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This interview is being conducted with Professor George Kistiakowsky in his office at Harvard University, Cambridge, Massachusetts on November 17, 1976. The interviewer is Dr. Thomas Soapes of the Eisenhower Library; present for the interview are Professor Kistiakowsky and Dr. Soapes.

DR. SOAPES: What I wanted to start with was the beginning of your affiliation with the federal government. I believe it went back to the Manhattan Project?



PROF. KISTIAKOWSKY: Yes. I began doing military R & D [Research and Development] in the summer of 1940, very soon after NDRC National Defense Research Committee, was organized by Drs. [Vannevar] Bush and [James Bryant] Conant on [Franklin Delano] Roosevelt's instructions. Later on in the war I moved from NDRC where I headed the explosives division to Los Alamos Lab of the Manhattan District and spent there two years, full-time, until January of '46. After the war there was a period until Korean War when I did very little work in Washington; but after that I became fairly heavily involved on a part-time advisory level, with various, mostly military operations, including--was it '53 until '58--membership in the Ballistic Missiles Advisory Committee to Secretary of Defense. Then I became a member of the President's Science Advisory Committee [PSAC] in November '57, stayed as a member until July, '59, then was chosen as full-time special assistant to the President and was elected chairman of that committee. Kennedy invited me to stay on as a member of the committee, and I was for three more years member of the PSAC.

SOAPES: I would like to focus our attention on PSAC and some of its activities and the individuals there. One of the personalities, whose name comes up frequently in the manuscript materials, is David [Z.] Beckler. Could you explain to me something about what his position was?

KISTIAKOWSKY: David Beckler, in terms of association with PSAC, was the senior staff member. Before--

[Interruption]



SOAPES: We were talking about David Beckler--

KISTIAKOWSKY: Yes. Well, David Beckler became the executive secretary of a science advisory committee in the office of emergency mobilization [Office of Defense Mobilization]--I think that was the title of it--which was created by President [Harry S.] Truman. It, in a way, but not directly, because it communicated with the President through the director of the office, was the predecessor of the PSAC. And that was created, I don't know, toward the end of the Truman administration, 1950, something like that. Beckler has been with PSAC ever since-- until the PSAC was abolished by Nixon in '73. So you see he has nearly twenty-five years, twenty-two years of service. Towards the end of that period he was explicitly made the top staff man in that organization. In my time I resisted that

suggestion. He was simply, perhaps the more senior, among a small group of my staff people, whom I treated as co-equals, each within his area of responsibility.

SOAPES: And his area of responsibility?

KISTIAKOWSKY: Was the PSAC, the committee.



SOAPES: I see.

KISTIAKOWSKY: And the monthly meetings of the committee, the organization of them, and a lot of things like that. And then another staff member [Robert N.] Kreidler, was the executive secretary of the Federal Council for Science and Technology and then Professor [George W.] Rathjens, who is now at MIT--was then of course quite young--and one or two others were responsible for military projects. Mr. Spurgeon [M.] Keeny, [Jr.] was responsible for disarmament problems, and so it goes.

SOAPES: Okay. In your role as science advisor to the President what was your frequency of access to Eisenhower and what was the type of information that you would be giving to him?

KISTIAKOWSKY: You know, it's difficult for me to answer with precision. Let me put it this way, I saw the President in groups of people very frequently because I went to almost all briefings before the press conferences--which were almost

a weekly affair--and frequently played quite an active role in these briefings by presenting to the President suggested responses to anticipated questions dealing with what was broadly called science and technology. I saw the President in National Security Council meetings, which were also almost weekly affairs, because I had explicit instructions to attend all those meetings. And then there were special meetings. In the end, when it comes to private meetings with me alone, there in the Oval Office, they were not frequent. I would say probably once a month, maybe a little more frequently. I didn't press for it because I found that I could communicate very effectively otherwise in these group occasions or channeling my information through General [Andrew Jackson] Goodpaster, whom--we became good friends. And since I was aware that Eisenhower had rather short working hours and demand on his time was very great, I played it cautiously with very satisfactory results because I never had to wait. When I asked for an appointment I usually got it within the next twenty-four hours.

SOAPES: What was your estimate of the President's grasp of technological information?

