



Photo taken in 1967

**DAVID C. ELLIOT**  
(1917 – 2007)

**INTERVIEWED BY**  
**CAROL BUGÉ**

**April – May, 1986**

**ARCHIVES**  
**CALIFORNIA INSTITUTE OF TECHNOLOGY**  
**Pasadena, California**



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**Subject area**

History

**Abstract**

Interview conducted in five sessions, April and May 1986, by Carol Bugé with David Clephan Elliot, professor of history, emeritus, who arrived at Caltech in 1950 as an assistant professor, was appointed full professor by 1960, and served as the humanities and social sciences division's executive officer from 1967 to 1971, as well as the secretary of the faculty from 1973-1985. Born and raised in Scotland, he received his MA in 1939 from the University of St. Andrews. In 1940 the British government sent Elliot to India, where he spent six years in the Punjab region working for the Indian Civil Service. In 1947, Elliot entered Harvard University, where he received an AM in 1948 and a PhD in 1951; later, in 1956, he also received an MA from Oxford University, where he studied international organizational law.

The interview begins with Elliot discussing his early years in Scotland, the outbreak of World War II, meeting his future wife Nancy, and his experiences in India. He then goes on to discuss his decision to settle in the U.S., and more

specifically his arrival in California in 1950. His recollections of the 1950s and 1960s at Caltech include descriptions of the makeup and character of the campus and the students; the humanities division under the chairmanship of Hallett Smith; and later, with the addition of the social sciences to the division, the gradual shift in emphasis from teaching and survey courses to research and specialization, which took place under the helm of Robert Huttenback. Elliot discusses History 5 and the eventual development of the California Seminar on Arms Control and Foreign Policy. He recounts the visit of Alexander Topchev and other Soviet scientists to Caltech in the early sixties. Elliot compares and contrasts the Caltech presidencies of Lee DuBridge, Harold Brown, and Marvin Goldberger: the men, their respective policies, and their influences on the campus. This includes recollections of: Linus Pauling's political activities, the Honker Group, the La Belle tenure case, the Arroyo Center, and Caltech's seventy-fifth anniversary.

Throughout the interview there are interesting anecdotes regarding a wide variety of individuals: Dr. and Mrs. Robert A. Millikan, Hallett Smith, Alan Sweezy, Matthew Meselson, Carl Rogers, Robert Huttenback, Robert Christy, Harold Brown, Roger Noll, Rochus Vogt, Marvin Goldberger, Phillips Talbot, Matthew Sands, Dean Acheson, General Lauris Norstad, Charles Lauritsen, Albert Hibbs.

Elliot concludes the interview discussing his retirement, his years as secretary of the faculty and a member of the steering committee; offers from other institutions; his association with trustees; consulting work for RAND, NASA, and the Ford Foundation; and his research on London during the English Restoration as well as the Vista Project.

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**CALIFORNIA INSTITUTE OF TECHNOLOGY ARCHIVES**

**ORAL HISTORY PROJECT**

**INTERVIEW WITH DAVID C. ELLIOT**

**BY CAROL BUGÉ**

**PASADENA, CALIFORNIA**

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**Interview with David C. Elliot**  
**Pasadena, California**

**by Carol Bugé**

Session 1	April 10, 1986
Session 2	April 15, 1986
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**Begin Tape 1, Side 1**

BUGÉ: I would like to start with your childhood in Scotland.

ELLIOT: I was born in Larkhall, which is a small mining town outside Glasgow, in Lanarkshire. I don't know if you're familiar with the geography. It's in the middle of one of the big coal mining areas of Britain, on Lanarkshire coal fields, one of the big coal areas of Scotland. My father was a Presbyterian minister in the United Free Church of Scotland at that time. And we stayed in Larkhall until just after my mother died in about 1921 or '22.

BUGÉ: How old were you then?

ELLIOT: About four. I was born in '17. And she must have died in '21, and we must have left about 1922. We went from there to Dumfries, which is in the south of Scotland, and I started school in Dumfries Academy. We had a pretty good time there until about 1928, when we went to Edinburgh. My father then became a minister of St. David's Church on Morrison Street, which is, I think, no longer extant. And I went to school in Daniel Stewart's College, where I remained until 1935, making occasional forays out of Scotland, once or twice to attend rugby football matches in London. And another time, I guess I was out twice on the continent—once in Paris and Nice; another time in Germany. Incidentally, I went to Berlin in 1935, I think. We

were attending an international YMCA camp in Potsdam on the Potsdam lakes. And after the camp I think the municipal government in Berlin invited us to Berlin and had us Scots characters to sing Scottish songs on the Berlin radio. Then they took us up in a plane over Berlin. This was the first time I was ever in an airplane, which is interesting since there may well have been others who were up for the first time over Berlin, but they were later on doing it in anger, I think, perhaps. But this was just a small commercial airplane we went up in. And I remember from that period the Wilhelmstrasse and the Brandenburg Gate. I didn't go back there for fifty years. Last year, 1985, I went back again, only in a different area, in West Berlin, but very close to where I'd been before. The geography is that you go up the Wilhelmstrasse, and then turn left and go under the Brandenburg Gate and out into the Tiergarten, the woods, part of which was a zoo. And I remember going out there and walking in the gardens [in 1935]. Well, this time we stayed at the other end of the park, over here in West Berlin at the Continental Hotel. And I walked in the other direction—essentially closed the circle, which was interesting—and of course looked over the wall and the area which had been the Wilhelmstrasse; nothing, just a great view of flat nothing. And so that was of particular interest to me, but is a digression from foreign travels in various parts of Europe. Another time we went on to Budapest and so on. Anyway, in 1935, I went up to the University of St. Andrews. You wanted to know why I had been interested in history. Well, I had a fascinating history teacher in Daniel Stewart's College. What happened was that in the Scottish system, you tended to take your final exams—I don't think there is anything comparable here. I suppose SATs would be comparable, only these were final, and they now have various "A" levels, and "O" levels. And in Scotland it was a higher leaving certificate which enabled you to get into the university. Now if you're going into the university—for example, both my brothers, who became doctors, left school at that point and went to the university. We'd sit at what we called bursary exams, for scholarships. You would sit these exams, and I sat them in Edinburgh and at St. Andrews. In Edinburgh, my schoolmate whom I was doing Latin and Greek with at the time was, I think, the top guy. I was somewhat further down the list, about twenty-two. But in St. Andrews where I also sat, they gave me a very worthwhile scholarship—a Harkness Scholarship. That was probably my first connection with the United States. The same guy, Harkness, supports the Harkness Chair of History at Caltech. He is the same guy who gave an awful lot of money to Yale. And on account of that scholarship, I went up to the University of St. Andrews, planning to study English literature.

BUGÉ: So it wasn't specifically for studying in history.

ELLIOT: No. It was a general fellowship and not subject earmarked. The reason why I'm going about in circles is because I was going to tell you the reason I really got interested in history first of all was because I had an excellent teacher at school, and in the extra year I stayed after the higher leaving certificate, which I did not explain to you. As I was working on that extra year, I was the only guy in the class. We had a high old time; he was fascinating. I think his name was Davidson. But we had a fascinating time. When we got bored, we would play what they used to call "shore ha'penny" on the desk. I don't know if you're familiar with that—put a couple of English pennies or ha'pennies on a desk like this, if you're very good, something like playing soccer, and you try to hit the other fellow's coin over the other end. And he'd be trying to do the same thing with you. I forget what all the local rules are now.

So we got very friendly. But I still thought I would do literature when I went up to St. Andrews. Except when I got there, it seemed to me that the attack on literature was just very pedantic. There was an awful lot of very fine textual criticism going on. And I'd had enough of that in the classics, where we did that sort of thing in spades. So instead of examining the value of a Shakespearean play as drama and so on and so forth, you'd be nit-picking on the text—what was the proper text and so on and so forth. So I turned my back on that and went into history.

BUGÉ: So it wasn't so much an attraction, as looking for something else?

ELLIOT: No, I had no difficulty, as I recall, in finding it, because we had some very interesting people in history at St. Andrews. Now who did I have in that first year? I forget. But my real interest developed with a man called Alan Simpson. Alan Simpson was one, and Ronald Kant was the other; he was a medievalist, who then went over into Scottish history and became a professor of Scottish history at St. Andrews.

