thank you. Dr. Evans.

DR. EVANS: Dr. von Neumann, where were you born?

THE WITNESS: Budapest, Hungary.

DR. EVANS: I thinkyou did tell us, but I want to know again,just where were you educated?

THE WITNESS: I studied chemistry in Berlin and Zurich and graduated as an engineer of chemistry in Zurich.

DR. EVANS: Zurich?

THE WITNESS: Yes, in Switzerland. After that I got a Ph. D. in mathematics in Bundapest, Hungary. This was in 1926.

DR. EVANS: When did you come to this country?

THE WITNESS: 1930.

DR. EVANS: Are you a citizen of the United States?

THE WITNESS: Since 1937.

DR. EVANS: And you were professor here at any time in any institute?

THE WITNESS: Yes, I was professor of mathematical physics at Princeton University until 1933. At that time the Institute for Advanced Study began to operate in Princeton and I was then appointed to the Institute for Advanced Study.

DR. EVANS: You first met Dr. Oppenheimer in Goettingen?

THE WITNESS: It was either Zurich or Goettingen in 1926.

DR. EVANS: Doctor, do you think a man can be loyal to his country and still, due to his associates, be a security risk?

THE WITNESS: That is possible, yes.

DR. EVANS: Do you think a scientific man -- a man trained in mathematics, like yourself -- after any country had exploded an atomic bomb, a scientist like yourself in Russia, could guess a good bit about it?

THE WITNESS: That depends when. I think in 1943, hardly. Pardon me. Just from the fact of the explosion?

DR. EVANS: You knew it was an atomic bomb explosion, and you knew the room to the atom had been unlocked, and we knew the structure in there, and the quantum mechanics

connected with it, you would be able to guess a good bit?

THE WITNESS: Surely. Knowing about nuclear fission and knowing that sombody else had been able to make a detonation, one could go ahead on that basis, but it takes a large organization.

DR. EVANS: Yes, it does. Do you believe scientific men should be required not to publish this discovery?

THE WITNESS: In which era?

DR. EVANS: Any time.

THE WITNESS: Forgive me, sir, I have not understood. You mean that no discovery should be published?

DR. EVANS: Yes, a scientific man makes a discovery; should we keep it secret or should be publish?

THE WITNESS: No, it ought to publish. There are military areas, there are areas of classification and I think apart from this, one ought to publish.

DR. EVANS: Apart from that?

tHE WITNESS: Yes.,

DR. EVANS: You do think there are some that should be kept secret?

THE WITNESS: Oh, yes.

DR. EVANS: If someone had approached you and told you he had a way to transport secret information to Russia, would you have been very much surprised if that man approached you?

THE WITNESS: It depends who the man is.

DR. EVANS: Suppose he is a friend of yours.

THE WITNESS: Well, yes.

DR. EVANS: Would you be surprised?

THE WITNESS: Yes.

DR. EVANS: Would you have reported it immediately?

THE WITNESS: This depends on the period. I mean before I got conditioned to security, possibly not. After I got conditioned to security, certainly yes.

DR. EVANS: You would.

THE WITNESS: I mean after quite an experience with security matters and realizing what was involved, yes.

DR. EVANS: I am sure you would now, Dr. von Neumann.

THE WITNESS: There is no doubt now.

DR. EVANS: You don't know some years ago whether you would have or not?

THE WITNESS: What I am trying to say is this, that before 1941, I didn't even know what the word classified meant. So God only knows how intelligently I would have behaved in situations involving this. I am quite sure that I learned it reasonably fast. But there was a period of learning during which I may have made mistakes or might have made mistakes. I think I didn't.

DR. EVANS: Would you put loyalty to a friend above loyalty to your country at any time?

THE WITNESS: No.

DR. EVANS: Have you met any Communists?

THE WITNESS: Oh, yes.

DR. EVANS: That you knew were Communists?

THE WITNESS: Oh, yes.

DR. EVANS: Have you any friends that are Communists?

THE WITNESS: At this moment, no.

DR. EVANS: Do you always know a Communist when you meet him?

THE WITNESS: No.

DR. EVANS: I guess that is all.

REDIRECT EXAMINATION

BY MR. SILVERMAN:

Q Perhaps particularly in view of Dr. Evans' question about whether you ever met any Communists, I hope you will forgive me if I ask you one or two personal questions.

Was your family in Hungary at or about the time of the Soviet state there?

A Yes.

Q And did they leave in part because they didn't like it?

A We left Hungary very soon after the Communists seized power. The Communist regime in Hungary lasted 130 days. This was in 1919. We left essentially as soon as it was feasible, which was about 30 or 40 days later, and we returned about two months after the Communists had been put

down. I left Hungary later than this, to be exact two years later in order to go to college.

I first intended to become a chemical engineer, and if I had become a chemical engineer I might have returned to Hungary. Since I decided to become a mathematician and then the academic outlook in Hungary was not at all promising whereas in Germany at that time it was very promising indeed, I then decided to go to Germany.

Q As you grew up, did you and your family regard Russia as a sort of natural enemy of Hungary?

A Russia was traditionally an enemy of Hungary. There was a seed of war between Hungary and Russia in 1948 which according to the Hungarian version, which is what I know, the Hungarians put down the Russian army. After this they were not friendly. This trauma lasted after the First World War. After the First World War everybody had reason to worry about it. But I was a child of nine when the First World War broke out. So Russia was traditionally the enemy. After the First World War and the second war, there is quite a pattern. I think you will find generally speaking among Hungarians an emotional fear and dislike of Russia.

Q I want to go to another subject. Would you say that the development of computers was an important or essential part of the hydrogen bomb program?

A The way the thing went, it was very important.

Whether one could have done without it is a different question. I have been a very strong proponent of computers and their use so I don't want to over-evaluate it, but I think it made an important difference, let us say.

Q Could you elaborate on that? Perhaps the view to indicating to what extent the development of computers at the particular time the hydrogen bomb was being developed contributed to it.

A You mean what the role of very fast computers was or who developed them and why?

Q Was it a fact that there were devebpments, important developments in computers during the period.

A Very high speed computing came into reasonably general use just about during those years. I would say --

Q When you say those years, what do you mean?

A When the hydrogen bomb was developed. I would say about two thirds of the development took place under conditions like this, that the heavy use of computers was made, that they were not yet generally available, and that it was necessary to scrounge around and find a computer here and find a computer there which was running half the time and try to use it, and this was the operation I was considerably interested in. I would say the last third of the development, computers were freely available and industrially produced, and by now this is not a scarce commodity. It was very scarce

during more than the first half of the hydrogen bomb project.

Q Was there also a question of some kind of computers not perhaps developed yet?

A The art is better now than it was then. I would say by now what passes for a fast computer is three or four times as fast as three or four years ago. There were few of them and there were fewer people who knew what to do with them, and they were less reliable.

DR. EVANS: Did you know my friend Mr. Flanders?

THE WITNESS: Yes, I know him well.

DR. EVANS: Did you know a chemical engineer named Adelaneau?

THE WITNESS: No.

DR. EVANS: He was connected with gas. Was there such a thing as the Roumanian-English Oil Company over there, do you know?

THE WITNESS: Probably. I know there was a lot of oil in Roumania, and I know the English companies were the ones exploiting it.

DR. EVANS: I wondered if you knew him as I knew him personally very well.

THE WITNESS: No.

BY MR. SILVERMAN:

Q Would you say anything about the role done at the Institute with respect to the development of computers?

A We did plan and develop and build and get in operation and subsequently operate a very fast computer which during the period of its development was in the very fast class.

Q Did Dr. Oppenheimer have anything to do with that?

A Yes. The decision to build it was made one year before Dr. Oppenheimer came, but the operation of building it and getting it into running took approximately six years. During five of these six years, Dr. Oppenheimer was the Director of the Institute.

Q When was it finally built?

A It was built between 1946 and 1952.

Q When it was complete and ready for us?

A It was complete in 1951, and it was in a condition where you could really get production out of it in 1952.

Q And was it used in the hydrogen bomb program?

A Yes. As far as the Institute is concerned, and the people who were there are concerned, this computer came into operation in 1952, after which the first large problem that was done on it, and which was quite large and took even under these conditions half a year, was for the thermonuclear program. Previous to that I had spent a lot of time on calculations on other computers for the thermonuclear program.