KISTIAKOWSKY: Well of course it depends on the domain of technology. Obviously he was far better informed in military technology. I think you have to be aware that my activities,



to a very large extent, were in the domain of national security; R&D; technology of national security--and that meant actually military hardware and even some operational problems--space, which was of course a very emotional issue then; and intelligence--modern techniques for intelligence gathering, and so on. When it came to health and things like that, we didn't get very much involved. Yet I got involved in the cranberry sauce affair, rather heavily, because Eisenhower was very unhappy about being pushed from two sides. From one side the Secretary of Agriculture took the simple attitude: to hell with consumers, we must do what's good for the farmers. And Secretary of HEW essentially took the opposite point of view. Eisenhower finally told me he wanted me to settle the matter.

SOAPES: Those explicit instructions! [Laughter]



KISTIAKOWSKY: Yes. We did, by and by, after a lot of anguish.

SOAPES: Right. Of course the item that got the most publicity was the Sputnik, the development of the space satellites. Was the reaction in the White House to Sputnik and subsequent events in the nature of the great panic that seemed to set in the press, and in the country, or was there a different attitude in the White House?

KISTIAKOWSKY: I think there was somewhat different attitude.

There was no panic. At the same time, by the time I joined PSAC, November, '57, the President's office was very sensitive to this whole business because my first assignment as PSAC member was to become the chairman of a panel on long range missiles. And I might say that in that capacity I saw the President, was taken to see the President, taken by [James R.] Killian [Jr.] who was then special assistant, several times in the year and a half before my appointment, so that Eisenhower presumably sized me up personally before selecting me as Killian's successor. But I was also appointed a member of what amounted to a two-man panel-- Dr. [Herbert F.] York the chairman--which was to investigate whether the Vanguard satellite was--are you aware of Vanguard satellite?

SOAPES: Yes, that was the Navy--

KISTIAKOWSKY: Was originally a Navy, then Eisenhower ruled that satellite should be a civilian project and so the Vanguard project was transferred to NSF [National Science Foundation] as part of the International Geophysical Year, IGY. Unfortunately the transfer of the project was not accompanied by transfer of completely adequate funds and so that project suffered and there were repeated failures on the launching pad. The third panel member, Emmanuel [R.] Piore didn't do any work--



I mean he just was not available for anything. So it amounted to just a two-man panel, York and myself, who made a major effort to understand what were the problems with Vanguard and also looked at the competitive project of the Army under [Wernher] von Braun. That project was in a peculiar situation because while the Pentagon told Braun late in '57 to go ahead with their competitive satellite launching project, Eisenhower took the position that he would decide whether it could be launched or not because he didn't want the whole business to become military. That was a military project, as he saw it, because it used the Redstone army missile as the booster and the team was a military team. About the end of '57 York and I came to a conclusion which, to put it very crudely, was something like: That there was an even chance that sometime during '58 a Vanguard satellite would be successful, but there was an even chance that the first launching of the Army satellite would be successful, and this was reported to Eisenhower. I'm not sure whether we did it personally or whether Killian took our memo to Eisenhower. I just don't remember it anymore. He would probably be able to say, or maybe York remembers. On hearing that estimate the President decided to go ahead with the Army satellite. Von Braun and his crew were almost ready. As a result, once the Presidential permission was given they launched their missile within weeks, and it was a success,



which obviously didn't hurt our standing with Eisenhower.

SOAPES: [Laughter] Right. Sherman Adams made the comment after Sputnik was launched about we're not going to get involved in an outer space basketball game. Was--

KISTIAKOWSKY: Yes, and I heard another story that the Secretary of Defense, Charlie [Charlies E.] Wilson, said something about who cares about that iron ball in the sky? Well, those were very unfortunate remarks, of course.

SOAPES: What was your opinion of the idea of a space race, of the importance of being first?

KISTIAKOWSKY: I---

[Interruption]