Alan Simpson had been a Commonwealth Fellow at Harvard. I think he went to Queens College, Oxford, or something like that; and then from there to Harvard, where he had been a contemporary of Ogden Nash. He had a large collection of the unpublished verse of Ogden Nash, which had better not be published... [Laughter] So he was a great guy. He had married—his wife's name was Mary, I forget what her unmarried name was; she came from Chicago and was later, I think, to edit the *Bulletin of Atomic Scientists* when they came back after the war.

The story I liked about them particularly was that in 1939, when the war broke out, she called up the local Red Cross and said that she was an American but she'd be glad to help in any way possible. And they said laughingly, "Sure, we're delighted to have you, even though you are an American, so long as your name's not Mrs. Simpson." Well, of course it was, but she went to work for the Red Cross anyway. She did even worse later, because she made the mistake of voting for Winston Churchill in 1945, and in this way, of course, lost her American citizenship. So, when they came back to this country in 1946-'47, the great difficulty was in getting her purged. They knew how to naturalize somebody. But how to deal with someone who had been denaturalized—if you're a native-born American, how do they make you American again? I think they finally managed to dream up some process or ceremony which would fit the case.

BUGÉ: Did she do this knowingly? Was she aware of the consequences?

ELLIOT: No, she had no idea at all. In fact, late in '46, she went into the American Counsel's office in Edinburgh—a man called Naismith, whom she knew very well—went and saw him and said she'd better get a new passport, that she was going back to the States. And he said, "Sure, there's no problem there. You're an American citizen; you've got your old passport. And of course, you haven't been fighting in the armed forces of a foreign power." "No, no, no!" "And you didn't vote or anything like that." "Oh, yes," she said, "I did." "Well," he said, "Did you tell anybody?" And she said, "Well, I told that chap in the outer office there." "Oh," he said, "there we are. Deep trouble! Well, you're going to have to go in as an immigrant." And so she went back to Chicago as an immigrant.

But Alan Simpson went and taught at the University of Chicago, and he later on, of course, became the president of Vassar. He was my real instructor in history.

I became very fond of a number of American girls who were over there, most, but not all of them, coming from Sweet Briar College, which had a junior year abroad program. In fact, I think they were the second college to have one—those days, it was not very common. The original junior year abroad I think was managed by the University of Maryland. And then somewhere about 1930, they gave it up; Sweetbriar came along and they used to send us two to four girls every year, to St. Andrews, and they sent two to the Sorbonne at the same time.

BUGÉ: So St. Andrews was coeducational?

ELLIOT: Oh, yes. All the universities in Britain are. There are no all men's or women's colleges. At one time they were men only, and it was only in the 1870s, I think, that women first came to the University of St. Andrews. There was one professor who continued throughout his life to ignore the women. He would come in and address the class as "Gentlemen." Of course, we were segregated. There was a partition that ran down the center of each classroom. And the men would sit on one side, and the women on the other. Or if there was no partition, the men would sit in the front and the women behind—definitely second class. Well, he used to like to come in and say that, until one occasion there were a number of women there, but there wasn't a single guy. He came in and had a look around, and said, "Well, I see there's nobody here." Then turned around and went out. [Laughter] Oh dear, oh dear! Well, those were the days.

What were we talking about?

BUGÉ: You were just telling about St. Andrews and about the exchange students.

ELLIOT: Oh, yes. Well, I'd seen a number of these, and I came over here to visit my present wife as well as another young lady that I'd known, too, and at that time, we made arrangements as it were. Only the war had come on by now. This was in the summer of 1939. So I was actually in Nancy's hometown of Chattanooga when war broke out. And it took a little time to get back again—like some time in October. I'd been due to go up to Oxford. And by the time I got back, the Oxford term had started and most of my friends had already been whistled off into the armed forces. I said I'd be glad to go along with them. But they said, "We're full right now. We can't take you." So in January I went up to Oxford. And when I was there, both the India Office and the Colonial Office said that they were not going to be caught shorthanded as they had been in the First World War and wanted to get a hold somehow of people who might run the Empire in the meantime. So they wrote around to a number of university chancellors and vice chancellors. And Sir James Irvine, who was the vice chancellor of St. Andrews, must have sent my name in because I was called up by both the India Office and the Colonial Office. Finally, after they talked to me, the India people simply asked if I would like to go to India. And the Colonial people asked me if I would go out to Hong Kong. It was a bit of luck that I chose India. Hong Kong might not have been quite so good. So that is when I came to spend some six years out in India.

BUGÉ: What did you do for six years in India? Did you get married before you went to India?

ELLIOT: No. You see, the first year we spent in India was up in Dehra Dun, which is up there, really in about the middle of the Himalayan range, north of New Delhi. A very attractive place! We were encamped on the grounds of I think it was the Forestry Institute and close to the Indian Military Academy, where they had horses, where we learned to ride horses, and that sort of thing.

BUGÉ: Was this a big change for you? Had you ever anticipated anything like this?

ELLIOT: No. One of my closest friends was a year ahead of me and was already out there. Or rather, he went out in the fall of 1939. He went out twice because he got torpedoed the first time and had to swim for a bit, and then he tried again. The second time he made it. So I'd some familiarity with this whole situation. It was the sort of thing which you were apt to do, coming from a professional family. At that time, we were really very lucky, because the choices you had to make were very limited. We didn't have the enormous range of options one has now. I could very easily become a minister or a doctor or a lawyer, or a civil servant. These were the sorts of things one did. I nearly became a minister; in fact, I started off thinking I was going to go into the church. Well, there you are; all sorts of ideas when you're young. Normally before you went into the Indian Civil Service, you spent a year out at Oxford, or Cambridge, or Trinity College, Dublin, learning Indian law and language and history and that sort of stuff. And on account of the wartime business, they sent us out to do this training in India. I think they probably felt there was going to be transport needed. Because after all, half of us were Indian, and there were a bunch in India, too. And no doubt they didn't want to bring them back to England and then send them back out again. If they sent us out, the fewer trips they had to have. So they sent us out and we joined the Indians out in Dehra Dun and spent a year—not really much more actually than about six months—doing the usual stuff.

BUGÉ: This was your orientation period?

ELLIOT: It was more than orientation. We were training, because what we had to do after that was work on Indian law. And we had to administer courts, because the function of the Indian

Civil Service officer was really to be the government in a particular district. This was what it was all leading up to. You had a district of about a million people. And you were the chief magistrate of the district. You were responsible for law and order; you were responsible for seeing that the land revenue was collected, and that sort of thing.

BUGÉ: Did you ever question the system while you were doing it?

ELLIOT: Question the system, or the existence of Britain in India? The system I don't think I questioned much, because it worked pretty well. Whether we should be there or not, I think we all tended to question it. And indeed, the India Office, before we went out, you see, said, "When we send you out there, don't be under the delusion you're going to be staying there necessarily all your life, because the policy of the government is to turn it over to the Indians. We don't want chaos in the meantime." And so that question was one that was lying around all the time. So we started off at that time with the men in this training enterprise. And immediately thereafter, we had—I found it very delightful—about a weekend or so in New Delhi, with the guy who had drawn up the Government of India Act of 1935. He was at that point the Chief Justice of India.

And from there, I went up to the Punjab, where I was posted. Of course, the Punjab is now unhappily divided; part of it is in India and the other part is in Pakistan in one particular province. I was in Punjab all my service, and most of it in the area now occupied by Pakistan—much of the time in Lahore. I went to Simla for a while, a couple of summers. But for the most part, I was in the Pakistan area. My first district, however, was a Hindu district up in the Kangra district, which was an enormous district stretching from the Kangra Valley into the Kulu Valley and then up into Ladakh and Lahaul, right up there on the border of Tibet. A fascinating place! And the only thing I had against it was that I was attacked by malaria after I had been there for about a month or so; I spent about three weeks in the Gurkha hospital in Darmsala, which is the headquarters of the district, also the headquarters of the first Gurkhas. Now, they're fantastic people, *absolute courage*. Tough little men, they can go up and down a hillside as if they were going on the flat. And they'd go off for a twenty-mile route march downhill and uphill and over rugged country. They'd be singing their hearts out coming up the hill at the end. Incredible!