Q You were asked if there were an incident that looked like an approach to espionage to you, you indicated you

would report it, and now you indicated you certainly would and at other times you hoped so.

A I would. It is possible to define a transitional period in everybody's life where he is not fully aware of the problem being present. How well anybody behaves in the period is in part a question of fortitude and in part a question of luck. There is always a relation of these things.

Q If such an approach were made to Dr. Oppenheimer, today, what do you think his reaction would be?

A I have no doubt that he would report it.

Q Immediately?

A I think so, yes. May I say I can summarize my views on this. I think after about a year's experience with military security and implications of security and the things which make it necessary, I think every one of us and I am convinced of Dr. Oppenheimer, and I, and everybody who I take seriously, would act the same way, namely, follow the rules which exist.

Q Do you think that Dr. Oppenheimer would place loyalty to a friend above loyalty to his country?

A I would not think so.

Q Dr. Evans asked you about whether it is possible for a man to be loyal to his country, and yet be a security risk because of his associations.

A Yes.

Q I think you answered yes. Do you feel you know Dr.

Oppenheimer's associations reasonably well?

A I rather think so.

Q Do you think that Dr. Oppenheimer is a security risk because of his present associations?

A No, I don't think so.

MR. SILVERMAN: That is all.

MR. ROBB: One further question.

CROSS EXAMINATION

BY MR. ROBB:

Q Doctor, you have never had any training as a psychiatrist, have you?

A No.

MR. ROBB: That is all.

MR. GRAY: Thank you very much, Dr. von Neumann.

(Witness excused.)

MR. GRAY: We will recess until 2 o'clock.

(Thereupon at 12:35 p.m., a recess was taken until 2:00 p.m., the same day.)

AFTERNOON SESSION 2:00 P.M.

MR. GRAY: Do you wish to testify under oath?

DR. LATIMER: I am willing.

MR. GRAY: You are not required to do so, but all the witnesses have.

DR. LATIMER: I am willing.

MR. GRAY: Would you hold up your right hand, and give me your full name?

DR. LATIMER: Wendell Mitchell Latimer.

MR. GRAY: Wendell Mitchell Latimer, do you swear that the testimony you are to give the Board shall be the truth, the whole truth, and nothing but the truth, so help you God?

DR. LATIMER: I do.

Whereupon,

WENDELL MITCHELL LATIMER

was called as a witness, and having been first duly sworn, was examined and testified as follows:

MR. GRAY: Would you be seated, please, sir.

Dr. Latimer, it is my duty to remind you of the existence of the so-called perjury statutes. I should be glad to review them with you if necessary, but may we assume you are familiar with them?

THE WITNESS: I think I am in general familiar.

MR. GRAY: All right, sir. I should like to request

that if in the course of your testimony it becomes necessary for you to refer to or disclose restricted data, you notify me in advance so we may take necessary and appropriate steps in the interest of security.

THE WITNESS: I hope if I step over at any time that somebody would check me, because I am not always sure as to what is restricted, and what is not.

MR. GRAY: We have, Dr. Latimer, a security officer of the Commission present, and I suppose available a classification officer, if we need to call him in. So if there is some question in your mind, we will try to answer the question.

Finally, I should like to say to you that we consider these proceedings a confidential matter between the Atomic Energy Commission, its officials and witnesses on the one hand, and Dr. Oppenheimer and his representatives on the other. The Commission is making no release with respect to these proceedings, and we express the hope to every witness that he will take the same view.

Mr. Robb.

DIRECT EXAMINATION

BY MR. ROBB:

Q Dr. Latimer, would you tell the Board what your present position is, sir?

A At present I am professor of chemistry at the

University of California, and associate director of the Radiation Laboratory.

Q Located where, sir?

A At Berkeley, California.

Q And you live in Berkeley, California?

A I live in Berkeley.

Q Could you give the Board some account of your education and background?

A I have an A.B. from the University of Kansas. I have a Ph. D. from the University of California. I have been at the University of California on the staff since 1919. I was Dean of the College of Chemistry for eight years. Is there anything else that you want?

Q What is your specialty in science, Doctor?

A My specialty is thermodynamics and inorganic chemistry.

Q Have you held any positions or offices in the National Academy of Science?

A I am a member of the National Academy and I was Chairman of the Chemistry Section for one term.

Q Are you the author of any books?

A Yes, I have several textbooks. I also edited a series of books for the Prentiss Hall Publishing Company.

Q On what?

A Chemistry in general.

Q Do you know Dr. Oppenheimer?

A Yes, I do.

Q How long have you known him, sir?

A Oh, a great many years; ever since he came to the University of California.

Q Beg pardon?

A Ever since he came to the University of California I think we have been acquainted.

Q Did you know him when he was on the faculty there?

A Yes, I did, both before and after the war.

Q Has your acquaintance been both social and official?

A Not very highly social. I believe I was at his house for cocktails at one time. Officially, early in the Los Alamos program my group made a few hundred milograms of plutonium for their project. I think it was the first plutonium that they had. During that period I saw him several times.

Q Doctor, you somewhat anticipated my next question, which was whether or not there came a time when you and your group at Berkeley did some work on the A bomb.

MR. SILVERMAN: Would you mind, I don't quite understand this reference to Dr. Latimer's group.

MR. ROBB: I was going to ask him to explain that, too.

THE WITNESS: Plutonium was discovered in our

laboratory by Professor Seaborg and his group, and after Seaborg went to Chicago to work in the Metallurgical Laboratory there, I continued to direct a group on the chemistry of plutonium, and in the early days our principal source of plutonium was from our cyclotrons. So we worked up as large samples as we could of plutonium in order to study its chemistry.

The group I was directing did a lot of the early work on the chemistry of plutonium.

BY MR. ROBB:

Q When you say your group, Doctor, to what do you refer?

A I guess we had about 25 men working on the chemistry of plutonium.

Q You mean working under you in your department?

A Yes.

Q When you refer to the cyclotron, where was that located?

A There were two cyclotrons at Berkeley. The one that was used largely was the 60 inch cyclotron on the campus.

Q At Berkeley?

A At Berkeley.

Q That is what was called the Radlab?

A Yes, it is called the Radlab.

Q The Radiation Laboratory.

A Radiation Laboratory.

Q When did this work on plutonium go on, Doctor?

A I started Dr. Libby working on radioactive problems about 1933. Between that and 1940, we had built up quite a group, Seaborg and Kennedy, and at the time the war broke out, we had probably the best group of young nuclear chemists all over the country, so it was just a gradual transition from our research program that we had under way to applications for the Manhattan District.

Q Doctor, I would like to ask you a question for the record. What is the connection between plutonium and the atom bomb?

A Plutonium was one of the elements which were fissioned with slow neutrons, and therefore it is a material which can be used to sustain chain reactions, and was one of the materials used in the B bombs.

Q In connection with your work on plutonium and your production of plutonium, did you come in contact with Dr. Oppenheimer during the war?

A As I mentioned, we did make the first sample of plutonium for the Los Alamos Laboratory. I believe I am correct in that. We did other work for them. We made various ceramic materials for them in which to melt plutonium. We tried to be as helpful as we could although we were working closer with the Chicago Laboratory. Still we did jobs for Los Alamos as best we could when they requested it.

Q How frequently did you have occasion to see or meet Dr. Oppenheimer during the war period?

A Not very frequently. As you know, after they went to Los Alamos, they were pretty well tied down there. We didn't see many of the men after that.

Q Did you follow the work that was being done at Los Alamos?

A Not very closely. We were interested in the production of plutonium, and they were fabricating it into bombs. We didn't follow that side of it.

Q Doctor, did there come a time when you began thinking about a weapon which is called the H bomb?

A Yes.

Q When was that?

A I suspected I started worrying about the H bomb before most people. Just as soon as it became evident to me that the Russians were not going to be cooperative and were distinctly unfriendly.

Q Would you keep your voice up just a bit, Doctor?