KISTIAKOWSKY: Well it took me some time to realize that this race, the issue of being first in space, was politically a very important one. I took the position, however, that for reasons which were not correctable any more we could not overtake the Soviets in the domain of big weights, big things for quite some years to come. The reason being that the Soviets were using the first generation of their intercontinental missile, ICBMs, which they designed earlier than we designed ours. At the

time they designed theirs, they had obviously the ideas that the atomic warhead would be very heavy, so they built huge missiles--nearly three times as big as ours. Those missiles, they were never deployed militarily they were so awful; therefore, the whole business of the missile gap was invented regardless of what people like Joe [Joseph] Alsop and so on claimed. We were ahead of the Soviets. But those huge missiles were extremely useful to put big satellites in orbit and later launch man in orbit and so on. We couldn't do it because our missiles, ICBMs, were much smaller; and I spent a lot of my time arguing in the White House and otherwise that we would be extremely foolish to pretend that we were in a race where we couldn't win one. What we had to do was to select a different approach to space--to emphasize sophistication, do new things, communication satellites, and all sorts of things which did not require very large weights, but where the American technology would come to the fore. I was, I think, reasonably successful with Eisenhower. He was never happy about the situation; he kept pressing me repeatedly, "Why are our ICBMs so small?" And I'd explain that we concluded in '53 that a megaton warhead would weigh hardly more than a thousand pounds, so we built the missiles to carry a megaton warhead which was big enough for any purposes. Then he said, "Well, why did you do it? Why didn't you build bigger ones?" Well my answer was, "Because it would have taken more time to build



bigger ones and we were in a hurry because of the fear that the Soviets would get missiles ahead of us." But this argument used to satisfy Eisenhower. I mean, in other words, there was never any angry reaction to it; but that sort of questioning happened, I think, more than two or three times during my period in office. Some other people in the White House were far less enlightened, kept talking to Eisenhower about a race.

SOAPES: These would be politicians?

KISTIAKOWSKY: People on the White House staff that were not, shall we say, very enlightened.

SOAPES: Okay.



KISTIAKOWSKY: I'm not going to give you any names. If you want to know the names, read my book.

SOAPES: All right.

KISTIAKOWSKY: It's all there.

SOAPES: Okay, fine. What was your evaluation of the creation of the civilian space agency, moving so much of this out of the military into NASA?

KISTIAKOWSKY: Well, I was in favor of it. At the same time I was in the middle of very complicated inter-agency squabbles about who does what, how much money NASA will get, how much the Air Force will get, and the Army. I tried to maintain a

balanced point of view. I'm sure that people who didn't see eye-to-eye with me didn't feel that my point of view was balanced. I think it was. And Eisenhower, by and large, bought what we recommended.

SOAPES: One of the questions that always comes up in these discussions is the balance between basic research support and weapons technology support, the contest between engineers and scientists. How was that problem dealt with during the Eisenhower years?

KISTIAKOWSKY: The membership of PSAC was heavily weighted toward scientists; there were relatively few non-scientist engineers on that. Killian--well he was not even an engineer, was an administrator by training, has had a great deal of engineering experience--and one or two others were the only engineers. The rest were scientists, and there was a heavy emphasis on physicists. The panels of PSAC, which dealt with specific issues and which were extremely valuable to me--I mean because of advice I got from them, technical advice on many issues--had more engineers in their membership. But few of them were completely engineering. There was always a sprinkling of scientists. You have to bear in mind that at that time the men who were active in World War II, scientists, and who in World War II acquired the responsible positions--



well like myself who was head of a division at Los Alamos and before that head of a division in NDRC--those people were still very active. They had a thorough familiarity with military and space and missile problems, although professionally they were physicists. That generation, of course, is gone. It dies in the seventies--not many still alive. The young generation of physicists simply hasn't had the opportunity to get involved in technology, to that extent. We found at that time that by and large the engineers were not very useful in PSAC. I must say that later on as PSAC became more heavily weighed with engineers, particularly during Nixon administration--of course there was a very great emphasis on industrialists--I'm not impressed. I'm not trying to imply that they're dumber than academic types, but they are very much narrower in their outlook. They find it much more difficult, I think, to disassociate themselves from their at home concerns.

Now to complete that answer, Eisenhower, of course, was not terribly enthusiastic about federal dollars going to support of research which was not relevant to the government's objectives and that meant it wasn't relevant to national security matters or health. And things outside of it, he felt that they should be, as he used to say, private sector. I think we accomplished a major task by convincing him before the end of that administration that in order to be first in the world,



United States had to have across-the-board support of basic research by the federal government. At a PSAC meeting at Newport, Rhode Island in July, 1960, Eisenhower was present and it was a very good meeting. And during that meeting he said, "Well, yes I've become now convinced that there's no alternative; that this is a responsibility of the federal government." But actual dollar allocation, what percentage of total dollars, that never was raised in such a blunt form. In my arguments about budgets of various agencies, I was very much interested in making sure that the Defense Department put enough dollars into support of basic research, after all...