The odd thing is, I can still sense the sounds and smells of the Gurkha cantonment—the



wood smoke and the pine trees, and that sort of thing. Beautiful place!

So, here am I, rattling on about the Punjab, some of which has become rather vague; the pictures are very clear in my mind, I think, looking back. But sometimes the sequence of events, the names of people and the names of towns become a little hazy. I stayed there with the deputy commissioner who was in charge of the district. What they did was they would put these young squirts like me out in the district to sort of act as a personal assistant to the deputy commissioner and begin to learn really how things work. So you trot along, really, after him. He was all of about ten years older than I was—that is, he was in his thirties and I was in my twenties. But he was a pretty senior officer at that point because in twenty years he'd be becoming a governor or something like that in the province. He was young, but you had to be young. In fact, it really was fun when you were young, because normally you spent half the time in district headquarters and the other half on touring the countryside—that sort of thing. You'd get on your horse and trot around the countryside. Some horses are better than others, too. [Laughter]

I came upon what the locals called in Hindi words “black devil.” I remember well the first experience I had on him. These were tiny little horses, local ponies—and very uncertain equipment on them, too. I got on this pony in a big sort of a village square. Everybody was gathering together—the deputy commissioner and so on, and all the local officials. We all wanted to go off in the same direction. And I didn't have a horse of my own. So the *tahsildar* [tax officer] presented me with this black devil without any sort of warning at all. I got up on it and it began moving into action immediately. It began to trot up. Well, you know, I was supposed to stay back a little bit; but I trotted up and my boss said, “Well, that's nice; he's going up to keep Pam [his wife] company at the head of the procession.” Well, that was the direction the horse and I were heading in, but we didn't stop when we got there. It didn't matter how hard I pulled; he went faster and faster. This was up in mountain country and we were going tearing down the road—a narrow road, precipices on both sides. I thought: well, you know, there's no great harm because there is a gate across the road. Well, it turned out I was wrong. We got to the gate and there was about a foot between the gate and the post. And that bloody horse was around the gate before you could say “Jack Robinson,” tearing down the road! Fortunately for me at that point the girth broke, so I ended up on the road; fortunately not over the precipice. And later on, finally news came back about the horse. Somebody from down below was coming up and we asked had he seen a horse going down. “Oh, yes,” he said. “He was about six feet off

the ground.” So he was off for the other end of the earth. Oh, it was terrible! They had me on that devil again later on. And the only way I could control him was to stick his nose firmly into the tail of my boss’s horse—a big horse, a race horse actually, a magnificent animal, and lots of behind. So if I kept that nose pointed right in there, there was no way he could go. But the trouble one gets into sometimes. It was a real initiation for me; that was my first experience, I think, on tour.

That was the sort of thing one did. And I would go into court. For a while, I was assistant to the deputy commissioner of Lahore, which is the capital city. I’d be sitting in court and hearing some sort of case, and the telephone would ring and I’d have to deal with that while the case was still pending, as it were, and I’d be on the telephone; and then some visitor would come in and sit down. You know, it was that sort of three-ring circus.

BUGÉ: I’m trying very hard to remember the name of the book about India which was recently made into a movie.

ELLIOT: The *Passage to India*?

BUGÉ: Yes. Was that similar to your experiences?

ELLIOT: I think I read it going out to India, as a matter of fact.

BUGÉ: I haven’t read it. Was it contemporary with the period you’re talking about?

ELLIOT: I forget, but I think it’s earlier than that—at least the 1920s, and maybe even earlier. Ian Foster—when did he die? He must have been close to dead by 1940, I would think.

BUGÉ: Even so, it sounds like there was the same segregation between the British officers and population and the native Indian population.

ELLIOT: Between British officers, by and large, and the general run of the population. There were many other officers in my service who were Indian, which would be a very different matter. And I can remember one lawyer, for example, too, trying to make a little ground with me

because he had been to my old college at Oxford. There were really two types of life. There was the sort of Anglicized life, and there was a native life; and there were those who were sort of in the middle, and some local Indian people themselves who could move very freely and easily and happily in both areas. But there was the Punjab Club in Lahore, for example, that was purely white. The Punjab Club was nothing more than a place where you ate and drank and could sleep. The Gymkhana Club, where you played tennis and golf and that type of thing, was one in which Indians and British mixed and all you had to do was to have a little money to join. So there were both sorts of things—and a society very much in transition. You couldn't segregate yourself from the Indians completely, because you were working with them. And several of my friends, the polo-playing ones, were very close to some of their Indian polo-playing friends.

BUGÉ: Did you play polo?

ELLIOT: No, I didn't play polo. I wasn't that good a horseman.

BUGÉ: Doesn't sound like it from your previous story.

ELLIOT: No, I don't think anybody could have sat on that horse. But obviously somebody could control him because they hadn't shot him.

And the housing, there again, it was very much a matter of economics and status. There was government housing in Lahore, and it might be occupied by an Indian officer, or a British officer, either one. The next door neighbor might be anything. I remember after my wife came out, there was an Indian officer down the road who was married to a girl from London. She used to come up frequently to seek refuge with Nancy because her husband's relatives would descend on the house, and she'd be going slowly mad with all these characters around. So she felt she had to get out.

BUGÉ: So some time during your tenure there, you did get married.

ELLIOT: Oh, yes. But it was after the war; it was not until 1945. And that's a whole other story, which Nancy's very good at telling because she spent a lot of the war trying to get out to India. We had gotten engaged when I was over here in 1939 in sort of an unofficial way. Then, after I

finished that training period, in the summer of 1941 and I'd been posted to the Punjab, we decided it was about time for Nancy to come out. And so she was due to sail on the President line from San Francisco on the 9<sup>th</sup> or 10<sup>th</sup> of December, 1941. She didn't sail. [7 December 1941, Pearl Harbor—understood.] They recalled her passport, and there she was. She tried a number of things—going out to the Red Cross, and this, that, and the next thing, and these didn't work. She tried hard and nothing worked. Then she went around to the British embassy to see if they couldn't do anything for her to get her out to India. She talked with the legal advisor to the embassy. He said, "Well, if you were British, I might be able to do something about it, but not if you're American." And then she said, "Well, you know, I've got a perfectly good British fiancé; and if we were married, I'd be British, wouldn't I?" So he said, "You're right." And she then said, "How do I do it?" "Oh," he said, "well now; you could go to Kansas and be married by proxy." But she said, "I'm not going to do that because none of these boys coming back from the war are going to want to get married by proxy; they've got other things on their mind." He said, "I understand that. But you might go to South Carolina, where they still have common law marriage. And all you have to do there is state before witnesses that you want to be married. Since the preacher would not be around, to take care of the needs of the young, they could simply declare their intention and they'd be married." It was 1945 by this time; because the legal advisor was to go to San Francisco to attend a meeting, setting up the UN. "But when I get back," he said, "I'll fix things up." So he came back and drew up the document, whereby Nancy would be deeded essentially to me, provided I agreed, and then it would be registered. The deed bit came later—this was a simple declaration of intent. And so he drew it up and sent it off to the Viceroy in India in a diplomatic pouch. He sent it to this young chap—that is, me—down in the Punjab. So one morning I went down and found this document in the mail. It said, "Please sign immediately and return." This is what it was, this marriage contract. I couldn't even sign it there because it had to be notarized, and I was the only notary in that area; and I can't very well notarize my own signature. So I had to wait until I was going to Lahore, and I got it witnessed and signed and so on and shipped back to the viceroy; and he sent it back to the ambassador in Washington.

BUGÉ: This must have all taken weeks.

