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Solly Zuckerman

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Oral History Interview

with

SIR SOLLY ZUCKERMAN

August 5, 1966
London, England

By Joseph E. O'Connor

For the John F. Kennedy Library

O'CONNOR: Sir Solly, could you tell us when your first meetings with President Kennedy were, what personal contacts you had with him, actually?

ZUCKERMAN: I seem to recall that the first occasion that I met him was in the company of Jerry Wiesner [Jerome B. Wiesner], whom I was visiting in the Executive Offices shortly after President Kennedy took over. Jerry said that he'd been talking to President Kennedy about me and about the work he and I'd been doing together… Of course, we'd been working in the disarmament field for some considerable time. Could we break off for a moment?

O'CONNOR: Surely. We don't have to break off, we can tell them we're just about to have tea.

ZUCKERMAN: All right. Now the tea's come in, let me go on. Jerry must have told the President, obviously, about the fact that we worked very closely together and

that he and I had been concerned to try and bring some reason into certain aspects of military thinking about nuclear weapons. I remember being taken into President Kennedy's room. He got up in his usual and very courteous way and said he'd heard all about me, whatever that may mean, and started talking, "I'm very glad to know you work closely with Jerry." And then he immediately, I seem to recall, asked me a question what did I think of his missile gap. And I remember my reply, "What missile gap?"

Well, one thing led to another and then on almost every occasion -- and there were frequent occasions that I was in Washington -- I would call on him, not for very long. I also, before the test ban, went down and spent, well, a very late night -- we had intended spending the night -- Bill Walton and I went down into the country where the President and Mrs. Kennedy had a little country house. They were there with…

O'CONNOR: ...the small children.

ZUCKERMAN: Yes, the small children, and also her sister. Those were the only people there. And I suppose on that occasion I had my longest talk absolutely alone with him -- it went on for several hours -- when we discussed most of the issues that were then being deliberated about in preparation for possible negotiations for a test ban. And at the time, at that particular time, one of the big questions before him was, why did it appear that the Russians were now so keen?

O'CONNOR: Yes, that was one of the questions I was going to ask you. What your opinions of that were.

ZUKERMAN: My reply to him was that the Russians were probably just as frightened of nuclear weapons as he was and I was. We went on discussing various aspects of this problem that evening. He wanted us to spend the night, but it was snowing, and I had a feeling that I'd get tied up over Sunday and that I wouldn't be able to get back to Washington, because I think I was leaving that Sunday evening. And so we set out after midnight on these hideous roads in deep snow to get back. Well, I supposed that gives away the time; it must have been early spring or late winter of 196….

O'CONNOR: It would really have to be '63 if the Russians were already really keen.

ZUCKERMAN: Yes, that must have been '63. So that was after two years in which I'd known him. I'm just answering your basic question when did I meet him.

O'CONNOR: Yes.

ZUCKERMAN: Another occasion when I saw him quite a lot was one in which he went

around, he was in his aircraft and President Johnson [Lyndon B. Johnson] in his aircraft, to look at all the space installations. And Jerry Wiesner, and Harold Brown, who had taken over from Herb York [Herbert F. York] in the Pentagon then, and I went along. We were on the road, if traveling in presidential aircraft is being on the road, for two nights certainly -- that I recall. I think it was two nights. And we stopped, heaven knows where. We arrived one night in Houston, Texas, where he addressed people who were waiting in the airfield -- it must have been about 9 o'clock -- and then we rode in cavalcade into Houston withe people lining the streets for a few miles until we got to our hotel. I mention this because ever since his tragic assassination in Dallas, I've kept thinking of the number of occasions like that…

O'CONNOR: When many, many people lined in the streets, you mean?

ZUCKERMAN: Yes. Then I met him in Nassau, at the Nassau talks. I was part of the British team with Mr. Macmillan [Harold Macmillan], and that was -- I don't know how many days that meeting went on. The final time I saw him was when he came over here in the summer of….

O'CONNOR: 1963.

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ZUCKERMAN: That was the year he was assassinated. I saw him at the Birch Grove talks then, both on the Saturday and on the Sunday. On the Saturday I remember the talks went on to, oh, quite midnight. And Mr. Macmillan gave me a piece of work to do before morning.

O'CONNOR: It was already morning.

ZUCKERMAN: It was already morning, yes. The Birch Grove meeting, I seem to recall, hadn't been prepared for very long. Again it all seemed rather hurried, and I wanted to get back to France on the Sunday. But I didn't. And the last time I saw him, that i can recall having seen him, was at the meeting on the Sunday morning in Mr. Macmillan's drawing room where we were conferring. I don't recall having seen him after that occasion. I think -- what month was he assassinated?

O'CONNOR: November.

ZUCKERMAN: It's just possible that I may have gone in to say hello on some trip to Washington in between the Birch Grove meetings which -- I forget when they were. I may have forgotten one or two occasions. But the main occasions when I saw him. as it were, were that time I went down to the country and the two conferences -- the Nassau conference and the Birch Grove conference.

O'CONNOR: Well, do you carry any particular impression of the man from these meetings? Is there any way, any particularly strong characteristics you would….

ZUCKERMAN: Well, I'd say straightaway that he was one of the friendliest people I've ever met, one of the easiest to meet. The other characteristic I carried straightaway -- if one may elaborate what one means by friendly and what one means by welcoming and all that; different people have different words for this -- the other thing which was very, very clear about him was his directness. He was very forthright. He was always trying to get straightaway to what to him was the kernel of a problem, the main issue. And he didn't appear to be pulling any punches in the questions he put to you or in the comments he made.

O'CONNOR: I suppose the things you talked with him most often were really technical or scientific problems regarding disarmament and this sort of thing.