A I felt that it was only a question of time that the Russians got the A bomb. I haven't much confidence in secrecy keeping these things under control very long. It seemed to me obvious that they would get the A bomb. It also seemed to me obvious that the logical thing for them to do was to shoot immediately for the Super weapon, that they

knew they were behind us in the production of a bomb. It seemed to me that they must conclude shooting ahead immediately in making the Super weapons. So I suspect it was around 1947 that I started worrying about the fact that we seemed to be twiddling our thumbs and doing nothing.

As time passed, I got more and more anxious over this situation that we were not prepared to meet, it seemed to me, a crash program of the Russians. I talked to a good many people about it, members of the General Advisory Committee.

Q Do you recall who you talked to about it?

A I talked to Glenn Seaborg for one. I didn't get much satisfaction out of the answers. They seemed to me most of them on the phoney side.

Q Doctor, may I interpose right here before we go on to ask you a couple of questions, first, why did it seem obvious to you that the Russians would proceed from the A bomb to the H bomb?

A They knew they were behind us on the A bomb, and if they could cut across and beat us to the H bomb or the Super weapons, they must do it. I could not escape from the conclusion that they must take that course of action. It was the course of action that we certainly would have taken if we were behind. I could not escape from that conclusion.

Q The second question is, you said that we seemed to be twiddling our thumbs in the matter. What was the basis for

that feeling on your part?

A In the period between 1945 and 1949 we didn't get anywhere in our atomic energy program in any direction. We didn't expand our production of uranium much. We didn't really get going on any reactor program. We didn't expand to an appreciable extent our production of fissionable material. We just seemed to be sitting by and doing nothing.

I felt so certain that the Russians would get the A bomb and shoot for the H bomb that all during that period I probably was over-anxious, at least compared to most of the scientists in the country. But it seemed to me that such an obvious thing would happen.

Q Reverting again to your narrative, you said you talked to Dr. Seaborg and others about going ahead with the H bomb, and their answers, you said, seemed to be phoney. What did you mean by that?

A I can't recall all the details during that period. When the Russians exploded their first A bomb, then I really got concerned.

Q What did you do?

A In the first place, I got hold of Ernest Lawrence and I said, "Listen, we have to do something about it." I think it was after I saw Ernest Lawrence in the Faculty Club on the campus, the same afternoon he went up on the Hill and Dr. Alvarez got hold of him and told him the same thing. I

guess the two of us working on him at once with different impulses got him excited, and the three of us went to Washington that weekend to attend another meeting, and we started talking the best we could, trying to present our point of view to various men in Washington.

On that first visit the reception was, I would say, on the whole favorable. Most people agreed with us, it seemed to us, that it should be done.

Q Could you fix the approximate date of this?

A I would say within two or three weeks after the explosion of the Russian bomb. I don't remember the date of that.

Q That was in September 1949.

A Shortly after that.

Q And you said your reception seemed to be on the whole favorable. Do you recall whom you saw on thatoccasion?

A Around the Commission I think Dean was the only Commissioner there. I talked largely to the chemistry group there, to Dr. Pitzer, and Dr. Lauritsen and Dr. Lawrence and Dr. Alvarez talked to a good many other men. They talked to, as I recall, members of the Joint Congressional Committee, and to various men in the Air Force and Army.

Q Do you recall whether you talked to any other scientists who were not with the Commission?

A Yes. I talked to Dr. Libby and Dr. Urey in Chicago. I talked to everybody I could, but I don't remember now. I

tried to build up pressure for it. I definitely tried to build up pressure for it.

Q What was the reception of your suggestions received at that period of time? I am speaking of the time two or three weeks after the Russian explosion.

A It was favorable, I would say. We met practically no opposition as I recall.

Q Will you tell us whether or not that situation changed?

A It definitely changed.

Q When?

A Within a few weeks. There had been a lot of back pressure built up, I think primarily from the Advisory Committee.

Q Would you explain that to us a bit?

A I don't remember now all the sources of information I had on it, but we very quickly were aware of the fact that the General Advisory Committee was opposed.

Q What was the effect of that opposition by the Committee upon fellow scientists, if you know?

A There were not many scientists who knew the story. I frankly was very mystified at the opposition.

Q Why?

A Granted at that time the odds of making a Super weapon were not known, they talked about 50-50, ten to one, one hundred to one, but when the very existence of the nation

was involved, I didn't care what the odds were. One hundred to one was too big an odd for this country to take, it seemed to me, even if it was unfavorable. The answers that we kept getting were that we should not do it on moral grounds. If we did it, the world would hate us. If we didn't do it, the Russians wouldn't do it. It was too expensive. We didn't have the manpower. These were the types of argument that we got and they disturbed me.

Q Did you ascertain the source of any of this opposition?

A I judge the source of it was Dr. Oppenheimer.

Q Why?

A You know, he is one of the most amazing men that the country has ever produced in his ability to influence people. It is just astounding the influence that he has upon a group. It is an amazing thing. His domination of the General Advisory Committee was so complete that he always carried the majority with him, and I don't think any views came out of that committee that weren't essentially his views.

Q Did you have any opinion in 1949 on the question of the feasibility of thermonuclear weapon?

A Various calculations seemed to show that it might go if you could just get the right conditions or the right mechanical approach to it. The odds didn't look good, but as I say, I didn't care what the odds were, if there was a

possibility of it going, I thought we must explore it, that we could not afford to take a chance not to. The stakes were too big. The very existence of the country was involved and you can't take odds on such things.

Q Was there any way that you knew of to get the answer without experiment and tests?

A No, I am sure all the calculations showed that the only way it could ever be settled was by trying it.

Q Have you followed the progress of the thermonuclear program since 1949?

A In a rough way, yes. In the past two years, we have been working on some of the problems at the Radiation Laboratory.

Q At Berkeley?

A At Berkeley.

Q Dr. Latimer, this Board is required within the framework of the statute to determine upon its recommendation to the General Manager as to whether or not the security clearance of Dr. Oppenheimer should be continued and the standards set up by the statute for the Board are the character, the associations and the loyalty of Dr. Oppenheimer. Would you care to give the Board, sir, any comments you have upon the basis of your knowledge of Dr. Oppenheimer as to his character, his loyalty and his associations in that context?

A That is a rather large order.

Q I know it is, Doctor.

A His associations at Berkeley were well known. The fact that he did have Communist friends. I never questioned his loyalty. There were elements of the mystic in his apparent philosophy of life that were very difficult to understand. He is a man of tremendous sincerity and his ability to convince people depends so much upon this sincerity. But what was back of his philosophy I found very difficult to understand.

A whole series of events involved the things that started happening immediately after he left Los Alamos. Many of our boys came back from it pacifists. I judged that was due very largely to his influence, this tremendous influence he had over those young men. Various other things started coming into the picture.

For example, his opposition to the security clause in the atomic energy contracts, opposition on the floor of the National Academy which was very intense and showed great feeling here. These various arguments which were used for not working on the H bomb, the fact that he wanted to disband Los Alamos. The fact of the things that weren't done the four years that we twiddled our thumbs. All these things seemed to fit together to give a certain pattern to his philosophy. A man's motives are just something that you can't discuss, but all his reactions were such as to give me considerable worry about his judgment as a security risk.

Q I will put it in very simple terms, Doctor. Having

in mind all that you have said, and you know, would you trust him?

A You mean in matters of security?

Q Yes, sir.

A I would find -- trust, you know, involves a reasonable doubt, I would say.

Q That is right.

A On that basis I would find it difficult to do so.

Q Doctor, it has been suggested here that Dr. Oppenheimer is so valuable to this country's weapons program that he should be continued in his present status. What can you say about that?

A He could be of tremendous value to this country. His leadership of the scientists of the country has been extremely valuable. As far as his value in continuing the atomic energy program, I would say it is largely in the influence he has upon other scientists. One of the things that annoys a great many scientists more than anything else is this statement that he alone could have built the A bomb, or that he alone could have carried on the program. One very pominent engineer said to me yesterday that statement just gets me down. Sure, I can pick out a half dozen young men that could do the job.

Whenever you do anything new the first time it seems awfully hard, but later you discover that all you have

done is taken a long roundabout road to get there. Actually there is a shortcut and you get there in a hurry. So one always tends to magnify the difficulties the first time you do a thing. If you have enough good men working on it, you are almost sure to find a shortcut.

I think the developments in the Super weapon that have occurred recently show that this went along without very much -- at least the key ideas were not supplied by him.