ELLIOT: It did. And finally, it got back to Nancy, and she went down—this was the 20<sup>th</sup> of June, 1945—she went with her father and sister to Greenville, South Carolina, I think—a little sleepy Southern town—in order to sign off on her side and have it registered and get a marriage contract and certificate and all that sort of jazz. And they went in there, and the little clerk behind the counter said he didn't understand this at all; this was totally new to him. The lawyer said, "It's the law in the state of South Carolina. All you need is this contract and the usual marriage certificate, and register it appropriately here." Well, in the end, he refused to do that. But he said, "Would it be all right if I registered it with the deeds?" And Nancy said, "Sure, that's fine with me, just so long as you issue us a marriage certificate or something like that." And her father said, "It's not all right with me. I'm not going to have my daughter deeded with the cows and the horses and the farms and that sort of thing." [Laughter] So it was nip and tuck, but Nancy finally persuaded him that it was just going to be a matter of formality anyway. Anyway, they ended up with the appropriate document, which she could then take to the British consulate in Atlanta and get a British passport. Nancy then cabled me. She said, "The deed was done."

I was out of town at that time. Instead of staying in Lahore, where I was supposed to be, I'd gone off to play golf up in Gulmarg, up in Kashmir.

BUGÉ: How could you do such a thing?

ELLIOT: I didn't know what was going on. I'd gone off on leave up to Gulmarg and was busily playing golf up there. And I came in one day, after we'd been out... [Tape ends]

### **Begin Tape 1, Side 2**

ELLIOT: I was sitting, having dinner in the hotel—which has since burned to the ground, I think—and a girl [that knew me] was there, the wife of a military officer or something like that, and wrote a little note across with a clipping from the paper, which said, "I see you're married. Congratulations." I thought, well, this is pretty peculiar! Anyway, there it was. I got back down to Lahore and found Nancy's telegram; they'd just stuck it in my box and didn't bother to do anything with it at all.

In the meantime, Nancy was back in Chattanooga. She'd come down to breakfast every morning and her father would ask, "Have you heard from David yet?" So finally he said, "Well,

you know, I think he doesn't want you and he doesn't know how to tell you." Having gotten the wire, of course, I cabled back. As it was expensive to cable, all I said was "Delighted. Love, David."

BUGÉ: [Laughter] Not very romantic.

ELLIOT: Well, that's what she thought. And as a result of that, and the British passport, Nancy finally got out to India in November, 1945. The war was over and things were beginning to loosen up, but not much; it was still very hard to get around. But she got out on a Swedish boat which was supposed to go to Bombay. And so, of course, I went to Bombay. And guess what, when they were a day out of Bombay, the government said, "Put into Karachi." So Nancy, having discovered this, realized there was no point in trying to get in touch with me, because I'd be on the way to Bombay—as I was.

BUGÉ: How far is Karachi from Bombay?

ELLIOT: Oh, it's hundreds of miles. Bombay is about, if you can imagine it, about half way up the left hand side of India. And Karachi is well on up there to the top. Anyway, it's a long way away, and she figured I'd never make it. So she neglected to prepare herself for the great occasion. She had seen Bette Davis sweeping off the boat with a great big hat, and she was all ready for it.

But they got into Karachi quite early in the morning. And she had suggested—well, her roommate had gone up to see if her husband was there. And it turned out he was. They looked around and they saw no sign of me, so Nancy sort of gave up at that point. So she was startled when I appeared a little while later, and she was still in curlers, which was not something she had been anticipating. It was a curious situation. When we got to Bombay, I'd had a terrible time finding out anything, particularly since the American consulate was all closed up; it was Thanksgiving. I forget where I finally learned that that wretched boat was going to Karachi. And somehow, and I don't know how, I managed to get on a plane from Bombay to Karachi, which must have been a major enterprise.

And so we were married, again, in the proper manner, in the Lahore Cathedral, and stayed in Lahore about a year until January 1947. During all this time, of course, that I'd been out

there, the British government had been trying desperately to try and see how they could hand over power. There'd been several missions that had gone out, and none of them had been successful. On the other hand, it seemed to me that finally they were going to be successful and there was no point in sitting around any longer. Why don't we go back here, to this country? So I planned to go back to Harvard, which I did.

BUGÉ: Why did you want to come to this country rather than going back to Scotland or to England?

ELLIOT: I thought it would be fun. I loved it; I'd been over here once, and I loved all the women around here.

BUGÉ: That's what you liked? That's why you came, for women?

ELLIOT: Oh, you better believe it, of course.

BUGÉ: Your Nancy's had an interesting road to hoe with you, hasn't she?

ELLIOT: Oh, no, nothing like that at all. [Laughter]

BUGÉ: I was not impugning your honor at all, just your interests.

ELLIOT: Well, the American women are really a very attractive group of people. I have less use for men, on the whole. But you know, you have to put up with that situation when you find it. They keep talking about baseball and stuff and nonsense like that. Very troublesome; it interferes with friendship.

BUGÉ: Do you feel the same way about rugby and polo? Or is it just baseball and American football?

ELLIOT: Oh, no. The point is that the lads here, their upbringing has been so different. They've all played baseball. Now some people can sort of get into it. But most games, it seems to me, if

you haven't really played it, you don't have quite the same feeling for it. By and large, I am not a voyeur. I like to look at games if I've been into them myself.

BUGÉ: So you went to Harvard for the women?

ELLIOT: [Laughter] No, *one* particular woman at that time was of interest. And it seemed to me that on the whole, we'd be better off in this country than in war-torn Europe after all. Things were not, on the whole, very attractive at that time. Remember that rationing continued until 1952.

BUGÉ: I have heard about living in England in those years, it was not easy.

ELLIOT: That's right. I planned a visit to home as soon as I could, but it seemed time to get on with a new career rather than wait any longer. So I left India in January 1947, which was just before [Lord] Mountbatten went out. He must have gone out about March or thereabouts. And things up in the Punjab had really been, until that point, really very peaceful. People lived happily, Muslims and Hindus, and everybody together. But not much longer.

BUGÉ: So you had no training in law, but actually law and government was what you were doing while you were there.

ELLIOT: Yes. By and large. I'd read history. But about a third of the history I did was constitutional law in history, and that sort of stuff. So making legal arguments in cases was very familiar to anybody who worked on history. By and large, the universities in England and Scotland prior to the Second World War were very much geared towards the sort of administrative type of career. Most people would, in fact, be going into something like that; if they didn't become doctors or ministers or teachers, very likely would be going into an administrative position. And it tended to be based very much either on the classics or on something like history.

BUGÉ: What did you think your goal was when you left and decided to come to Harvard? How did you decide Harvard?



ELLIOT: I thought it was the best place on this side of the water. I'd already sampled Oxford and St. Andrews. St. Andrews was the oldest university in Scotland; and Oxford was the oldest one in England. And what is the oldest university here? Well, I toyed with the idea of Yale. I thought of diplomatic history, and Yale was good on diplomatic history. And I'm not sure why I finally decided Harvard would be the place. Of course, I may have decided on it because Harvard was willing to take me. But there wasn't as yet that pressure on the graduate schools which developed later. By the time I left the graduate school at Harvard, the pressure was fairly considerable. They were beginning to try and weed people out as they went through the graduate school and not let them stay on and on and on, but sort of move them out if they were not absolutely top, then get rid of them.

BUGÉ: You went into the master's program at Harvard, is that right?

ELLIOT: PhD.

BUGÉ: What's the AM at Harvard, 1948?

ELLIOT: Oh, at Harvard, I got a Master of Arts degree simply for the asking. At some stage, they say, "You now qualify for a master's degree." Curiously enough, I have three master's degrees, two of which are really of little consequence. The AM at Harvard was simply en route to the PhD. They said, "Here it is. Good luck."

And the MA at Oxford is simply something you buy after a given length of time after the BA. The BA is the operative degree. And in fact, I did not get my BA at Oxford until 1956, when I went back to study international organizational law. And at that point, simply by being there for a term—residence was important—I'd done all the work for the BA; and they wanted another term's residence for the MA, which means money. And having done that, I was immediately, because of the lapse of time, qualified to take their MA. I got the two degrees at the same ceremony in the Sheldonian Theatre in 1956. I went in and they gave me a rather nice black hood with white trim, which is for the Oxford BA, and then went out and came in another door; and then they gave me the MA hood, which is the same as all my other hoods—red. Every single hood I have is red. And so there it was. But that's simply because of the money. The Harvard one cost me nothing. And the St. Andrews one I worked for.