ZUCKERMAN: Yes, on most occasions we undoubtedly spoke about matters of that kind. [INTERRUPTION] Sometimes we were not, however. I mean he was an extremely easy person. I remember, for example, on the occasion when I was down in the country with him, and there was just five of us. He said, "Take your jacket off. I'm taking mine off." And I said, "I can't take my jacket off. I'm wearing braces -- suspenders, as you say it -- and you're not. And I can't sit here in my suspenders." So he said, "Listen, nobody's going to take your suspenders." So I said, "All right, I'll compromise with you." And I took off my waistcoat and put on my jacket over my suspenders.

Then again in the final luncheon party at the Nassau conference it was very hot; we were lunching out of doors at a round table. There were one or two other tables; I was at the table bang opposite of him. On his left was Mr. Macmillan, on his right was Diefenbaker [John G. Diefenbaker] who turned up for the last day of the conference from Canada, still in a very heavy suit, having stepped out of eight inches of snow, or whatever the depth of the snow was up there. I remember the depth as having been commented on by our High Commissioner in Canada who was with Diefenbaker, a man called Lord Amory [Derick Heathcoat Amory], whom I had known well for many years and who's a rather nice, eccentric character. Derry Amory, he was in a very thick suit with his waistcoat on too, I think, and not minding the heat at all, speaking lightly about this, that, and the other.

Suddenly, it was apparent that Kennedy was becoming somewhat bored after this week of negotiation. There had been some discussion which kept wafting across this round table between the two prime ministers and the President about levels of unemployment in their respective countries, and what political impact they had, and he must have got fed up with this because he suddenly called across the table, "Solly, have you been up to see my

nuclear rocket?" He had invited me to do this. And I said, "No, Mr. President. I thought you'd give up that jazz." He said, "No, it's still going on. I'd very much like you to go up there and have a look at it one day."

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And then started a very curious conversation. Macmillan said, "What's this rocket for?" And Kennedy said, "Well, I suppose it's to carry our spaceman to the moon when it's been perfected." And Macmillan said, "What for?" "Well, because they're going to get to the moon." "How are they going to get to the moon?" "How do they get down onto the moon?" And the President then said, "Go on, you tell him, Solly," recalling a peculiar incident on the trip when we were looking at some of the space installations when that big difference of opinion of which way people were going to get to the moon, how many stages, whether there was going to be a rendezvous, in space, whether there was going to be a space platform, whether they were going straight up there, whether they were going to orbit around the moon and then detach from there, and so on. And this discussion -- I forget exactly where it took place. It may have taken place in Canaveral. Jerry Wiesner was mixed up in it and one or two others and, unfortunately pressmen. And we were all in a little huddle, and something slipped out publicly, you know, about the fact there was a major difference of opinion about which was the best technique to follow. So he reminded me of this on this occasion in Nassau. He said, "You tell him." And so I, insofar as I could, described in very few sentences, knowing this would become just as boring as levels of unemployment, what the thing was about. And then Mr. Macmillan said, "What happens then?" I described, as it were, what was intended to be the last stage of the operation, the detachment of the smaller capsule and its descent onto the surface of the moon. "And then what?" said Macmillan. I suppose they're talking all the time, I replied. "What are they saying?" I said, "One of them is saying, 'Mum, we're here.'" "Go on," said Kennedy, "that's fine." He was beginning to enjoy the bantering. "What'll they do then?" I said, "They'll very daringly open the door of their little capsule, and then they'll step out." "And then what?" "They'll touch it."

Kennedy was enjoying himself over this talk and said, "You know…" and then broke off. He said, "Do you know, I find all this very much easier to understand then I do the working off a pocket radio." I told this story to Jerry Wiesner afterwards. The President may have made that observation to more than one person for all I know, and Jerry incorporated it in an obituary notice he did in Science. And so he said, "Tell me how a pocket radio works." So I said, "I'm no physicist, but as I understand

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it…." et cetera. And in some very crude and general terms I told him what I knew about the pocket radio. Again, I remember Diefenbaker just looking, never having uttered a single word, slightly bemused by this curious conversation -- you know, lighthearted conversation at a moment when he presumably expected to be discussing great affairs of state. When I had finished my little, probably incorrect, explanation of the radio, the President said, "Well, I don't understand it enough to make one." So I said, "You're not expected to. It's only

schoolboys who make them, and that you certainly aren't." And that's where we broke off. But that was the sort of thing I remember about him more than once, suddenly breaking away from some line of talk, no doubt his mind still operating on the particular thoughts which had been exercising him before he put these other questions.

O'CONNOR: In your serious discussions with him, did you find him very able to keep up with you, did you find yourself very often having to talk down to him with regard to scientific matters?

ZUCKERMAN: It's not the scientific matters that one discusses; one is rarely discussing the impact of major technological developments in, let's say, international affairs -- where the other side is doing precisely the same thing. One is really talking about the transformations which will result from the introduction of new weaponry, developments in space, big expenditures, the technological revolution and so on. No, I never found him saying, "Say that again." Nor do I recall, apart from the radio story, that he ever asked for any details about this, that, or the other. He may have done a bit of it with his specialist advisors in the United States, but in my knowledge of him, no. I was with him at one or two briefings of a technical kind (during the tour of space installations) where he listened intently, apparently trying to follow everything that was said and trying to appreciate slightly more about the matter than I might have myself thought necessary. That's always -- one never can tell in politicians how much they need to know about these technical matters.

O'CONNOR: Okay, let's really get into the question of disarmament now. I'm sure you were involved in the question of disarmament long before President Kennedy became President Kennedy. I wondered if you'd care to comment on what some people have referred to as the difference in spirit toward the question of disarmament between President Kennedy or the Kennedy Administration and the previous Administration. Do you think there really was a difference or did you notice any?

ZUCKERMAN: The talks had begun, of course, under the previous Administration in Geneva, talks relating to the development of nuclear weapons, about possible means of reaching agreement whereby people would stop elaborating new weapons and testing them. The dangers of the nuclear arms race were appreciated long before Kennedy. There was an eight nation experts conference in 1958, followed immediately after by tripartite political negotiations. I think up to the moment that President Kennedy came in almost every issue had been formulated and defined. One had easily identified -- I'm talking about our side now -- those people who were not so keen on a test ban, for example, and those who were. It was sometimes possible even to believe you understood the motives of the two sides. Over here, of course, the problem was very different from what it was in the United States. We were not launched on any vast, big program. In comparison with yours, ours was a small program even though it used all the resources we

had. The problem of contamination, radioactive contamination, was poorly understood but publicly feared.