SOAPES: You are a trained scientist; you're not a politician; you go to the White House; you're in a political world. How did you feel that your political colleagues reacted to you and did you feel that you were able to compete effectively with political interests?

KISTIAKOWSKY: Well I was scared as hell when I took that job, and I took it reluctantly. I was afraid I'd make an ass of myself and not please the President. I kept a diary because James [B.] Conant--a former president of Harvard who is a very close personal friend of mine--told me in effect, "Look, George, you will be a babe in a very, very rough environment and you better keep a record of what you said to people and what people

said to you so if there's any argument afterwards you can check on people when they accuse you of doublecrossing and so on--or doublecross you." That's the origin of the diary I kept. I found a very friendly reception. See, I don't know whether [Sherman] Adams ever liked the idea of having a science advisor because he was so jealous of his privileges as, essentially chief of staff, the assistant to the President. In my time as special assistant, that job of assistant to the President was a retired general, [General (ret.) Wilton B.] Jerry Persons. Persons and I got along very well. We got to be very friendly, really very friendly relations, to a point where I was able to play a practical joke on him and get away with it. At that time it looked to me like a very funny joke because he was very nervous about the Soviets all the time. So when his birthday came in the Spring of 1960 we got a carton which said dynamite, DuPont dynamite and so on, and then we got these cardboard cylinders that are used for, you know, wrapping photographs and mailing. We wrapped them in waxed paper so they looked exactly like dynamite cartridges, filled the box with these quasi-dynamite cartridges, then got a box which said detonators on it, filled them with cranberries, and under that box put a book--that just came out--of James Bond's adventures called From Russia With Love. I explained to Person's secretary what it all was about and she thought it was a very funny idea. So the dynamite carton was wrapped in



just plain brown paper. I took it across into the White House and since they knew me they didn't look into what was in the package and that was put in Jerry Person's office. His secretary told me that when he unwrapped it and saw the dynamite words, he rushed out of the office and ordered guards.


[Laughter]

KISTIAKOWSKY: I suppose I had generally a very friendly reception. Maybe one or two doubtful ones.

SOAPES: Okay. One last area to get into, and we're getting very close to the time that you've allotted for me. You had to deal, of course, with a great number of agencies--DOD, State, Atomic Energy Commission. How was it dealing with those people?

KISTIAKOWSKY: I think there was a sort of a quantum jump, and in a way it's a funny event. I mean they looked at me in the beginning with suspicion and doubt and I was obviously not accepted as a co-equal, although my rank was essentially just sub-cabinet rank. Then at one of the National Security Council meetings, the President--that was about two months later--all of a sudden starts saying to me--he always said, "Dr., what do you think,"--he said to me, "George," and that change of address had almost miraculous effect on the top members of the





administration. I became George to everybody and they became Jack and Jill and whatnot. And after that, personally, I had good relations with only a couple exceptions. The exceptions were [John A.] McCone, the chairman of AEC--there was a continuing running battle. I found [Ezra T.] Benson very difficult to deal with--no communications, absolutely impossible, from my point of view. And, some people in the Pentagon were intolerable. Otherwise relations were quite casual, quite polite, reasonably friendly. Later on really very friendly; for instance, the Secretary of State would insist I come to his house for private conversations and that sort of thing. Generally speaking my social contacts were nominal. I did not go to cocktail parties; I was invited to very, very few dinners; that administration--you see it was at the end--the friendships had been already established long ago among those people. I was a newcomer and so fortunately I was not in; I was out. Which didn't hurt me because I lived a bachelor life there. I was separated from my wife, who remained here in this area. I was working very hard, and I just had no need for these social contacts which were always very temporary anyway. But, I retained perfectly friendly relations, say, with Douglas [C.] Dillon, then under secretary of state; Thomas [S.] Gates, secretary of defense; and particularly the deputy secretary of defense, [James H.] Douglas [Jr.]--he and I were very good

friends, he's a Chicago lawyer; also deputy director of the budget, who's now the director of General Accounting Office, GAO--what's his name?

SOAPES: Staats?



KISTIAKOWSKY: Staats. Elmer Staats. My relations with [Maurice H.] Stans were not good, and I do not regret that they were not good. I was, of course, very polite--had to be and was very polite--to Nixon. I had strong suspicions of him which I recorded in the diary, but was impressed by the soundness of his views by and large.