At Harvard, I worked on, curiously enough, the Liberal Party of Scotland in the early part of the nineteenth century. I was really interested in why liberalism had become so strong in what were called the Celtic fringes in Scotland and in Wales, and to some extent but not so much in Ireland. By the early twentieth century, much less strong in England; it had lost its hold in a large part of England—the industrial parts which had left the Liberal Party—and it was becoming very much of a fringe affair. In fact, it became even more of a fringe later on, and pretty soon you found liberals in the Orkneys and the Shetlands, and that was about it for a while. This was the sort of interest I had. And since it was a little difficult to get Welsh materials in Harvard at that time, and travel was just difficult; you didn't have much opportunity to go criss-crossing the Atlantic. Fortunately, the Scottish Liberal Party was very happy to send me an awful lot of their stuff. In fact, I had a lot of it sitting in the bottom of the closet right here. And it turned out that there was this sort of vague family connection to this because the main Scottish whip turned out to come from Kirkcaldy, which is my mother's hometown. And I'm sure that my grandfather... must have been very familiar with him. I could remember his house and that sort of thing, so it rang a bell or two there.

BUGÉ: And it was just coincidental that this was the research you picked.

ELLIOT: Purely coincidental, absolutely; I had not thought of it at all for that reason. In fact, I was mainly interested in doing research, getting a degree, and getting out by that time. By the time I finished at Harvard, we had two children, too. So I didn't want to spend forever on this doctorate. And fortunately it took me only three years and I was able to come to Caltech.

I came to Caltech because Caltech was looking for people. And since Rod [Rodman] Paul—I judge, though I don't know this—was a Harvard graduate, and the first place he turned to was Harvard, he wrote to Harvard and said he needed some young history people. And I presume he looked at others. I remember meeting Rod; I also met a guy from Berkeley, but he didn't offer me anything at all. I met Rod; I think, Godfrey Davis, too—you didn't know Godfrey Davis.

BUGÉ: No.

ELLIOT: Godfrey Davis was a fellow at the Huntington Library, a very great expert on the

Stuarts. His widow is still a very good friend and lives up in Santa Barbara; she is now something like eighty-five years of age. Her father was a Harvard professor of economics. And she married Godfrey Davis, who was an Englishman. He'd been to Oxford and had studied under S. R. Gardner, who was the sort of late nineteenth century genius in early Stuart history—he wrote massive volumes of history on the early seventeenth century. Godfrey was something of a prodigy of Gardner's; and his successor, Sir Charles Firth, I think, was Godfrey Davis's tutor. And Firth, in turn, had been brought up by Gardner. So there was one of these traditions. Godfrey Davis died about 1958 or thereabouts.

So he and I and Rod all talked about things. And it may be at that time—also I think Rod asked me to have tea with his mother, maybe just to see what spoon I used.

BUGÉ: This was all back East?

ELLIOT: Yes, all in Cambridge, Massachusetts. Rod came East. I think there was some sort of annual meeting of the Historical Society or something like that. So that means it must have been about somewhere in December or January. Anyway, I got a telegram later from Hallett Smith, asking if I'd come out to Caltech. It was in December—I can date it by my son's birth; he was born in December, 1949. And the reason I know is I got this telegram, and I said, "Jeez, an institute of technology, what the hell's that?" I knew MIT. And I was not tremendously impressed with MIT. I'd been through it and so on, and it was an awful lot of machinery around; it was kind of depressing.

So I talked to Crane Brinton, who was really quite a distinguished history professor, and I said what about this? He said, "That's all right. You don't need to stay more than a year or two there. I taught at MIT for a couple of years after I graduated. Sure, fine, go ahead." So I was encouraged by that thought, and I went to ask Nancy about it. She was in the hospital, that's why I remember, just having had our son, our second child. I said, "Well, honey, how would you like to go to Pasadena?" And she said, "Pasadena what?" I said, "Pasadena, California." She said, "Oh, honey, that's west of the Mississippi." I said, "Yes, it is. It's west of the Mississippi considerably." And I just—not ever having heard of Caltech before and hearing it now for the first time—was surprised too. But then I was fairly flexible; most of my colleagues, for example, would not really go west of the Hudson, and certainly not south of the Mason-

Dixon Line or anything like that. They've become more flexible, too, mind you; but at that time, most of them said quite happily, "California? You have it. Good luck!" So we set off that summer to come to California. We set off, as a matter of fact, on—again, I know precisely—on June 20<sup>th</sup>, which is the day the Korean War broke out. We set off and went down via Chattanooga and stayed a short while with Nancy's parents. And then began to make our way across the country driving.

I think we were driving Nancy's car at that time. I didn't have a car. I didn't have beans! I had a teaching fellowship at Harvard; and for the rest, we were fortunate that Nancy had some resources of her own; otherwise we would have been in deep trouble. Fellowships at Harvard, what did we get? I think something like \$2000 a year. Of course, it was worth more than it is now. But not just an enormous amount.

Anyway, we got down to Chattanooga, and Nancy's father said, "That Mercury you're driving is getting a bit old isn't it?" It might have been about five years old or something, I don't remember. He suggested we swap it for this Chevy he had, which was certainly a good deal newer. And it may have been wise; I don't know whether the other would have made it across or not. But we made it across in the Chevy, and made it across, fortunately, just before Master John, the young lad who was born in December, just before he was able to crawl from the back seat to the front seat. As we were coming into Pasadena, he suddenly appeared in the front seat. We'd put a mattress across the back and he was fine, because he could crawl around there but couldn't get out.

BUGÉ: How old was the first child?

ELLIOT: She'd be two-and-a-half at this point. And she was a girl, so she was a fair bit more reliable, not in throwing things around on the table, but less adventuresome, less inclined to get into trouble, a little gentler. John, you couldn't corral him. Nancy came out one morning and found him standing there, brandishing two bars from the playpen which he had yanked out.

So here we were; we ended up here. And there were not very many people around. I remember Hallett Smith was here. He had a house on Wilson at that time. In fact, he asked us to come and have dinner. And that very day, his wife found the house which they bought. So she was off looking at this house; Hallett was trying to give us a drink, and all the rest of it; and

confusion reigned. But they did it very gracefully and nicely. And he's been in that house he has now since that time.

BUGÉ: He hadn't been here very long at that point, when you arrived.

ELLIOT: Not more than a couple of years. There was a whole turnover after the war. I replaced a lad who, I think, went off to sell shoes or something like that, who had taken the place of Wally Sterling, who had been the, sort of, Europeanist before. And Wally had gone off maybe a couple of years before this guy I was replacing. And so it was sort of a post-war turnover. Kent Clark came just after the war. And Rod came and had been there a couple of years. So it was a young bunch of people.

BUGÉ: What were they expecting from you?

ELLIOT: What they expected, when I got to Caltech in 1950, was teaching. They said, "These are your classes." I had History 1, and I used to teach three sections of History 1, which was compulsory. They all had to do European history, which was a sort of half course—five units, as I recall. And there was a parallel English course. They had to do English and history in the first year. They did a course in American history the second year, plus, I think, some economics. In the third year, they did Junior English, which was Shakespeare basically. And then in the last year, they did what we called the Senior Elective. All this is lockstep—you did Physics 1, Chem 1, Math 1, your English and history, and that's it; and you have one free course. And in the sophomore year, ditto. There was no business of, "Do you want to do this, chum, or that?" Or whatever. You just did what was said. And then in the senior year, they had the Senior Elective in which various members of the faculty would teach whatever happened to interest them. I taught one on modern Britain, as I recall, in addition to History 5, which was a course on public affairs, which all the seniors had to take. And for that, they read the news of the week in review from the *New York Times*. And they had one lecture, a large number of which I gave along with Alan Sweezy—Alan and I really, essentially, were in charge of the course. And so he and I would do that. And Rod lectured sometimes; others lectured from time to time. But that course ran all year. The History 1 ran all year. And then in one of the terms, you had these electives. And that was expected to take you four out of the five days of the week. Now, since the

scientists had a day for consultation, we were supposed to have a day off in which we could do some research. And Hallett, on the whole, tried to arrange things so that you had actually one day—not just two half days—free, so you could go to the Huntington Library. But throughout the fifties, the responsibility within the division was to teach. Hallett used to describe it as a sort of liberal arts college within this scientific research institute. And some of the cruder types talked about humanizing the scientists—some needed it, some didn't. But that was the sort of function we had. So it was definitely to teach.