Q What?

A The key ideas were not supplied by him.

MR. SILVERMAN: By Dr. Oppenheimer.

THE WITNESS: That is right.

BY MR. ROBB:

Q Bo you would not say thathe was indispensible?

A No, I couldn't say that.

MR. ROBB: That is all I care to ask, Mr. Chairman.

MR. SILVERMAN: May we take about five minutes recess to consult with my colleagues?

MR. GRAY: Was there anything said you didn't hear, Mr. Silverman?

MR. SILVERMAN: No, sir.

MR. GRAY: I think we might as well proceed.

Let me say this. My commitment on behalf of the Board with respect to cross examination of witnesses whose direct examination has been conducted by Mr. Robb is that if there are instances in which Mr. Garrison felt that he was

disadvantaged by surprise, we would consider any reasonable request. But it doesn't seem to me necessary to take a recess for purposes of cross examination unless there is something that you --

MR. SILVERMAN: Mr. Chairman, I don't press the point particularly. There are one or two places when I was talking to Dr. Oppenheimer when Mr. Marks heard something and I asked what was said, and he says he has it down. It is that sort of thing.

MR. GRAY: If you feel at any point you cannot properly represent Dr. Oppenheimer's interest, I would want you to inform the Board.

MR. SILVERMAN: I will do my best to represent Dr. Oppenheimer's interest. We will just take a minute here if that is all right.

MR. GRAY: Go ahead.

CROSS EXAMINATION

BY MR. SILVERMAN:

Q Dr. Latimer, Dr. Oppenheimer left Berkeley in 1947, didn't he, to go to the Institute for Advanced Study?

A I don't remember the date.

Q How often would you say you have seen Dr. Oppenheimer since 1947?

A Not very frequently. I have seen him at the Academy meetings. He has been back to Berkeley on visits, but it has

been infrequent.

Q Would you say you have seen him ten times, five times?

A Let us say five times.

Q Were those in fairly large groups?

A I would certainly at least meet him and shake hands with him and maybe pass a few words.

Q Just social?

A These were casual meetings.

Q You met him a few times casually since 1947?

A That is right.

Q And before that, did you meet him frequently?

A We never had an intimate relationship. We saw each other on the campus.

Q You were members of the same faculty.

A We were members of the same faculty and had the normal contacts as between faculty members.

Q Did he ever visit your home?

A No.

Q And the only time you have a recollection of visiting his home is that one time you went to a cocktail party?

A I believe that is all I recollect.

Q You say you started worrying, I think was the phrase you used, about the hydrogen program and about the fact that we seemed to be twiddling our thumbs about 1947, when your

worries began?

A I can't date it, but at the end of the war I was not content for us to stop going ahead. I did not trust the Russians and I immediately started worrying about keeping ahead. I can't date it, but let us say I suggested it even before it became obvious to everybody that the Russians were not going to be friendly. I started worrying about it.

Q Did you know whether there was working being done on thermonuclear research, and research on thermonuclear weapons at Los Alamos during the war?

A Yes, I knew that the program, that a start had been made on it.

MR. ROBB: Have you finished the answer?

THE WITNESS: I knew a start had been made on it. I knew they had not gotten very far, but that calculations had been made andvarious possible approaches were being investigated.

BY MR. SILVERMAN:

Q Did you know that research continued?

A Yes, it continued without much pressure on it.

Q How did you know what was being done?

A I saw Teller occasionally. I don't suppose I had a very clear idea at that time except that it is not hard to form an impression of the magnitude of a program from many different sources.

Q What I am concerned about is to what extent these

sources were matters of which you had some fairly direct personal knowledge.

A I don't know what you mean quite by direct personal knowledge. I was not down to Los Alamos during that period, and I didn't talk to the men working on the program during that period. But our general impressions around the Radiation Laboratory, the general impressions I got from talking to men in Washington, was that things were not moving ahead.

Q Did you have some sort of responsibility for any part of the atomic weapons program?

A During those years?

Q Yes.

A No.

Q Did you have any official connection with it?

A I was still associate director of the Radiation Laboratory, and the men together in this laboratory talked over between them many problems. There is a pretty general amount of information on these programs.

Q What I am concerned about is, was what you knew pretty much what you picked up in a sort of general way, or was it something that it was your business to know something about, and that you made fairly direct efforts to find out?

A It was not directly my business to know about it except as a citizen of this country who had a certain amount of information on that subject, and was greatly concerned about

what was being done. I would ask questions as high up as I could to find out what was being done. Maybe the answers were often vague, but still anyone can form a pretty definite impression by such methods.

Q Quite so. I would not for a moment question your right to form an opinion. Indeed a very natural interest would lead to it. What I am trying to arrive at was the opinion or impression you had formed the impression of an interested citizen without very direct access or responsibility to the problem, or was it that of a man whose job it was to be working on the problem?

A It was not my job to be working on it, but I had a lot of information about the nuclear program. I had a lot of sources of classified information. I think I might say that my suspicions over that period had been verified by evidence thathas come out later.

Q What you had was suspicions?

A It was obvious during those years we were not doing anything of any significance.

Q Did the Radiation Laboratory do any substantial work on atomic weapons during the years 1945 to 1949?

A No.

Q Did you know what General Groves' views were as to whether it was desirable in the years 1947 on -- in the early years there -- as to whether it was desirable to

concentrate on fission weapons rather than on thermonuclear?

A I suppose I heard his views. They seemed to coincide with that of the General Advisory Committee pretty much. I suspect again under the influence of Dr. Oppenheimer.

Q You don't of course question General Groves' patriotism or his good faith?

A I don't question the patriotism of any of the members on that committee. Of course, he was not on the committee. Not only General Groves, but the other members on the committee, Conant and the other members, they were under the influence of Dr. Oppenheimer, and that is some influence, I assure you.

Q Were you under Dr. Oppenheimer's influence?

A No, I don't believe I was close enough contact to be. I might have been if I had been in closer contact.

Q You think that General Groves was under Dr. Oppenheimer's influence?

A Oh, very definitely.

Q Have you sever spoken to General Groves?

A About this problem?

Q At all.

A Oh, yes, I saw him frequently during the war.

Q On what do you base your judgment that General Groves was under Dr. Oppenheimer's influence?

A I wouldn't go too far in answering that question,

because I don't know how much General Groves' opinions have changed in recent years. The statements that I have heard attributed to him seemed to follow the same -- at least for a while, I have not seen his statements very recently -- but during part of this period he seemed to be following the Oppenheimer line.

Q What I am curious about is how do you know that Dr. Oppenheimer was not following the Groves line?

A That is ridiculous.

Q Pardon?

A Knowing the two men, I would say that is ridiculous. Oppenheimer was the leader in science. Groves was simply an administrator. He was not doing the thinking for the program.

Q I am trying to arrive upon what it is that you base your -- I think you said it was a suspicion, but perhaps I am wrong, that General Groves was under Dr. Oppenheimer's influence. Is it simply the fact of your knowledge of Dr. Oppenheimer and the fact that he is a leading scientist and a man of great gifts.

A I know these things were overwhelming to General Groves. He was so dependent upon his judgment that I think it is reasonable to conclude that most of his ideas were coming from Dr. Oppenheimer.

Q How do you know he was so dependent?

A I don't. I don't know, but I have seen the thing operate.

Q There were other scientists at Los Alamos, weren't there?

A Yes, there were.

Q And General Groves has had contact with other scientists.

A Yes, but there were no other scientists there with the influence that Dr. Robert Oppenheimer had and moreover this close association with Groves certainly one would normally conclude that he still had tremendous influence over him. It may be an unreasonable conclusion, but it doesn't seem so to me.

Q Forgive me, but no man considers his own view unreasonable.

A That is right. You must accept these as my personal opinions and nothing more than that

Q I am trying to arrive on what you base these personal opinions.

A Various things that go into a man's judgment are sometimes difficult to analyse.

Q I am trying to find out to what extent objective facts --

A I had studied this influence that Dr. Oppenheimer had over men. It was a tremendous thing.

Q When did you study this influence?

A All during the war and after the war. He is such an amazing man that one couldn't help but try to put together some picture.

Q Tell us about these studies that you made about Dr. Oppenheimer's influence. You said after the war.