So far as the underground test ban was concerned, the main issue became one of cheating. Would it be possible if a test ban were signed that one or the other side -- and, of course, we were always thinking about the Russians -- would the Russians be able to cheat? I mean by blowing up bombs in big holes underground, et cetera, so that you couldn't detect these explosions by the seismic signal because of decoupling. And there were other dream word fancies; you know, testing nuclear weapons behind the moon or behind Mars. I haven't a clue where some people thought they could not be tested. All these things were being spoken about. But because we over here were less ambitious, a lot of these things sounded gross nonsense. That was one thing. I'm more or less giving you some indication of my own approach.

The second thing, which was even greater nonsense to me, was the fact that in my connection with the military -- I have been around with the military in the field, and even though I wasn't dealing with nuclear weapons, I do know something about destruction, and for the life of me I could not see what the elaboration of a range of so-called tactical nuclear weapons meant because in no conceivable circumstances could I see them being used except as a prelude, and an immediate prelude, to a strategic exchange. Their military value seemed to me trivial.

It did happen that when you persuaded some soldiers to understand that there wasn't going to be a wonderful little week's battle in which they fired hundreds or thousands of tactical nuclear weapons while they still behaved like glorious soldiers in films, one then had to contend with sailors who said, "Ah, but we're in a slightly special position, and we'd be able to use them where soldiers couldn't." It was all a kind of special pleading.

In my approach to the problem, it struck me that, on the one hand, people were making far too much of producing more and more weapons, and on the other, that when one looked at the weapons functionally, there was no particular rationality behind their further elaboration. Fortunately, there were a few people in the United States who held the same view, even though they had been mixed up in the original big debate about nuclear weapons and had themselves been very concerned in seeing that the U.S. nuclear arsenal was full. It was therefore, easier for me to advance controversial views in debate than it was for them, particularly in international discussions. I'm still talking about secret talks. And it was easier for me to talk to President Kennedy the way I'm talking at this moment, like this, because he'd lean back or rock back, and nothing I'd say seemed to come as a shock to him, intellectually, morally, or otherwise. My line wasn't a departure from common sense, nor was it a different one from any I had been pursuing before.

So much in introduction to an answer to your question. Now, your question was, did I notice any difference between the Kennedy Administration and the previous Administration? I think the difference that I did notice was a difference due more to the passage of time than it was to the emergence of a new personality. I think if Eisenhower [Dwight D. Eisenhower] had gone on being President and had he been in

good health, as events unfolded, there would have developed a greater understanding of the relevance of nuclear weapons in field warfare as opposed to their role as a strategic deterrent -- it may well have come out the same way. That's so far as the end result is concerned. But the course of events would not have been the same. I think while Congress was always said to be one of the stumbling blocks to a more rational view about a treaty on nuclear weapons -- and one says Congress, I imagine ones' talking about a few particular congressional committees and a few particular congressmen -- I think it would have been just conceivable that, because Eisenhower had been a military man, he would have been able to sway some of them more readily if he himself had been convinced of the case, as I feel certain he would have been. To the end, so I'm told, President Kennedy, even while we were negotiating in Moscow, was being pressed on by the opposition. And we worked pretty hard and long on our position paper both in the U.K. and the U.S.A. It was that position paper which we negotiated; it wasn't a Russian paper. And one had a feeling that the members of the U.S. delegation, while they knew they could rely on President Kennedy's support, on the other hand were conscious of the congressional…

O'CONNOR: ...stumbling block.

ZUCKERMAN: Stumbling block. Some more than others. I don't think Averell Harriman, for example, was as concerned about Congress as one or two others. That was just a personal impression I got.

O'CONNOR: Well, it's interesting that you say this, though, because many people have laid emphasis on the personality or the particular commitment of John F. Kennedy toward disarmament and said that this really didn't exist before John Kennedy became President. And others have point to, for example, your friend Jerome Wiesner as marking a great change -- his influence, that is, in marking a great change in America's attitude toward disarmament.

ZUCKERMAN: Well, I'm quite certain of this, that in a particular group of U.S. scientists in Washington we could discuss matters in the same way we're now doing.

O'CONNOR: Well, do you care to mention who these scientists you're referring to are?

ZUCKERMAN: Oh yes. In 1960 -- now that's before President Kennedy -- I'd had two meetings, two important meetings, although they were unofficial

meetings -- unofficial in the sense that the records were for ourselves and not passed -- in which we had discussed the relevance of nuclear weapons and what was the point of going on elaborating, you know, smaller battlefield weapons which you could never use. And the people then were -- there was George Kistiakowsky who was Eisenhower's man. On his team there were people like Jerry Wiesner; Harvey Brooks; Rabi [Isidor I. Rabi]; Harold Brown, representing at the time more of the "let's carry on the testing" side of it all -- he was then in charge of the Livermore Laboratory [Livermore Radiation Laboratory]. I'm afraid I can't offhand remember the others. But I've got my own private record of the exchanges. That was 1960. We were under no illusions at the time that the whole question of disarmament was the other side of the nuclear problem. The one side is "What do we want nuclear weapons for?" The other concerned the suspension of testing and trying to put a stop to elaboration and proliferation. That was the side we discussed. That was before Kennedy. I haven't the slightest doubt that one or two of those people informed Kennedy about the tenor of our arguments. I published one paper, setting out corresponding view which I'd expressed in NATO [North Atlantic Treaty Organization], SHAPE [Supreme Headquarters Allied Powers Europe].