BUGÉ: So the day that was set aside for research was actually an enrichment for you, an incentive for you, rather than an obligation from the institute's point of view.

ELLIOT: That's right. They didn't, on the whole, expect a hell of a lot. They were not going to object. We'll come to it later, but this changed. It's quite interesting, but at this time, it was very definitely teaching. And if anybody proposed a new appointment, for example, it could be justified *only* on the grounds of teaching. Do we need a teacher? We don't? No appointment. And in the fifties, it seemed to be regarded as a fairly successful operation. We had people here; I remember one coming around, seeing how we did it here, in order that they might copy it. There was one lad from the Imperial College of Technology in London, for example, wanting to know how do you get across the humanities to these youngsters. And there was another, I can recall, from Australia.

BUGÉ: Before we go on, how did you find the institute when you came here? Was it the foreign country you half expected?

ELLIOT: It was very nice. George Tanham you may have heard about. George Tanham [who taught military history at Caltech before joining RAND in 1955 –ed.] was a young guy from Stanford who came here after a very brilliant wartime career—he'd won the Croix de Guerre and things like that. He had a very distinguished career. He'd, I guess, landed in Normandy and driven a tank all across Europe. He was a tough little guy—not so little; a nice fellow who came from the South. And he was married to his then second wife.

BUGÉ: Even in those days.

ELLIOT: Oh, yes. There was a wartime marriage. And I really know nothing about that. Then that ended, and he married Patty, and had several children by Patty. He was master of student houses, as well as being a professor of history, or assistant professor or lecturer at this point, and lived in Arden House, next door to the Health Center—that was the master of student houses’s house. He had succeeded a man called Goldworthy or something like that only about a year before. And he was very good as master of student housing; the guys got no change out of him at all. He knew all the mischief they’d be up to. So he had no difficulty in handling the students. But he was in Europe at this time. His thesis had been on the Belgian underground, and he was doing some work on that in Europe. And he very graciously said, “Well, you can stay in my house.” So we stayed over there. And there were not many other people here. I remember a guy called Mel [Melvin David] Brockie, who was an economist. Mel always wanted to see the tops of their heads when he had the class, liked them to focus on what they were doing and be writing careful notes of what he was saying and not just dreaming. And you ask about the foreign country! He very kindly said, “Why don’t you come up and visit us tomorrow night or Saturday night,” or something like that. I said, “Fine, what time?” He said, “Eight o’clock.” And we went into a huddle at that point. Eight o’clock? Now what does that mean? Surely, it looks a little late for eating. But on the other hand, who knows what they do around here. And maybe we ought to get the kids in bed or something like that. So we finally decided that this was a dinner invitation. That was our big mistake. We arrived on Mel’s doorstep and he welcomed us warmly. We sat down; he said, “Let’s hear some music.” I remember to this day, we played Horowitz, “The Great Gate of Kiev,” full pitch and turned up. We sat and listened to that and thought, “Gee, will we get any food, do you think?” [Laughter] Sat there for about an hour! And then Jane, his wife, went out. She said, “You might like some refreshments,” and that was exactly true, and brought out a bowl of nuts, which I have to say, we descended upon in very, very short order. We may have got a drink or something like that. But about eleven-thirty, we were turned loose on Altadena. We had no idea where to go or anything like that. In fact, everything was closed—they rolled up the carpets. So that was not one of the greatest experiences. They were very friendly. It was not their fault that we misinterpreted this whole situation. If we’d had any sense, we could have said, “Do you have a sandwich?” Anyway, there we were.

Who else did we see in this early stage? It’s probable that I went in and made the

acquaintance of Earnest Watson round about this time. I'm sure I had to check in and report to him.

There was another little fellow who was very helpful, called Bert [Herbert H. G.] Nash. He was a very interesting, imaginative sort of guy. I'm not sure what his technical position was, but that's something easily ascertained. He managed all the, sort of, personnel things—insurance and so on. He was very good in dreaming up new policies. If I'm not mistaken, we had no Caltech health insurance when I came. But he dreamed it up; and I think, probably, dreamed up one of the first university health insurance plans in the country. The reason I say I think that's true, he had to go to Lloyds of London to find anybody, any insurance company, who would do the job for him. But he sort of wrote out the target and finally got Lloyds to agree and put it into practice. So he was very helpful. And he had a little office. If you had any difficulties or problems, and that sort of thing, with the details of life here, he could sort it out. I think he was, among other things, a secretary to the Board of Trustees. Much of the administration was handled by [Lee A.] DuBridge and Bert Nash and Chuck [Charles] Newton [assistant to Caltech's president, 1948-1966], and that's about it.

BUGÉ: Did you have second thoughts, after you got here? Did you think, “Oh my God, we should have stayed in Cambridge?”

ELLIOT: No, I got to like this more and more. I took only one trip back. When I came out here, first of all, it looked like a burned up countryside to me, not unlike the northern parts of India where I'd been, with bare hillsides and that sort of thing. Dry! Then I went back. I had a meeting in the East, and I was back in the Hudson Valley. And then I felt the vegetation was suffocating, it almost throttled me. I'm a Westerner. So, no, not after the first initial shock—which is a shock. And it was a pretty simple place.

BUGÉ: So even intellectually, you didn't—

ELLIOT: No. But I'm pretty simple, intellectually, too, you see. And there were plenty of people to talk to if you wanted to talk. It was a happy, congenial group we had here. We seemed to get along amiably and well together. The only thing was we went round and round to each other's houses, so it got a little tiring seeing the same people again and again.



**DAVID C. ELLIOT****SESSION 2****April 15, 1986****Begin Tape 2, Side 1**

ELLIOT: In the division of humanities we did have some social scientists, in that we had two or three economists, something like that. But that was all—no political science, no anthropology. We had the psychologist John [R.] Weir, who appeared at some stage, I'm not too sure, sometime in the fifties. But that was all. There was no great emphasis on the social sciences.

BUGÉ: When he came, was he a regular appointment, or was he visiting?

ELLIOT: No, no. He was a regular appointment and he stayed for a number of years. He did a lot of work in regard to admissions. He sent questionnaires to alumni and that sort of thing, and tried to make sense of our admissions procedures, for one thing: What sort of people were most likely to succeed when they came at Caltech, so that success was plotted in terms of various arcane numbers and so on—taking the SAT scores and a few other things, high school grades, plugging them in to some formula to see if they succeed or they fail. That, I think, had a good deal of significance for admissions. His work in that area, admissions, was carried on after he left by Barbara Brown, who continued on until I guess about 1970, give or take a bit, working on the statistical side and producing all sorts of numbers, which were helpful in admissions.

BUGÉ: Were you working with admissions at all, then?

ELLIOT: Not at all. I didn't start that until the middle seventies, by which time there was very much less of that. In fact, I'm not sure if a great deal of that has been done over the last few years. Anyway, John Weir was there sometime in the fifties. He was into a certain amount of sensitivity training stuff, too, which got very hot somewhere in the fifties, early sixties—sensitivity training, where you'd go around being totally honest, and touching people, and that sort of stuff.

BUGÉ: That started in the fifties?

ELLIOT: Oh, yes. He was involved in something. In the summertime, he'd go off to Bethel, Maine, which I think was a great place for this sort of stuff—how to win friends and influence people. And it was very much into touching people, and on telling people what you think about them. They had one session, at which I was not present, but Bob [Robert A.] Huttenback was. And he told me afterwards that they'd tried that out on him, and he said, "I'm not about to tell people what I think of them; I've got to live with them." [Laughter] It was the understanding of how people perceive you. The [Caltech] Y had great interest in this. Wes Hershey was very much into this, too. I would think it was the late fifties, though the time scale is difficult to recall. It certainly went into the sixties, and sort of faded out with the sixties.

BUGÉ: I thought it was all in the sixties.

ELLIOT: It could have been, but I think John Weir started off pretty early with that.

BUGÉ: What did the scientists think about that?

ELLIOT: I don't think there were many of them who got greatly involved in that. It was more with the kids, I think, they tended to operate—the instructed. The others were sort of interested in matters of the mind, like Fred [Frederick B.] Thompson [computer science professor], for example. Still, I don't think he thought very much of this general notion.