A He has been a most interesting study for years. Unconsciously, I think one tries to put together the elements in a man that make him tick. Where this influence comes from,what factors in his personality that give him this tremendous influence. I am not a psychoanalyst. I can't give you how my picture of this thing was developed, but to me it was an amazing study, just thinking about these factors.

Q For a long time you have been thinking about Dr. Oppenheimer's influence on people.

A Yes, particularly during this period when he was able to sway so many people, so many of his intimate -

Q What is the period here?

MR. ROBB: Wait a minute. He has not finished.

MR. SILVERMAN: Sorry.

THE WITNESS: During this period of discussion as to whether one should work on the H bomb and the Super weapons. I was amazed at the decision that the committee was making, and I kept turning over in my mind how they could possibly come to these conclusions, and what was in Oppenheimer that gave

him such tremendous power over these men.

BY MR. SILVERMAN:

Q Did you talk to any of these men over whom Dr. Oppenheimer had this tremendous power?

A Occasionally, yes.

Q Would you tell us whom you talked to, please?

A The man on the Commission I was most intimately associated with was Dr. Seaborg, since he was a member of my department. I talked to him very frequently about the problem.

Q Did Dr. Seaborg say he just couldn't stand up to Dr. Oppenheimer's influence?

A He didn't stand up to him very well.

Q What did he say?

A That is years ago. I can't remember.

Q I am trying to distinguish between your judgment and what you were told.

A These were my judgments, I would say. I have seen him sway audiences. It was just marvelous, the phraseology and the influence is just tremendous. I can't analyze it for you, but I think all of you know the man and recognize what I am talking about.

Q I think you said that you judged that the source of the opposition to the hydrogen bomb, the back pressure, I think you referred to it as, was Dr. Oppenheimer.

A That is right.

Q Would you tell us on what you based that judgment?

A As Chairman of the Committee he wrote all the committee reports and the decisions became pretty apparent. I don't remember how the decisions leaked out but the fact that they recommended to the President that no work be done. Surely nobody could conclude it wasn't largely Dr. Oppenheimer's opinion whichwas being presented.

Q Have you ever met Dr. Conant?

A Yes, I know Dr. Conant.

Q Would you say that he is a man of fairly firm character?

A I have known him a long time. He is a man of force, but in matters pertaining to theoretical physics, I think he trusted Dr. Oppenheimer completely.

Q And on what do you base that?

A The fact that he followed along so consistently.

Q Do you know whether Dr. Conant's judgment in connection with the hydrogen bomb was based on a technical evaluation -- I don't mean a technical evaluation -- a judgment as to the nuclear aspects of the problem, the scientific nuclear aspect of the problem?

A Those were the reasons which were given in the report. They were expressed in technical terms. I was by no means convinced that those were the real reasons behind the decision.

Q Have you read that report?

A I don't know as I ever have. I may have in recent years seen in the atomic energy office copies which would confirm my opinions, but certainly the essence of the report was known, that they were opposed to the thermonuclear weapons. We didn't have the manpower for it. It would detract from our A bomb work -- a number of reasons like that. I don't know. Technical reasons were given.

Q You consider those technical reasons relating to nuclear physics?

A They sounded pretty phoney to me.

Q That was not my question, precisely. My question was whether you considered those reasons related to nuclear physics, and on which therefore Dr. Conant might be relying on Dr. Oppenheimer?

A Yes, those were the obvious reasons given, I believe.

Q Did you consider that those were reasons related to nuclear physics on which Dr. Conant would therefore be relying on Dr. Oppenheimer?

A Those would have been legitimate reasons if he had been exercising his free judgment and not overwhelmed by his great confidence in Dr. Oppenheimer's judgment. I doubt if it was a free judgmen t on his part.

Q My question, sir, is not whether it was free judgment or whether it was legitimate reasons or anything like that. My question is whether you consider manpower a problem of nuclear

physics.

A It was in this case. In this case if it was true we didn't have the manpower to do it, it was a legitimate reason. But I believe we did have the manpower to do it as subsequent events showed.

Q Is that the problem that Dr. Conant was relying on Dr. Oppenheimer, as to whether we had the manpower?

A I judge he offered that as one of the reasons.

Q You don't know now whether you have ever read the GAC 1949 report, or do you?

A I don't recall. I have talked to a good many men who have seen it. I have talked to Dr. Pitzer and Dr. Seaborg and probably a half dozen others who have seen it. Whether I r ead it or not, I don't recall, but the essence of it was obvious.

Q Do you know whether these reasons you have given were stated in the 1949 rpport of the GAC?

A I can't at this moment say definitely, but they were, as I recall, approximately the arguments given.

Q You say as you recall. As you recall it from what?

A As I recall it from the discussion whihh was occurring at that time. That has been a number of years ago.

Q Discussion with whom, sir?

A With everybody concerned in the program and that was concerned in this decision. There was general discussion among

the scientists on the atomic energy program whether the thing should go. These arguments were tossed back and forth very freely among hundreds of men on the program.

Q What I am concerned about, sir, is the reasons given in the GAC report.

A Yes, sir.

Q. Do you know what the reasons that were given in the GAC report were?

A I can't at the moment quote the reasons given, but the intent of the report was obvious. Four or five years ago I could have given you many of the details, but today all I can recall in detail is the intent of the report.

Q And you think that the report did contain this argument about diversion of manpower?

A You see, there were so many arguments being given by members of the General Advisory Committee, many of them verbally, and what was actually written down in that report at this moment, confusing all these arguments that are given, I could not definitely state.

Q You came to Washington in an effort, I think you put it, to build up pressure for the hydrogen bomb.

A I came to Washington on another mission, but while I was here, I did everything I could to build up pressure for the work.

Q Did you know that the Genral Advisory Committee

would be consulted on this problem?

A Why, surely.

Q How many members of the General Advisory Committee did you know personally?

A I forget now. Many of them I did not know intimately. Rabi, I knew fairly well. Fermi I had a speaking acquaintance with. Seaborg, I don't remember the exact composition of that committee at that time.

Q Did you attempt to communicate your views to any member of the General Advisory Committee?

A I certainly worked hard on Seaborg.

Q Didn't Dr. Seaborg tell you that he was not going to be at the meeting?

A He wrote a letter, I believe.

Q Didn't he tell you he was not going to be at the meeting?

A Yes, but he still had influence.

Q Did you speak to anyone else who was going to be at the meeting?

A I believe not directly.

Q I don't understand what you mean by not directly.

A I worked on a good many of my friends around the Commission, such as Ken Pitzer. I told him my point of view.

Q Dr. Pitzer did not have to be convinced of your point of view, did he?

A It didn't take very long to.

Q Did you try to speak to Dr. Oppenheimer about it?

A I did not.

Q Did you then hold the view that Dr. Oppenheimer was a very influential member of the GAC?

A Oh, that was obvious.

Q Didyou then hold the view that whatever Dr. Oppenheimer's view was would ultimately be the GAC view?

A The majority, I believe. I believe there was occasionally a dissent, but certainly the majority followed his opinion.

Q Didn't it occur to you that it might be useful to call up Dr. Oppenheimer and try to present your point of view in the hope that GAC would be influenced?

A I didn't think my opinion would have much influence upon him.

Q In matters as important as this did it really matter what the chances were of your being able to influence Dr. Oppenheimer?

A It was merely a matter of procedure. I was trying to accomplish my objectives, but one makes judgment as to how is the best way to accomplish these objectives. I talked to Admiral Strauss and gave him detailed statements of what I thought he could use with the President to make the decision.

Q Did you think that Admiral Strauss' influence was

greater than that of Dr. Oppenheimer?

A When he got the Army and Navy and others behind him it turned out it was.

Q Did you then think that Admiral Strauss' influence would be greater?

A I did.

Q Didn't you think it would be a good idea if you could get the GAC to go along?

A I hoped they would.

Q Did you do any more?

MR. ROBB: Wait a minute. He has not finished his answer.

MR. SILVERMAN: I am sorry I keep interrupting.

THE WITNESS: Let it go at that. I hoped he would. But I didn't feel with very many members of the GAC I didn't have much influence. After all, a chemist does not have much influence with theoretical physicists.