President Kennedy took office the beginning of '61, did he not? Well, certainly by the summer of '61, I was stating pretty publicly views of this kind, which the President later accepted 100 percent as far as I could make out, in spite of his missile gap. He never pulled me up and said, "I think you're talking nonsense, Solly." And I assumed, always did assume, that so far as goals of political endeavor were concerned, there was no difference between the views he held on the subject of nuclear disarmament and the views which Mr. Macmillan held.

When I started questioning the rationality of the way we were going in this country, I was, it is true, the first one to do it from a position of authority. Fortunately, somebody's always got to be first. It needn't have been me, but the views would undoubtedly have emerged in due course. The big argument about underground testing and the need for inspection, which has been, of course, the critical stumbling block in the past in negotiations with the Russians, had not changed for, I think, about five years. And the question which I myself put at the start and still put, was what we really want inspection for. I think President Kennedy knew that he could never get away with a treaty if he had accepted at that time -- that's in '63 -- a pact with the Russians to give up testing in all media if the underground medium did not carry with it the right of inspection of suspect events.

My question, again to this private group… They're not secret men, but they used to meet in secrecy. My question was: How many events are there which are likely to be suspect? And every year, as I've seen the number fall -- you could play this thing like a poker game but bidding down, not up -- and every year without question the number has fallen like mad. And I think it would be difficult for anybody now, so far as the detection of some underground disturbance and then its identification, to protest today, in this year 1966, what they were prepared to argue in 1960. That's changed. What might happen, or course -- and this is where a Kennedy would be an extremely valuable person -- would be that somebody

would cook up another argument simply because of the momentum behind the whole nuclear business, you know, you go on making weapons, and that's that.

O'CONNOR: Did you find American politicians who felt more or less this way, in other words, were bidding down or were perhaps, in 1963, willing to agree to a nuclear test ban agreement in all areas with a very small number or nonexistent inspection?

ZUCKERMAN: Well, the obvious man who comes to mind is Adlai, Adlai Stevenson, whom I know fairly well…

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O'CONNOR: I was thinking particularly of President Kennedy or of Averell Harriman or some of the others you had…

ZUCKERMAN: Well, President Kennedy certainly. I think he saw the problem of inspection in terms of the political issues involved. So far as the scientific facts were concerned, he knew what was at stake. What the politicians were in fact doing, and to a certain extent are still doing, was to shelter behind the backs of scientists. But scientists do not constitute a homogenous group. There are many scientific opinions; although there shouldn't be any difference in the scientific facts. But the use to which you put those facts is another matter. And it is always possible to handpick a group of men who know about the problems connected with seismic detection and who will further the political purposes that a country wishes to further, while another lot will go off in an opposite direction.

O'CONNOR: Do you feel that's really the only thing that held John Kennedy back from a more complete…

ZUCKERMAN: I have a feeling that what held him back more than anything else was that one issue, and it was a political issue. As you know, there was a moment -- it's well known; I think it's been recorded -- when Harold Macmillan went over to Moscow and saw Khrushchev [Nikita S. Khrushchev] to agree to what would be a token number of inspections. I think the figure was three. Now, he immediately, of course, let President Kennedy know about that, but President Kennedy wasn't looking at the figure three in terms of seismic signals; he was looking at the figure three in terms of what the congressional committees were going to do. I've spent hours in sterile arguments with technical people saying, "Well, let's settle for a total for a total of twenty-five events about which you would be doubtful, events over seismic magnitude 4.5." And then, the figure gets beaten down to twenty. I can promise you today it's nowhere near twenty, and the reasoning -- I was not working, frankly, just on faith. We had started some work in this country on seismometer arrays -- we've

been outdistanced in all this now in the United States -- and in surface wave analysis, which made me believe that we were going to become better and better at identifying the nature of the seismic disturbances which are registered. I don't ever believe that in this field, any more than in radar, you stand still. You begin with enormous wave lengths, and you come down to microwaves, so that at this moment heaven knows how many radar dishes are picking up bits of junk half the size of this desk coasting around in space.

O'CONNOR: Okay, let's move on a little bit, then, to the actual beginning of the test ban negotiating itself. There's been a great deal of comment on the British delegation and on the men who were chosen. Could you tell us something about how you were chosen to be on the British delegation?

ZUCKERMAN: I was chosen to be on the British delegation because, so far as the official side was concerned -- the technical side -- I was the obvious man for the job. I was chief scientific advisor in defense and on these matters the scientific advisor to the Prime Minister. That responsibility in the case of Macmillan, was never declared publicly -- as it is now in the case for the present Administration. The people who worked on the technical aspects of testing in this country worked to me, to my desk. So, if there was going to be any technical representation, I was obviously going to be there. I took with me -- you are about to say something.

O'CONNOR: Well, I was going to ask you then about some of the other people who were on the delegation.

ZUCKERMAN: Well, on the technical side, I was immediately said I had to have with me a member of my staff, a man called Press, who is still working with me in this field. I am, by the by, still named as the chief scientific advisor on disarmament to the government. The others on the delegation were -- first of all, the leader of the delegation was then Lord Hailsham, now Mr. Quintin Hogg. He, at the time, was

Minister of Education and Science and knew nothing whatever about seismic matters or disarmament and had not concerned himself before with any of this problem. But it was a case here of picking a minister to go. And they wanted a senior minister. He was a Cabinet minister. It was clearly not the job of the Foreign Secretary. The Minister of Defense was obviously not necessarily the right man. And Mr. Macmillan knew that Lord Hailsham was an amiable character who would enjoy going on something new. As he put it to me when he told me that he was going to send him along, "What do you think of the idea of sending Quintin?" I said, "It's a bright idea." "He'll enjoy it, he likes talking," he said. Well, he was

picked for that reason. They had to have somebody. The others on our delegation were a man who is now our Ambassador in Belgrade…

O'CONNOR: Wilson?