BUGÉ: What did you think?

ELLIOT: Well, I had the feeling that there were many ways to skin a cat; and if that was their particular way of doing things, good luck to them; but it's not my particular approach. Though there's a certain amount in it, that the actual physical contact can sometimes be helpful. My daughter tells me that you have to be hugged eight times a day. You have to be careful, though, because for some people, a physical pat on the back may be encouraging and attractive, and for others, it may be thoroughly unattractive and they don't care for being pawed all the time, or any of the time, for that matter. But for those for whom it's attractive, or between those who have

sort of fairly intimate relationships, I would think it's an important type of thing.

BUGÉ: It was certainly illuminating for the society when all this became so popular.

ELLIOT: Oh, I think so, and particularly for the Caltech society, which was, as we said last time, talking about Margaret Mead, on the whole not into the emotive side of things at all. And I think much of that was probably quite helpful for these lads—and there were only lads; there were no lassies at that point, a totally male institution. And many of my colleagues then were very anxious for it to remain that way.

BUGÉ: I wanted to ask you what you thought about that, since in Great Britain all your experiences have been in coeducational institutions.

ELLIOT: Normally I'd been used to an institution of higher learning being coeducational; it had been in Britain for a couple of generations. But here, this was a very monastic institution. And by and large, I had the feeling it would be improved by a certain amount of feminine infusion.

BUGÉ: Were you surprised to find that it was not coed?

ELLIOT: No, no, because I'd come from Harvard; and MIT was strictly male, too, at that point—maybe not strictly among the graduates. Our first woman here, too, came here with some professor of chemistry from, let's say, Yale or something like that. One of his students, a woman, wanted to come with him and finish her degree at Caltech. So there was this question: Could we admit women to the graduate school to Caltech? And we had a big faculty meeting about that, with all sorts of strange arguments.

BUGÉ: Was that at the beginning of the time when they started to admit women, or was that much earlier?

ELLIOT: Oh, that was ten years before undergraduate women were admitted. So I guess this came about in the early fifties, that women were first admitted to Caltech as graduate students. And undergraduates weren't until the middle to late sixties, I would think.

BUGÉ: I've never thought of this place as monastic in the early years. I thought of it more as a gentleman's club.

ELLIOT: No, it was more austere than a gentleman's club. A gentleman's club carries the connotation of a certain amount of amateurishness, too, I think. There was this professional element here, and these were dedicated Jesuits—dedicated to science, and that was their god. All their time, day and night, was likely spent on science. And the kids, on the whole, in the fifties, quite often didn't know how to behave around women at all. They were very unsophisticated youngsters. Of course, the whole of Southern California was much less sophisticated than it has since become. Coming from the East, it really gave you that impression. It was a much simpler type of society. And the notion of the Caltech student houses housing gentlemen I think would be a little odd at that time. In fact, there was a certain amount of effort to improve their general social manners. They had what they called a lost weekend or something. I didn't have much to do with it. I think it was a weekend in which they brought women into the student houses, and they had parties and so on and so forth, carefully chaperoned in those days.

BUGÉ: Who organized that?

ELLIOT: It could have been the deans; it could have been the master of student houses—that sort of thing. But I don't recall, really. Some faculty wives were involved. I remember Morgan Ward's wife—he was a mathematician—was the chaperone on one occasion.

BUGÉ: And what did you think of the students as you saw them in your classes?

ELLIOT: The first students I got were a shock. This was the beginning of the Korean War, and the students were all somewhat concerned that they might be drafted. And that was sort of hanging in the air to such an extent that we imported the ROTC at that point, and the faculty voted to have an ROTC on campus, and so we had the Air Force ROTC for a number of years. But the kids didn't all have their mind on the job. I think by that time the immediate postwar group of veterans had gone through—they spent four years, from '45 to '49; they were through and out. So that somewhat disruptive element, as I would judge, was out. These kids were sort of a callow bunch. We came to the end of the first term, and I gave an exam; and a significant

number—I don't know how many—handed in totally blank books, nothing, absolutely zilch. I think about a third of the class—and you'll take any number I give you with a grain of salt—about a third of the class just left at Christmastime.

BUGÉ: No kidding! Were they there to avoid the draft?

ELLIOT: No, no! They were genuinely recruited in the same way, but they were so unnerved by the unsettling atmosphere—you know, “Is it worth working,” that sort of thing. Otherwise, there was no particular reason for them to drop out completely. Except that that is when in the old days the Caltech system really hit them for the very first time. Without a lick of work, they'd got A's in their high school class, and here they'd get C's and D's and F's, and that type of thing. And they'd be totally undone. It wasn't until the early sixties, I think, we gave up freshman grades; and that postponed the evil day somewhat. They didn't have to meet the whole thing in one great avalanche, as it were. So that was my impression of these students: Are these boys serious? They're clearly not seriously doing this part of the job. However, a number of them survived, and I think several of the people who were there in the first year or two are now on the faculty. Fred Anson was one of the early students I had. Howard [C.] Berg was another one; he's in biology—little things that go scurrying around; little propellants I don't know what they are. [Laughter] These are living organisms, that sort of thing. Very odd, what you see on an oscilloscope, or whatever that screen is; there is not necessarily reality. Anyway, I'm not sure that Neal [Cornelius John] Pings wasn't in there, too. Anyway, several of them were here in the early fifties; so they certainly didn't all flunk out. There were some very good ones. The best student I have ever had at Caltech, Matt [Matthew] Meselson, was here in the first half of the fifties. Actually brilliant, he produced papers that I have not seen matched anywhere.

BUGÉ: Really! What field did he go into?

ELLIOT: He's a biologist, and now a distinguished alumnus of Caltech. He was here on the faculty for a while, and then decided the smog was going to be too much for him. So he went off to Harvard; and he's been there ever since, from about 1961 or '62. He had a great deal to do with the United States signing the biological weapons treaty, and has been very much involved in sort of national politics.

BUGÉ: What was he writing about when he was in your class?

ELLIOT: God knows, whatever essay we had him write—this, that, and the next thing: causes of the First World War, or ancient feudalism, or something like that. He could do that as well, maybe even better, than he does biology; and he does biology very, very well.

These were some of the students we had. So there was really quite a range in the capabilities.

BUGÉ: Is that still true?

ELLIOT: I've never come across anybody with the skills that he had. One or two have come close.

BUGÉ: But do you still get a broad range?

ELLIOT: There are relatively few who will have both the ability and the urge to do really well. The grades tend to bunch up around a B, or something like that. On the other hand, there are relatively few, I find, who are stupid enough to fail completely. If they fail, they're usually just sort of goofing off completely across the board.

BUGÉ: Why don't we talk about the role of the humanities, the way it's changed since you came here. There have been some really major changes.

ELLIOT: Yes, that's right. When I came, as I think I said before, we were regarded pretty much as a group of people who would help the students to write and think about values as well as about scientific subjects, and concentrate on the undergraduate teaching, which was the main job of this division. I think I said you couldn't get an appointment unless there was a teaching need to fill. Our teaching requirements were very precise; I think we talked about that—there was the lockstep type of thing, year by year, exactly what you had to do. The units were carefully parceled out, and I think it was only in their senior year that they got complete freedom to do what they liked among a number of things. All that has changed. It began to change in the sixties, this sort of rigidity of the schedule, as it seemed increasingly desirable to let the students

come at least in part as volunteers. That is, they could at least choose history or English or philosophy or something like that, instead of having to take this, that, and the next thing. And that was part of it. The other change was, I'd say from about 1965 on, the people who came to teach at Caltech were themselves much more interested in research and thought of themselves as much more—not just as teachers in comparison with the scientific researchers, sort of thing, but as people who regarded themselves as being in a university atmosphere and equally desirous of doing their research. And for some, the teaching was, if not completely secondary, at least a little bit downgraded.

BUGÉ: That must have happened in response to an administrative decision to have it happen.