MR. SILVERMAN: I believe there is one chemist in this room that has a certain amount of influence.

THE WITNESS: Not directly.

BY MR. SILVERMAN:

Q Wasn't there a chemist on the GAC?

A Seaborg.

Q How about a fellow named Conant?

A He was a college president.

Q You didn't think that speaking to Dr. Conant there would be any rapport between you and Dr. Conant?

A No. In fact -- well, I gues s it doesn't matter.

Q You said some of the boys came back from Los Alamos pacifists, and you judged that to be due to Dr. Oppenheimer's influence. On what did you base that judgment?

A Their great devotion to him. They were capable of independent judgment, but it looked to me like a certain amount of indoctrination had taken place. That matter I would not put too much weight on, but it was just an observation that they had.

Q Forgive me, Dr. Latimer. This is a terribly serious matter, this whole proceeding.

A I realize it. I feel terrible about it.

Q I understand that, sir. Is it your considred judgment that boys came back pacifists from Los Alamos due to Dr. Oppenheimer's influence?

A That was the conclusion I came to. I may be wrong, but that was my conclusion.

Q And you gave thatconclusion in your direct testimony.

A Yes.

Q On what did you base that conclusion?

A It is difficult to analyze it. I talked to them, This was years ago, though. I can't recall all the details of it. That was the conclusion I came to. I don't remember now what went into my judgment at the time.

Q Dr. Latimer, let me put it to you as frankly as I can, and I would like you honestly, and I know you will, to consider this point of view. Would you say that your judgment that these boys were influenced to become pacifists by Dr. Oppenheimer is based essentially on your judgment that Dr. Oppenheimer is a very persuasive person, and that very few people come in contact with Dr. Oppenheimer without being influenced by him?

A That is certainly an important factor in my decision.

Q And that therefore if someone comes back after having a contact with Dr. Oppenheimer with a view which to you appears to be Dr. Oppenheimer's view, it is in your judgment reasonable to suppose that Dr. Oppenheimer influenced them?

A I would conclude from the devotion of these boys to him that would not be contrary to his own opinions and probably expressed.

Q Did you know what his opinions were on the question of pacifism?

A Let me phrase this a little differently. Let us not put the general pacifism, but an unwillingness to build weapons or to work on any research involving weapons. I believe that was a more careful statement of the opinions they voiced.

Q Dr. Latimer, that is a very different thing from being pacifists, is it not?

A It amounts to the same thing, I would say. We have to have weapons to fight. If we don't have weapons, we don't fight.

Q Wasn't it true that many scientists after the explosion at Hiroshima and perhaps even before that -- many scientists after the explosion at Hiroshima were terribly troubled by this weapon?

A Oh, yes.

Q Weren't you, sir?

A I was more troubled by what the Russians might do along the same line.

Q I would like to ask you whether you were troubled by this weapon.

A No.

Q Were you troubled by the fact that 70,000 people were killed at Hiroshima?

A I felt that you might even have saved lives. I had been in the Pacific and I had seen something of the difficulty of getting the Japanese out of caves. I went over there on a special mission that involved that problem. I felt that if we had to land our boys on the coast of Japan, and knowing what I knew about the difficulty of getting Japanese out of underground positions, that the loss of life might be very much greater.

Q I think we all understand that consideration, Dr.

Latimer, and I think we all share it. What I would like to know is whether you were troubled by the fact that 70,000 people were killed at Hiroshima.

A I suppose I was troubled to the same extent that I was troubled by the great loss of life which occurred in our fire bombs over Tokyo. The two things were comparable in my mind I am troubled by war in general.

Q Don't you think that perhaps boys who had worked on the atom bomb and who perhaps felt some responsibility for the bomb might have felt that trouble in perhaps even more acute form?

A I grant that is correct; they might have.

Q Now, I think you said that you referred to Dr. Oppenheimer's opposition to the security clause.

A Beg pardon?

Q I think you referred to Dr. Oppenheimer's opposition to the security clause.

A This was just part of the pattern that seemed to be developing. There was quite a group in the Academy who fought the security clause in the AEC contracts, and I think many of them were sincere in it. I just said this was a part of the picture. Dr. Oppenheimer being more eloquent and speaking more forcefully before the Academy, seemed to be carrying the lead in the attack. This is not in itself important, because he was joined by many others,especially an eminent astronomer

Q I would like to concentrate for a moment on this particular item. So the opposition to the security clause was an opposition to a security clause with respect to AEC fellowships?

A The fact that they had to take a loyalty oath. There was a division in the Academy. I just mention this as indicating the side that he was always on. It itself I would not attach any intention except as part of a general picture.

Q I think in view of the fact that you mentioned it and referred to it as a security clause in an AEC contract, it is desirable that the record be clear now as to what it is he was opposed to.

A He was opposed to an oath which all holders of AEC contract must take. I believe that was a more direct statement.

Q All holders of AEC contracts?

A No, all holders of AEC fellowships. Let me get my phraseology correct.

Q I think it is important. And these were fellowships in basic science?

A They were.

Q Were they fellowships in the building of weapons?

A No, they were just part of the pattern which had been set up by Congress. The item is not highly significant in itself.

Q You did consider that Dr. Oppenheimer's position was right on that, wasn't it?

A I felt that the Act of Congress was unfortunate but in view of the Act, I didn't feel that one should offer this strenuous objection that he offered.

Q So though you thought that he was right in his position, your objection was that he stood up too strongly for his position?

A I would say this, that I didn't approve of it, either, but since the Act of Congress set this up, I thought the strenuousness -- it was the intensity of his objections, rather than whether it was right or wrong..

Q Now I don't understand. I thought at one point you said that Dr. Oppenheimer was right in his opposition.

A I think the loyalty clause in the contract was wrong.

Q Do you think that Dr. Oppenheimer was right in his opposition to that clause?

A I didn't oppose it on the floor of the Academy. I think I voted against the resolution.

Q Did you think that Dr. Oppenheimer was right or wrong?

A I thought he was within his rights in offering the objections.

Q I thought you said in answer to an earlier question that he was probably right in opposing it. That is not what you meant?

A I thought I tried to make myself plain.

Q Excuse me . It was not entirely clear to me, and I would like you to make it clear.

A I felt that the thing basically was not good, but I was somewhat struck by the intensity of his opposition.

Q What was basically not good? The thing that Dr. Oppenheimer opposed?

A Correct.

Q Surely you don't draw any unfavorable inferences from the fact a man intensely opposes that which he believes to be wrong?

MR. ROBB: Mr. Chairman, I think the witness has explained four or five times what his view on that was.

MR. SILVERMAN: Perhaps that is right.

MR. GRAY: Proceed.

BY MR. SILVERMAN:

Q Let me just ask one more thing. Was it a loyalty clause that Dr. Oppenhiemer opposed, or was it an FBI investigation in this connection, and was it for classified fellowships or for unclassified?

A For unclassified.

Q For unclassified?

A As I recall.

Q Did he make a distinction between classified and unclassified?

A I do not recall that.

Q I think you said that Dr. Oppenheimer wanted to disband Los Alamos?

A As I recall it, it was essentially that. He wanted to move it to Chicago, I believe. At least it would have appeared to have been a serious interruption of the program.

Q How do you know that he wanted to disband Los Alamos?

A That impression was built quite a number of years ago, and I am not sure that I remember all the details that went into my knowledge, but it was correct, wasn't it?

Q One of the advantages of being a lawyer is that I don't have to answer questions.

A I may have been misinformed, but I believe I wasn't.

Q Was one of the details that went into your knowledge of Dr. Oppenheimer's decision a conversation with Dr. Oppenheimer on this point?

A No.

Q Don't you think that might have been the most reliable source of information on that point?

A I think my judgment was reliable.

Q I think you referred to the fact that many scientists were annoyed at the notion that Dr. Oppenheimer alone could have built the atom bomb. I take it you were among those scientists, or weren't you?

A I certainly appreciate his very great contributions

They were tremendous. But I certainly think it would be erroneous to assume that it could not be done by anybody else.

Q My question, sir, was not that. My question is whether you were among the scientists who have been annoyed at that notion?

A I am annoyed at that statement which has been appearing in the newspapers. Every time I pick up a newspaper and read that, I am definitely annoyed. A great many other scientists I know are equally annoyed.