ZUCKERMAN: Yes. He was picked because he was at the time head of that division of our Foreign Office which concerns itself with disarmament matters. There was a minister, too, a junior minister in the Foreign Office the same rank as Lord Chalfont has today, a minister of state, who represented the country at formal disarmament negotiations. But he, it was felt, was not senior enough, so that's why Hailsham was chosen. But Duncan Wilson, being a permanent official and in this field, he was the natural for it. Then a legal expert from the Foreign Office called Darwin came along. And then there was our Ambassador.

O'CONNOR: Wasn't Sir William Penney along?

ZUCKERMAN: Sir William Penney came over the first four or five office days, but he didn't come into any of the meetings with the Russians. By the end of the first day or so it was apparent that he was not going to be used, and he returned. We were not going to get down to real technicalities.

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O'CONNOR: All right, you've run through the members of the delegation. I didn't know whether you would mention the point about the choosing of Lord Hailsham to head the delegation or not, but many, many people have criticized the appointment of Lord Hailsham and referred to it as something of a joke. And I find that -- perhaps it may well have been a brilliant decision to appoint Lord Hailsham to head this delegation -- but I find it incredible that he should be appointed if he really had not much knowledge or interest in this field. Could not he have jeopardized the success of those talks at all?

ZUCKERMAN: Impossible, although I think Hailsham was, as you say, regarded by certain members of the U.S. delegation as a bit of a joke, and, indeed, he staggered and startled them in the opening exchanges of our briefing meeting here in London. You've probably heard about this.

O'CONNOR: I would like to hear you talk about it.

ZUCKERMAN: Well, what happened was, that we first met in a room in Richmond Terrace, on the other side of Whitehall, and after the usual prefatory remarks Hailsham said…. He had this paper in front of him which was our position paper, jointly worked out. Now Hailsham had not been fully briefed about that paper. I don't think I'm going too far if I say I feel he'd only seen it, let's say, for about

twenty-four hours, and he'd certainly not discussed it with me. Whether he understood all the technical issues as were in the paper -- there weren't very many -- I don't know. Whether any bit of it was beyond his comprehension, I don't know. What he may have been unaware of is the fact that the two sides, that is Washington and London, had worked very hard on getting an agreed piece of paper. Each word had been studied and the significance of every sentence had been examined this way and that way; commas had been picked up, their undersides had been inspected; they'd been brushed and then put back again. And where Hailsham set the U.S. party back was by saying straightaway that he'd read and studied the document, and he thought it was very bad. He said he was speaking as a lawyer. It was that phrase, speaking as a lawyer, which I think got under the skins of one or two of the lawyers on the U.S. party because

there were at least two lawyers there. Quintin Hailsham is a barrister quite a lively barrister. He probably irritated them by saying, "This drafting is poor."

[BEGIN SIDE II TAPE I]

O'CONNOR: You were talking about his comment regarding the position paper and how this offended…

ZUCKERMAN: Yes, this, in fact, did happen. While he was going on like that, before Averell Harriman reacted and reacted slightly sharply, John McNaughton, with whom I've had many dealings before, passed me a note saying something like, "What the hell is this, Solly? What are we listening to?" And I wrote, "John, if you think you've heard all, you wait and see," thinking they'd also treat the matter lightly. They didn't. Averell, I remember, became somewhat disturbed and more or less said, "Well, if that's how you feel about it, we'd better break off now. My instructions were to coordinate our tactics with you, not to negotiate a new position," or words to that effect. But all was ironed out. I was sitting next to Hailsham, and I pushed him a note, saying, "This is our paper as much as a U.S. paper." From then on, it became slightly easier.

Insofar as anybody believed he was the wrong man, I think it was not quite understanding his personality. Hailsham's a very robust, forthright, extrovert sort of man with a good power of speech., phrase, and fairly sure of himself. His general attitude may have been misunderstood.

Then, when we arrived in Moscow, I think we started with a joint meeting in either the British or the U.S. embassy, I forget which. We met alternately in these embassies. I think Hailsham was much better in Moscow, but what he did at one of the opening meetings with the Russians -- either it was a procedural one or one that dealt with matters of substance -- he did make an observation, saying, "Well…." It may have been not at the first meeting, maybe in the second or even the third because we'd met more or less daily for nearly two weeks, as I seem to remember. It did go on for that long. Is that right? It's curious how one's

memory, when you haven't got any papers in front of you, needs to be checked. He did say -- as his contribution to one bit of the discussion in which Gromyko [Andrei A. Gromyko] and

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Averell had been doing the talking -- that if whatever was said was agreeable to them, clearly it would be agreeable to him, which, as it were, put him and the rest of the U.K. party into a peculiar sort of position.

I have heard it said by a member of the U.S. delegation that Hailsham's sole contribution to the whole negotiation was changing the title, of the agreement, having shown that there was an ambiguity in what was there before. I'd have to look at the title to identify the ambiguity in the earlier draft comparing it with the final draft. I think myself that that underestimates what he did do. I recall one moment where there was going to be a complete break over wording, and the meeting did break, but before it adjourned, I passed…. You know, the principals are the ones who speak at these meetings, and if I recall correctly, yes, I saw on Hailsham's left. We sat around a round table. The Russian delegation was Gromyko, Tsarapkin [Semyou K. Tsarapkin], Zorin [Valerian A. Zorin] and maybe one or two others at the table. I forget who they were, and then there was Averell and Butch Fisher [Adrian Fisher], and John McNaughton…

O'CONNOR: Carl Kaysen.

ZUCKERMAN: Carl Kaysen. I recall writing on a piece of paper a sentence which rephrased the one under discussion and which, I hoped, got over the fears of the Russians and the fears of the U.S. side eliminating the ambiguities, which are never the same ambiguities to both sides. What is ambiguous to the Russians, is plain to the U.S. and to us, and vice versa.

O'CONNOR: Do you recall what specific point this was? Did this have anything to do with the peaceful uses testing or withdrawal clause of adherence to the treaty or something.

ZUCKERMAN: I've got it somewhere. I almost certainly have got it, but I cannot at this moment remember. I'd have to look it up and let you know.