SOAPES: The types of conflicts that you had with McCone, with department of defense people, was it a problem of conflicting empires? Or was it problems of points of view--

KISTIAKOWSKY: I had no empire! No, that was not a problem. The problem was, firstly, that before I went into that office-- I mean was sworn in--the President told me he wanted me to work for comprehensive nuclear test ban, and those people were violently opposed to it. And, I found myself only weakly supported by the State Department--supported by Christian Herter, the secretary; but not by [Douglas C.] Dillon, who was on the fence; with [John A.] McCone, absolutely headon collision all the time; and military officers--they were doing some things

which I considered very unethical. They're all in the diary; they're not coming to light. I won't go into those.

SOAPES: Okay. Fine--



KISTIAKOWSKY: So that was the thing. Then the Pentagon and I'm afraid Eisenhower didn't help things too much. The President repeatedly said in the presence of the top-level military that he takes my advice; so I became that very dangerous, grey eminence behind the throne, in their eyes, on all matters dealing with military technology. In some ways it was really very funny, that the top men in the Pentagon would telephone me and ask me would I support this or that.

SOAPES: Let me pose a question about some of the other scientific groups--I'm thinking about National Science Foundation, National Academy of Science, the Federal Council for Science and Technology. What types of contributions did they make?

KISTIAKOWSKY: The National Academy, virtually none. Dr. [Detler W.] Bronk, then the president, was member of PSAC ex-officio. He, however, was the kind of man who felt that his presence there was all that was necessary. The Academy as a whole didn't have anything to do with us and I had some conflicts with him about it because I saw the Academy as potentially the

channel of communication from the scientific community to the scientifically-oriented parts of the federal government. The National Science Foundation, of course I had very extensive dealings with the director of NSF, Alan Waterman--helped him get bigger budgets, etc. But, I had no dealings with the National Science Board. There was, I think, jealousy because they're statutory advisors of the Presidents but have never been used in that capacity. I felt that I was much higher up in the Washington scheme of things than they since they were only part-time, meeting few times a year with no access to the President and so I let it slide and they never made any attempt to see me, to get together and that was that. I never met with them. That's NSF. With Waterman on the other hand relations were good. At times he felt that PSAC was poaching on the National Science Board activities so I said, "Well, let's do it together," but nothing happened. What else? Oh, Federal Council. That, of course, was just established in the spring of '59 under [James R.] Killian, [Jr.] I spent considerable time trying to make it into an effective working organization and failed dismally. It remained a gathering of individuals who represented frequently opposing agency positions and just were unable, unwilling, whatever you take it, to think on a national, federal level. Things became better under my successors [Jerome B.] Wiesner and [Donald F.] Hornig--I think it gradually



became a more, better working unit.

SOAPES: Okay. One final question and we will have used up our time. You served under two Presidents, Eisenhower and Kennedy. Could you--I know this would be a tough thing to do in a capsule summary, but a comparison or contrast between these men in terms of their attitude toward science and technology matters.



KISTIAKOWSKY: I can't give you a comparison because Eisenhower and I, while socially not intimate, became very friendly. I left office with great admiration for Dwight Eisenhower and I think he liked me very much and trusted me--I have strong evidences of it. And others tell me that. I saw Kennedy just a few times. We met with him a few times--PSAC met, but that's a big group--but in more intimate circumstances just two or three meetings, largely in the beginning of his administration. Well, of course, I felt that he was a much more stimulating intellectually--outgoing, shall we say, or inquiring than Eisenhower--but maybe only more vocal, more eloquent in speech. But, I never developed any particular feeling for him. And, of course, he didn't have the attitude of Eisenhower that there is a private sector and that it should be as big as possible. Certainly Kennedy was very different in that way. On the other hand, you see, under Kennedy PSAC and the special assistant largely lost their influence in matters of national security.

They were squeezed out by [Robert] McNamara at the Pentagon and McGeorge Bundy in the White House. And so PSAC became more and more oriented toward domestic affairs, civilian affairs; there it had much more influence than we had under Eisenhower because Eisenhower wanted to stay out of that as much as possible.

SOAPES: So the orientation was very different under Kennedy and Eisenhower.

KISTIAKOWSKY: Yes.

SOAPES: Okay, well, thank you very much for the time under this very busy schedule that you have.