Q Do you know whether Dr. Oppenheimer has ever taken that position?

A I do not. He is a very modest man. I assume he would not take that position.

Q Have you read Dr. Oppenheimer's answer to the Commission's letter in this proceeding?

A I have read it.

Q Do you know whether he said anything on that point?

A I don't recall that he did.

Q I think you said that the key ideas with respect to the hydrogen bomb were not supplied by Dr. Oppenheimer. That is what you said, wasn't it?

A I believe I did put it that way. Maybe It could be better phrased than that.

Q Perhaps you would phrase it better then because I think it would be desirable to have your notion as clearly as

possible on this record.

A This gets on the verge of classified information, of course, but I think one can say without going into classified information that the idea which made it work easily was not supplied by him.

Q The idea that what?

A That made it much easier to build was not supplied by him.

Q If it makes it easier there has been testimony in this record that Dr. Teller and Dr. Ulam made very great contributions.

A Yes.

Q Did you understand that Dr. Oppenheimer claimed that he had supplied the key ideas?

A No, I did not. I had not heard that he had.

Q I was just sort of wondering why you found it necessary or desirable to refute a statement which apparently had not been made.

MR. ROBB: Mr. Chairman, I don't think that is hardly a fair question inasmuch as I asked him to make his comments with regard to Dr. Oppenheimer, and it was in response to that question that he made that remark.

MR. SILVERMAN: I see.

BY MR. SILVERMAN:

Q I want to return for a moment to the GAC as

constituted in 1949 to your fear of not being able to influence them. Ithink you gave as one of your reasons that chemists might not have much influence with nuclear physicists. Dr. Cyril Smyth was on the GAC?

A That is right, he was. I had forgotten he was on there. If I had gotten hold of him, I would have certainly talked to him.

Q This was a terribly important thing, wasn't it, the problem of influencing the country's national policy on the building of the hydrogen bomb?

A We got the right answer, too.

Q Didn't you think it was worth your while to call Dr. Smyth?

A I worked through other methods.

Q You did not work through the GAC?

A If I had failed I would have said it was certainly unfortunate, but as long as we didn't lose the battle, I guess it was not so important.

Q What I am merely asking, sir,is do you think it is fair to say that the GAC was influenced completely in its opposition to the hydrogen bomb by Dr. Oppenheimer's domination without having talked to some of the members of the GAC who participated in the discussion?

A I think it is fair.

Q I think you suggested that we made very little or

no progress in atomic armament from 1947 to 1950. That comes as something of a surprise to me. I think there has been some testimony in the record that would seem to be the other way. But perhaps I am wrong. How do you know that nothing had happened of value?

A You keep asking me to go back and analyze my judgments. The reactor pogram did not move forward, the development of our natural uranium supplies did not move forward rapidly, the expansion of Hanford was slow, the expansion of production of U-235 did not move much,,this sort of thing.

Q Which reactor program did not move forward? The reactor program for weapons?

A No, the general reactor program which of course related to the program as a whole. Weapons are not entirely independent of the reactor program.

Q Wasn't it true there were expansions, large and important expansions in the reactor program between 1947 and 1950 withrespect to weapons?

A It was delayed at least a year by busting up the Los Alamos group and arguing where it was going and a lot of scientists got discouraged and quit.

Q Wondering what?

A I forget the details of whether it was going to be moved out to Chicago or Idaho. You broke up a competent

group at Los Alamos and delayed the whole program for a while.

Q Don't you recall that there was a delay in over a year after the war before an act was passed by Congress?

A Yes, but still there was plenty of delay after that.

Q Wasn't it during that period until an act was passed by Congress that the great deterioration occurred at Los Alamos?

A I don't remember the exact date. A lot of deterioration occurred during that period. But certainly the reactor program didn't move forward.

Q Do you recall that Dr. Oppenheimer testified in favor of early legislation in order to prevent the deterioration of Los Alamos?

A No, I do not.

Q Do you know whether there was a sizeable growth in the stockpile of fissionable material and of atomic weapons in the period of 1947 to 1950?

A Under existing facilities there should have been a sizeable growth.

Q Do you know whether there was or wasn't?

A Those figures are confidential and I don't have access to them, but knowing in general about what the production capacities were, one could conclude that the normal production went on, but there was no reasonable expansion of the program.

Q And on what do you base your conclusion that there was no reasonable expansion of the program?

A None of my friends disappeared to work on projects anywhere. If there were any such projects set up, they were kept awfully secret to me.

Q Can you tell us to what extent work on the atom bomb done after the war was helpful or perhaps essential as a pre-condition to the physics in the development of the hydrogen bomb.

A I think Dr. Teller could answer that question much better than I. It is his particular field. My impressions would be based very largely on what Dr. Teller has told me, and it would be second hand. I place considerable reliance on it.

Q You did say that you thought there had been no progress in atomic weapons from 1947 to 1950.

A I said very little progress. You had a program and you kept it going, but there was no --

Q Would you tell us what Dr. Teller told you as to whether work on atom bomb development was helpful as a pre-condition to the physics of the hydrogen bomb?

A I think he would say he got some encouragement, but he had a small group, two or three or four men workingwith him, something of the sort.

Q I am afraid you are not answering my question.

A I thought I was.

Q What I was asking was whether what Dr. Teller told you about the extent to which postwar work on the atom bomb, not necessarily by him, was helpful as a pre-condition to the physics of the hydrogen bomb.

A I can't give you more than the general feeling that he didn't get much encouragement during that period.

MR. SILVERMAN: I have no further questions.

MR. GRAY: Dr. Evans.

DR. EVANS: Dr. Latimer, I might say I relied on Latimer and Hildebrand for a great many years.

THE WITNESS: It is very kind of you to say so.

DR. EVANS: When the fission bomb was fired, is it correct in saying you were worried about the other end of the curve that Harkins wrote about many years ago?

THE WITNESS: Yes. It of course became obvious to everyone that energetically such things were possible and being a student in thermodynamics, when something is possible, it is probable that somebody can make it work.

DR. EVANS: Have you ever been approached for secret information?

THE WITNESS: No.

DR. EVANS: Have you known any Communists?

THE WITNESS: Yes, I have known Communists. They planted a Communist secretary on me at one time during the

war until the FBI discovered her. The Army sent her to me. That is the only intimate connection that I recall.

DR. EVANS: Did you know Fuchs?

THE WITNESS: No, I did not.

DR. EVANS: Dr. Latimer, anyone that knows him and his work would not call Dr. Conant a nuclear physicist by any stretch of the imagination?

THE WITNESS: No, he is an organic chemist.

DR. EVANS: Thank you.

MR. GRAY: I have a question just in the interest of finding out what happened to the debate. Was the security clause with respect to fellowships retained or rejected?

THE WITNESS: Let's see. I forget the outcome of that. I think the Academy refused to administer them, but I am not sure now as to the outcome of it.

MR. ROBB: I have one question.

REDIRECT EXAMINATION

BY MR. ROBB:

Q Doctor, was there a young man named Kennedy whom you knew who had been at Los Alamos?

A Yes.

Q Is he now in your department?

A No, he is not.

Q Did he return to you after he worked at Los Alamos?

A No, he went to the University of Washington at St.

Louis.

Q Did you have any conversation with him after he worked at Los Alamos?

A Yes, I had conversation with him.

Q Will you state whether or not you observed Dr. Kennedy had any of these feelings that you mentioned with respect to working on weapons?

A I believe to the best of my memory that he was one of the group that said he would no longer work on weapons.

Q Did that strike you as unusual?

A Not in itself. I would say I was a little surprised, a Texan taking that point of view.

Q He is a Texan?

A I believe so.

MR. ROBB: That is all. Thank you.

RECROSS EXAMINATION

BY MR. SILVERMAN:

Q Did Dr. Kennedy say to you that he had talked to Dr. Oppenheimer about the question of working on weapons?

A I cannot recall that he did.

MR. SILVERMAN: That is all.

MR. GRAY: Thank you very much, Dr. Latimer.

(Witness excused.)

MR. GRAY: I would like to ask Mr. Garrison if he wants to offer those affidavits at this time?

MR. GARRISON: Yes, I think it is a good time.