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O'CONNOR: I'm going to talk to several people involved in the treaty and perhaps I can get that from….

ZUCKERMAN: But this is the extraordinary thing, Hailsham looked at my sentence and nodded his head, yes, he thought this would do, but he felt it would be wise if he did not throw the suggestion in at the moment. And the meeting, the session, closed within a few minutes on the usual note of disagreement.

We repaired from there, and this time I do remember, it was to the U.S. Embassy. And there, as we were sitting around doing our post mortem of the discussion of the afternoon, he produced this sentence and handed it over to Averell, who read it and the others read it, and, yes, they thought they could buy the suggestion, and it might overcome the Russian difficulty. There was some rephrasing of one or two words, and the sentence was, as it were, then put in somebody's pocket for use as ammunition the next day.

When we resumed on the next day, the Russians began by saying that they'd been pondering over this precisely the same one as what I'd written down. So I started looking around and I nudged Lord Hailsham, "Is it this place or is the U.S. Embassy insecure?" But, as I said to myself afterwards, isn't it more likely that any people would have found the same way out, which is really what I think happened. If one's keen on concluding a pact, you don't immediately look for ways of breaking it. And there may have been other ways of achieving an identity of views about what words to use, but this particular set of words worked. That I call one of Hailsham's contributions. I don't really know. There may have been others. There was a record. Every day a record was kept, of course, and the U.S. had its records, the U.K. had its record, its notetaker, but I cannot…. I would think it's doing Hailsham a disservice to say that he did not contribute or, alternatively, that he might have been a menace.

O'CONNOR: Well, this contribution that you just mentioned of Hailsham, of course, is your contribution, not Hailsham's contribution.

ZUCKERMAN: Yes, but I…

O'CONNOR: The British side…

ZUCKERMAN: Yes, I know, but over here -- British side, yes?

O'CONNOR: I was referring to the specific man, and perhaps it might -- if this is the only major contribution that you can think of or the one that comes to your mind as an outstanding contribution of Lord Hailsham, then perhaps the statement of the man in the American delegation who said that his contribution was essentially in changing the title, perhaps that still stands.

ZUCKERMAN: Well, over here, of course, we are accustomed to saying that if a proposal comes from the British side, it comes out of the Minister's mind. It makes no difference that particular set of words came out of my mind, or flowed off my pen.

But at the very end, of course, it's perfectly true that Hailsham did become a wee bit testy. For example, somebody suddenly got into his head that the draft treaty would outlaw the use of nuclear weapons in war. I think that was John McNaughton. I thought this was a remarkable thing to come into his head because if there were war, the treaty wouldn't apply anyhow. But an issue was made of it. Now, obviously, at a moment like that, Hailsham, with

the kind of mind he's got -- and I know him fairly well -- would become impatient. And it's conceivable he showed his impatience, and it's conceivable that he then felt anxious not to conclude a test ban agreement. In the final analysis it was Carl Kaysen who had to telephone through to McGeorge Bundy in the White House. This was from the Russian offices where we were doing our negotiations, which was quite a remarkable thing, I felt. On the preceding evening a message had gone from Hailsham to Macmillan saying, "Ring up President Kennedy and have a word with him because we're beginning to make heavy water." This just shows you a difference of view. It may, of course, but that it was an important issue, that if the words could be interpreted to mean that you couldn't use nuclear weapons when in a state of warfare, that was a bad thing. To me it's a piece of nonsense.

O'CONNOR: This was Gromyko's reaction, too, wasn't it?

ZUCKERMAN: Yes. Now the curious thing is this, that obviously it's only…. I don't recall it was Gromyko's.

O'CONNOR: I believe someone mentioned this to Gromyko and said, "Now let's get this straight. This does not outlaw…." And Gromyko acted as though this was a ridiculous thought to have come up with.

ZUCKERMAN: Gromyko, you mean, reacted the way I did?

O'CONNOR: Yes.

ZUCKERMAN: Oh yes, and Hailsham, yes. I think it was ridiculous. Now it may well be -- let's say it was John McNaughton who suddenly saw that the words could be interpreted that way. It may well be -- let's say it was John McNaughton who suddenly saw that the words could be interpreted that way. It may be that John McNaughton was not so naive as to suppose that were we in a state of war, this pact would still be operative. It might be that he knew member of congressional committees and lawyers who assisted congressional committees who would say, "What have they done? They've sigend away…." Now if…

O'CONNOR: I think that's what he had in his mind.

ZUCKERMAN: That may be the interpretation. And from that point of view, of course, it's absolutely correct that he removed an ambiguity which didn't affect the substance of the whole thing. Treaties of this kind are not operative in war. But let me think again about Hailsham; I'm talking about him, and we're not talking about the test ban treaty. So we'll have to consider just when what I'm going to say now can be released.

If you look at two articles which Hailsham published in this country after he lost the leadership of the Tory party -- he never of course quite had that. But when Macmillan became ill and decided he was going to retire as Prime Minister, Hailsham, at the Tory party conference later the same year, decided that he would

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renounce his title, become Mr. Hogg, and put himself into the ring as a contender for the leadership of the Tory party on the assumption that he'd be the next Prime Minister if the Tory party won. He did that -- it was after the Test Ban Treaty -- and failed, for whatever reasons. Only history will tell. By so doing he threw up, of course, the leadership of the House of Lords; he would still be the leader of the Tory party in the House of Lords if he hadn't given up his title. And furthermore, after many years in active politics he had to try to earn his living again at the bar.

When he had decided to go into this operation and after he lost, he published two pieces in the *Sunday Express* about himself and the reason why he had thrown over his title. I think it was the *Sunday Express*. They were extremely revealing. In the course of one he mentioned the fact that while in Moscow he had had a long talk with me, sitting on the balcony of the British Embassy and explaining what he was going to do. Now, it's just possible that when in Moscow, with those slowly moving talks going on, sentence after sentence, laborious examination of the possible misinterpretation of a sentence or phrase, and so on, that he had other things on his mind. I do recall saying to him on that occasion, "Quintin, there's so much speculation about you, you've simply got to come clean soon and decide what it is you're going to do." Up to that moment nobody had take the advantage of this new bill to give up a peerage except the man whose persistence made the bill necessary -- the man who is now Minister of Technology, Wedgwood Benn [Anthony Neil Wedgwood Benn], who refused to succeed to his father's title and stood for Parliament and won a seat to the House of Commons, and then, of course, couldn't take his seat. He was debarred by these peculiar laws which govern the legislatures of this country. Then Hailsham did it and Home [Alexander F. Douglas-Home] did it. So these were heavy matters, heavy personal matters for Hailsham. It is just possible that in moments of boredom in Moscow his mind might have been turning to other matters, because during that peculiar fortnight. Here we were, looking at a document of only a few pages, some of it extremely dreary -- indeed as most treaty language documents are; they are dreary documents -- and, you know, saying, "Yes, this is all rights, but do we like this sentence?" To take a hypothetical example,

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"Unless some agreement about the control of the use of the new active materials can be attained in due time. Now what do they mean by due time? What is due time? No, no, we don't like that." And you know when twelve men are doing this with about twelve admirers sitting behind them….

O'CONNOR: Yes, I can see where it might be very, very boring.

ZUCKERMAN: So it's just possible there were moments when Hailsham showed a little boredom and all that, which would explain probably the feelings the U.S. delegation had about him. But I can assure you that he was very concerned to see that the negotiations came to a successful conclusion.

O'CONNOR: Oh, yes. And, in fact, I guess that is why his call to Harold Macmillan -- that was the reason behind his call to Harold Macmillan because he was so eager for a treaty and felt that Averell Harriman and others perhaps were slowing matters up.

ZUCKERMAN: Yes. I understand that Macmillan's call to the White House came in almost at the same time that Carl Kaysen's call came in from Moscow, and that President Kennedy was able to say to Macmillan, "Well, listen, what's the fuss about? They're signing." The one souvenir that I came away with from Moscow was the blotting paper which each of the three negotiators used to blot their initials on umpteen pages which had to pass from one to the other. Each page of the three copies of the treaty had to be initialed by all three. So I got the Russian, the United States, and the British blotting paper.

O'CONNOR: Do you have any further comments about -- I'm thinking now of people in the American delegation, for example, Averell Harriman. Do you have any criticisms or comments?

ZUCKERMAN: Well, he was certainly not the kind of man who would understand the precise way in which Hailsham expressed himself. Averell is a man who appears

slow in speech sometimes, or hesitant, and that is too bad. He's also a man who perfectly clearly knows his mind and knows where he's going. But it was a different way of talking from Hailsham, who never puts a word wrong. He never hums and haws the way I do.

O'CONNOR: Lord Hailsham, yousay.

ZUCKERMAN: Oh yes, he goes straight to it. You know, he could stand up at this moment wherever he may be, and be put onto a platform, he'd start addressing the company, if he was asked on the Common Market or on the history of the test ban negotiations, and he could do it admirably. So there was a difference there. I didn't get feeling that Averell thought that Hailsham was dull. I was fully under the impression that his single concern was to come away with a treaty. Fisher, with whom I've had many dealings, I think he was slightly more aware than Harriman of what the reaction on the Hill would be. He didn't talk so very much but he definitely gave me, you

know, the impression of a man whose frowns indicated thoughts about the views of Congressman Hosmer [Craig Hosmer], or whoever it might be. Frank Long, he and I had always been at one about the need for a test ban. He was a scientist.

O'CONNOR: I thought he was there for the same reason that perhaps Sir William Penney was there.

ZUCKERMAN: No, he stayed right through.

O'CONNOR: Yes, I know he stayed right through, but I thought he was there essentially in case the Soviet Union might agree to investigate the possibility of a comprehensive ban.

ZUCKERMAN: Well, I don't really know exactly why he stayed. If the comprehensive ban had come up, Penney would have been wanted, and on the U.S. side Dr. Press [Frank Press] -- not the U.K. Press who was with me, but Press the geophysicist. He, too, left as Penney did, after a few days. I stayed because I was an integral part of the U.K. tem. As I would now, whether or not I know about seismology -- I don't.

John McNaughton, of course, represented a dual interest, I suppose. He was the international security, Pentagon man. And I think he was also conscious of the fact that the Armed Services Committee and the Join Committee for Atomic Affairs -- what do they call themselves -- that they'd have something to say. Carl Kaysen, he, I think, was like Averell. I think he was concerned to get to a successful conclusion by the shortest possible route.

O'CONNOR: Did you ever find yourself in disagreement, major or minor, with these people -- well, particularly major -- on some of the things that were being negotiated with regard to the treaty. One of the largest questions, for example, had to do with peaceful uses, and another had to do with withdrawal clauses. Of course, there was kind of a trade between the West and the Soviet Union on these two issues. And I wondered if you found yourself, often or at anytime, feeling very critical thoughts of what the American delegation was putting forth?

ZUCKERMAN: No, I don't believe that on this occasion any issues which I regarded as fundamental came up. The fundamental issues had already been debated before we got there, and in those debates I certainly had disagreements. But, when on the context of a test ban treaty, somebody tells me that peaceful uses must be safeguarded in some sort of way, I would raise my eyebrows, wondering what peaceful uses he's talking about. But, okay, if he wants to put something in about peaceful

uses, then we'll make the right sort of arrangements to inspect peaceful uses so nobody can misunderstand what they are.