MR. ROBB: Are you going to read them, Mr. Garrison?

MR. GARRISON: I would like to. They are rather short. I would like the Board to hear them.

I have a very short statement, Mr. Chairman, by Walter G. Whitman, dated April 23, 1954, entitled, "Corrections to Testimony of Walter G. Whitman given April 22, 1954." He sent this to me on his own initiative. I am sorry I don't have copies of this.

MR. ROBB: May I see it before you read it into the record?

MR. GARRISON: Yes. I also have one from Dr. Killian, Mr. Robb, of which I regret to say I don't have copies.

MR. ROBB: I don't think it is a matter of much substance, but on Dr. Killian, he has not testified before.

MR. GARRISON: No. Mr. Whitman says:

"Dr. Evans asked me a question as to whether I had personally known any Communists or persons who were subsequently shown to be Communists. My answer should be amended to include the following information.

"I have known Professor W. T. Martin, who was a member of a Faculty committee at M.I.T. which I chairmanned in 1949-1951. Professor Martin testified in 1953 before a Congressional Committee that he was a member of the Communist Party about 1938 and that he left it in about 1946. My

association with him did not involve any consideration of political philosophy, or any matters of security.

"I have known Professor I. I. Amdur very casually since about 1934. It is my understanding that Professor Amdur testified at the same Congressional hearing that he had been a member of the Communist Party over somewhat the same period of time as Professor Martin had.

"I regret that I overlooked these two cases when I was testifying."

Signed "Walter G. Whitman."

There is no objection, Mr. Chairman, to adding that to the record as a correction supplement?

MR. GRAY: The Chairman sees no objection.

MR. ROBB: I have none whatever.

MR. GARRISON: I have here an original affidavit signed by James R. Killian, Jr., which I would like to read. I am sorry I don't have copies, Mr. Chairman.

"Sworn to before me this 20th day of April, 1954, Ruth L. Dawson, Notary Public."

It begins: "Commonwealth of Massachusetts, County of Middlesex, SS:

"James R. Killian, Jr., being duly sworn, deposes and says:

"I am President of the Massachusetts Institute of Technology in Cambridge, Massachusetts. I am a member of the

Science Advisory Committee of the Office of Defense Mobilization, a committee in which both J. Robert Oppenheimer and I have been members since it was appointed by President Truman in 1951. I have attended about ten meetings of this committee at which Dr. Oppenheimer was present, including formal gatherings associated with these meetings. Once when the committee met in Princeton, the members of the committee dined at Dr. Oppenheimer's home.

"In the course of these meetings I have observed no action or suggestion on the part of Dr. Oppenheimer that seemed to me to be against the interest of the United States, or to give any support to the charges against him in General Nichols' letter. On the contrary, he impressed me in these meetings as a man deeply devoted to strengthening the security of the nation and fertile of ideas for promoting the national welfare. Every aspect of his work on this committee sustained my confidence in his loyalty and integrity.

"To my knowledge this committee never discussed the desirability of making hydrogen bombs. Certainly I never heard any statement by Dr. Oppenheimer that reflected opposition on his part to the decision that had been made by the Administration to go ahead on this development.

"I recall being with Dr. Oppenheimer on one or two occasions other than the meetings described above, and these meetings were casual or social. He came to MIT in 1947 to

deliver the Arthur D. Little Memorial Lecture. He gave this lecture before a large audience which seemed absorbed by his ideas and moved by his sincerity.

"Dr. Oppenheimer was a participant in the Summer Study Project of the MIT Lincoln Laboratory in the summer of 1952. He was able to give the project only a very slight amount of time, as I recall, and I was not present at any of the meetings in whihh he participated. He did give a briefing to the group undertaking the study on the meaning of atomic warfare. The Summer Study Group made recommendations to the Department of Defense in regard to strengthening our defenses against air attack.

"An earlier project, known as Project Lexington, carried out by the Atomic Energy Commission under contract with MIT sought information from Dr. Oppenheimer which has been described elsewhere by the director of this project, Professor Walter Whitman. No information I have about Dr. Oppenheimer's relationship to either of these projects has given me cause to question his integrity and loyalty."

Signed "James R. Killian, Jr."

MR. GRAY: That affidavit becomes a part of the record.

MR. GARRISON: I have copies of this supplemental affidavit of Dr. Manley. This was to clear up a question that arose in his testimony. I think the Chairman put the question.

MR. GRAY: Yes. I might say with respect to that, or at least one portion of that, which involved a round use of the words "instrumental in persuading" rather than "attempts to persuade." Later on in reading General Nichols' letter that was General Nichols own language in the letter and if I had realized at the time I probably would not have raised the question. There is no reason why this amplification should not be made.

MR. GARRISON: I think this relates to an additional question, Mr. Chairman. It is an additional one, because it also covers "instrumental". This is a supplemental statement signed by Dr. John H. Manley,"Sworn to before me this 16th day of April 1954. Mary E. Mossman, Notary Public.

"I have been requested to clarify portions of my statement of 16 February 1954. This request reached me on April 15, 1954 by personal visit of Mr. Walters and Mr. Chipman of the Seattle FBI office with a teletype inquiry originating with the AEC and by a letter informing of Mr. Lloyd K. Garrison's offer to Mr. Gordon Gray to ask me for clarification. All questions refer to statements on page 10 of the reference document. I was informed that the AEC inquiry was for clarification of the following excerpts:

"1. 'Indeed, I had no feeling that anyone was holding back on the work on thermo-nuclear weapons once the President had decided the question by his announcement in January 1950'.

"2. 'I never observed anything to suggest that Dr. Oppenheimer opposed the thermo-nuclear weapons project after it was determined as a matter of national policy to proceed with development of thermo-nuclear weapons, or that he failed to cooperate fully in the project to the extent that someone who is not actively working could cooperate'.

"3. 'Neither have I heard from any scientists that Dr. Oppenheimer was instrumental in persuading that scientist not to work on the thermo-nuclear weapons project'.

"Mr. Garrison's inquiry related to the first excerpt.

"I do not now have a copy of the charges against Dr. Oppenheimer, but I recall that one was the accusation of opposition to H bomb development after the Presidential decision of January 1950. My statements (1) and (2) above were directed to this charge and therefore contained specific reference to the President's decision. It is completely incorrect to assume that the converse statement was true before January 1950.

"With respect to excerpt (1) I call attention to the two preceding sentences of my statement which have no time qualification and which, I hope, are unambiguous. To say that no one held back at any time would be ambiguous because, as I tried to show in preceding pages, the question was one of relative effort and anyone fully occupied with A bomb problems was in effect being held back from H bomb work, not because of

Dr. Oppenheimer but because of laboratory program and AEC direction before January 1950. I know of no case of an individual connected with the weapons program who could be accused of "holding back' from improper, malicious or disloyal motives. This includes Dr. Oppenheimer.

"With respect to excerpt (2), it is a matter of AEC record that Dr. Oppenheimer and others opposed a top priority program to develop thermo-nuclear weapons before January 1950. The reasons are also a matter of record. I add that the approved programs of the Los Alamos Laboratory for a considerable period prior to this date included such work, that these programs were normally reviewed by the General Advisory Committee, Dr. Oppenheimer, Chairman, and that I can recall no instance of his opposition, formal or informal, direct or indirect, to the thermo-nuclear investigations proposed in these programs and carried forward by the Laboratory. On the contrary, I know of specific assistance on his part in certain examinations of theoretical questions.

"With respect to excerpt (3) I can state that I never heard from any scientist that Dr. Oppenheimer ever attempted to persuade or was instrumental in persuading that scientist not to work on the thermo-nuclear weapons project. Neither did I ever hear Dr. Oppenheimer make such an attempt nor did I at any time see any evidence that would lead me to believe that any scientist was so approached or influenced

either by Dr. Oppenheimer or by anyone else. My position was such that I believe any such attempt would have come to my attention."

Signed, "John H. Manley".

MR. GRAY: Thank you, Mr. Garrison.

MR. GARRISON: That is all we have, sir.

MR. GRAY: We will now recess until 9:30 tomorrow morning.

(Whereupon at 3:47 p.m., a recess was taken until Wednesday, April 28, 1954, at 9:30 a.m.)