O'CONNOR: What sort of disagreements did you have before then? You said there were major disagreements over…

ZUCKERMAN: I outlined some of those disagreements in the first part of our talk. Disagreements -- I didn't believe for two seconds that matters like the so-called big hole theory and decoupling were real issues. These were not scientific matters, but possibly political fallbacks. To try to pretend it was a scientific matter was aggravating to the scientists responsibilities and powers which they did not possess. Equally,

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I thought it was absolutely rubbish to suppose that in a democracy the people, if they were given the true facts, would provide any atomic energy authority or commission with the resources with which to test new nuclear weapons, for which no purpose could be defined, behind the moon at a cost equal to the total annual medical spend in the country. These were the things which struck me as…. I mean, one had to fight out issues like these and numerous others. The delicate one which one had to fight was, of course, the question of inspection. And there one's got to be quite clear. That debate is not over, so at this moment I clearly would not pursue it here. But, to me, making an issue of the numbers of events for which you would be prepared to blow up the world -- was it three or was it five?

O'CONNOR: Three.

ZUCKERMAN: Three. But it was like making one side of an equation equal to the other when its significance wasn't a thousandth the importance of the other. We were just losing our sense of proportion.

O'CONNOR: Okay, unless you have any other thing to add on this particular question of the Test Ban Treaty, there's only one other matter that I wanted to talk to you about. Actually it's now ten minutes after four. We've spent an hour and fifteen minutes here. I don't care to take up all of the afternoon by any means. You were very deeply involved in the Nassau Conference and what followed, really the working out of the Polaris between the United States and Great Britain. I don't know whether you have talked at any great length to Richard Neustadt about this question of Nassau. Did he talk with you when he came over here?

ZUCKERMAN: I still very much want to get his story about Skybolt, what he picked up, what he knows. He and I did not talk about the issue in any depth; we may

have used the word once or twice. The reason why we would not have talked is that he knew that I knew from the word go that Skybolt wasn't a starter, or at least wasn't going to be completed. And he knew, too, that I had warned and warned and warned over here, but that the service people here with their connections with the U.S. Air Force were going to make quite sure that my reports were controverted.

O'CONNOR: Well, the strange thing that many people have wondered about is how two nations, relatively friendly toward each other, could have so misled each other in the question of Skybolt. If your feeling was so strong that the Skybolt would never really be completed, it will eventually be dropped, could you care to comment on how others were so completely misled about this business?

ZUCKERMAN: If I were to go into Trafalgar Square now and make an open air speech and say that there is no point in the United Kingdom providing two divisions for Viet Nam in spite of our desire to support our great ally, and that there is no reason for us to hang around in Singapore or to keep the forces who have now been released from Borneo and Malaysia east of Suez, that we should bring them back straightaway because this country no longer has any imperial mission, any listeners would say, "Yes, that's fine." And, you know, they'd yawn, and they'd walk away. In the case of the Skybolt thing, it was the same thing. The story -- I was reading over this weekend a book called *The Broken Wing* by a man whose works I've never read before, David DIvine. It's about the mistakes of British air power from the day it was born. I think it's a slightly vitriolic book. But in two pages he refers to the events which led up to the Skybolt affair.

Now the events which led up to the Skybolt affair were absolutely straightforward and simple. We had the V bomber force -- and V bombers are flown by pilots, and pilots are good things and manned bombers are good things in this country as they are in the United States. And for some years to come people are going to the stake for manned aircraft in this country as they will in the United States.

There were also missiles. The United States had embarked upon a very ambitious missile program which was brought to a real and successful fruition. We in this country had only one big missile called Blue Streak, which was becoming very much more costly than we'd bargained for. At the same time it was perfectly apparent to everybody -- well, not to everybody -- that strategically it was a nonsense.

So then the moment arrives through the collision of the right individuals at the right moment in time, and Blue Streak's cancelled. We don't want Blue Streak. The Air Force then sees itself stuck. They were going to have Blue Streak as well as their V bombers. Somebody knows about Skybolt, and so Skybolt comes into the picture. And the plan then is that we have got to have Skybolt.

I had a lot to do with this. But almost immediately I started inquiring about Skybolt. I knew that Skybolt was as much a nonsense as the manned bomber in a missile age. Furthermore, I didn't believe it could be worked technically, in spite of everything that was said. I was being provided with information by the people who really knew, and the men who had to take the responsibility for providing funds for it in the U.S. Defense budget. I wasn't getting my information from somebody in Douglas' who wanted to sell me Skybolt, nor was I getting my information from some Air Force general who wanted Skybolt because he could fly Skybolt off a B-52. I was getting the real information from men whose opinion I trusted and who trusted my view.

All right, when I came back here and said these things, however lofty my position, I didn't get my view accepted. In the normal way in which views are generated inside government, they come up from the bottom, and they boil up through the top. If you start at the very top with a view and try forcing it down, I can promise you it will come up against an impenetrable layer. There was no difficulty about persuading other people at the top -- don't be deluded into believing that there were people at the top here who didn't know what I knew, who didn't believe what I said. But politically it would have been a total disaster at that moment to admit that Skybolt wasn't going to materialize. And it was because of the illusions created by our Air Force, aided and abetted by USAF, on the one hand, and on the other because of the fear that without the Skybolt we'd be in a major political mess, that the situation you've inquiring about was generated.

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O'CONNOR: You mean Mr. Thorneycroft [Peter Thorneycroft] then was well aware long before the summer of 1962?

ZUCKERMAN: Mr. Thorneycroft undoubtedly had received minutes from me saying that Skybolt was not going to be completed.

O'CONNOR: Do you find the solution that was achieved at Nassau a solution, or simply to carry over?

ZUCKERMAN: It's absolutely in the sphere of politics, don't you know. A solution to what?

O'CONNOR: To the disappearance and failure of Skybolt.

ZUCKERMAN: It wasn't regarded as a solution by the present government when it was fighting for power. It regarded, first of all, the concept of an independent nuclear deterrent as a nonsense, and it demolished the whole concept in a debate shortly after it came into power in December, the middle of December 1964, when Wilson silenced Home on the subject of our independence. Since then our four Polaris submarines and what's left of our V force have, as you know, been

shuttlecocks in the debate about MLF [Multilateral Force], et cetera. And I honestly won't know what political solution was achieved until a lot more unfolds.

O'CONNOR: I think that should do it.