ELLIOT: No, I think we clearly, as we hired people, simply tried to get the best person we could. There may have been a market shift in that it was easier for us to get the very top guys from whatever university it was, that there was a larger supply of qualified people for the jobs. I think this conceivably happened. On the other hand, it may have been simple chance. The research was always there, and you were always expected to do that; but your teaching responsibility came first in the fifties. In the sixties, it began to shift and by 1970, it would have gone pretty much the other way—that the most important thing to do was research, and promotion and so on would depend on that rather than on teaching, or anything else. Not that before that time there'd been none, but there was a shift in emphasis, I think. Dan [Daniel J.] Kevles is a case in point. He had the feeling that he and others in the division should be like the scientists—do no more teaching than scientists do around the institute, and you know that's not much for most individuals. Their research is important to them. And I think people like that wanted to spend their time on research, and they had the passion for it, as Dan, for example, showed. He has produced a great deal of very good stuff. It meant an awful lot of hard dedicated work; and so he wanted to—and others increasingly like him wanted to—think in terms of his research. When you thought of appointments, you would think rather more of people who might be of interest to him and close to his field or filling other research needs, or something like that.

BUGÉ: So it actually became a system that might have begun accidentally. First, just hiring the best person for the job, but then those people whose interests were in fact more research oriented beginning to control things.

ELLIOT: That's right. And a different sort of person, I think, was coming here. If one takes another example, who is quite different, would be Peter Fay, who in the fifties—he came about '53, '54, somewhere around there—had very heavy teaching responsibilities. It wasn't really until the seventies that he burst forth with his first book, which is a first rate book. He had it in him all the time; but it might well have been difficult to produce. And everything else moved in that direction, too. There was no particular financial support for research in the fifties from the institute. If you got a Guggenheim or something like that, the institute would support you. But nowadays, there's a certain amount of research money that the division has which it can use to support people on this, that and the next thing. That did not exist in the fifties.

BUGÉ: Do you think that the students were served better in the fifties?

ELLIOT: We saw more of them, I think—at least we did in this division. We saw a great deal of the students. Most of the people in this division tended to go to students' social occasions and so on, a great deal more than they do now. In part, that is good. In part, the change has meant that other areas of the institute, other faculties, have done more of that, I think, than they did before. Recently, the master of student houses, for example, has been in other than this division. Prior to that, for a long period—twenty years—he came from this division, that type of thing. So I think, in a sense our contact has become less special with the student, with an obligation to become much more diffuse throughout the institute.

BUGÉ: Well, you were nurturing in all ways.

ELLIOT: We tended to be. The function of the division would be described as humanizing a scientist or getting him to understand at least something of other ways of looking at life and the world's problems and so on.

BUGÉ: I wonder, with people so concerned with their own research problems, do young undergraduate students get that cultural understanding of the world now?

ELLIOT: Get the understanding of the world? No.



BUGÉ: Somebody said—I think in another oral history—something about providing a framework for the making of value judgments, that they will, in fact, be making in their lives as scientists.

ELLIOT: I don't know. It's hard to tell. The big change which has taken place between the fifties and the eighties is that this division has the same amount of class time, working time, with the student body as it ever had. But something like a half of it is in the social sciences, which in some cases, as I understand it, might look very much more like their own scientific fields than dealing with poetry or music or art, and that whole range of things. It may be manipulating numbers and graphs and computers and stuff in economics and in some of the other social sciences, I think. On the other hand, there are the social science approaches. For example, in political science, I would believe that Bruce [E.] Cain is helping them to understand the world just as much as, for example, I did or Peter Fay did in European history or something like that. But, of course, he's a rare bird. He is one of those who can talk very easily to both sides of the division; not everybody can do that. There are some, on one extreme, who just don't understand what the others over here are doing at all, and possibly don't care; I don't know.

BUGÉ: Is there some hostility, do you think?

ELLIOT: Oh, I think by now most of the hostilities, which were indeed very genuine in the seventies, extend to the faculty, I think. We don't get together as a division in the way we used to in the fifties, when large numbers of the division met on a social basis very often. At that time, in the Athenaeum, we talked about that History 5 lecture class that I used to give with Alan Sweezy. And there'd be a good number of the faculty from the division who would come to the lectures, whether or not they were participating. And even more would come to lunch at the Athenaeum afterwards at a sort of humanities table that we used to sit at. There's nothing like that anymore. That went sometime in the late sixties. We saw a lot of each other

BUGÉ: Did that disperse in response to conflict over the social sciences?

ELLIOT: It dispersed in part over that, I think. But at the same time, the curriculum, you see, is changing too. And History 5 was one of these things with just two units; you couldn't fit it into

the sort of optional system that you were developing. So that course as such went out the window. And the two units disappeared, and everything was nine unit courses.

BUGÉ: And did anything take its place?

ELLIOT: Well, what took its place were specific courses on narrower subjects. That is, instead of talking about the world in general and that type of thing, what's happening in the world today, there'd be courses on modern history in regard to Russia or Germany or the UK and the British Empire; you name it, that type of thing; economics, how the economic system works, and so on. So that was how that particular change was made.

BUGÉ: But it sounds like, in the balance, more was lost than was gained.

ELLIOT: Well, I think that I have the feeling that in the 1950s, we did a pretty good job of acquainting people with what was happening in the world, what was going on, and having them think about things. You did have a forum in the History 5 for discussing these things in some sort of formal way. You could argue about them later, for example, at lunch, if you wanted to. So that was sort of helpful.

BUGÉ: So, as more social scientists came in and that kind of unified feeling began to break down, how did people respond to that?

ELLIOT: It became larger; the numbers increased considerably. And the group of economists, as we got into the late sixties, early seventies, something like that, were fairly aggressive in wanting to have exactly this, that and the next thing, various appointments and so on and so forth; they tended not to like anything very much that got in their way. So that if anybody else wanted to argue for something else, they'd have a hard time, particularly since that group of economists had very loud voices, literally. And if you shout hard enough long enough, that takes care of it. In any case, there was a good deal of support for some development of social sciences, which had been going on since the late fifties.

BUGÉ: Support that comes from where?

ELLIOT: From the division; but again, from a number of people in the division, not by any means, from all. Now, the people in English, I think, were on the whole pretty skeptical from the beginning. They had the sense, and maybe quite rightly, that this would just mean trouble for them. And in that they were, on the whole, farsighted. In history, I think for the most part, we tended to push and support the development of social scientists. At least, I certainly did. I had been basically of the general feeling that this place was, again thinking in terms of the undergraduate, that this place was limping along on one leg—you know, a scientific leg—and there was not an equal balance on the other side that was not a full university complex. And that the undergraduate would probably be better off if he had people with majors in history and English and art and so on in the student houses, so they could talk about these things, where they do learn, not in classes where they don't learn.

BUGÉ: Did you have second thoughts when the economists began shouting for their own way?

ELLIOT: [Laughter] Well, it becomes more complicated there. As I said, many of us in the late fifties and the early sixties were interested in the development of the social sciences. But if you took ten people and asked them what they wanted to see and how they wanted to see it develop, you got ten different answers. If you went out beyond this division into other concerned divisions, and the biologists were concerned, the people in the sort of computer science area were concerned, and the point which caused the most friction was in psychology. What sort of psychologists would you appoint? There were no two of these various groups, I think, who could agree on the sort of psychologists. The biologists wanted somebody like B. F. Skinner—"there's a guy now, and he understands the way to really get at this, in a good scientific way. We'll not have these guys who are fooling around with social psychology, or you name it, any of the other soft types of psychology. We're not going to have them; they're not *real* scientists." There was considerable difficulty, as I recall, of getting someone like Louis Breger, who's been very helpful for sixteen years. It wasn't all that easy to persuade anybody that this was the right type of psychologist. So you see what's happened; there's virtually no psychology here; you couldn't squeeze another psychologist in without some sort of eruption, I think. And that was the hardest thing to deal with.

Then, of course, when it came to the economists, or indeed any other political scientists

too, there was a real split between the behaviorist type and someone like Ted [Thayer] Scudder, for example, in anthropology, and the hardnosed analytical types of social scientists who really wanted to get things in numbers, like Charlie [Charles R.] Plott or somebody like that. There was a real division in emphasis between people who wanted to go one way or the other. Eventually the behaviorist group, who had all sorts of visions about what they would like to do and the sort of people they'd like to hire, were quite vociferous in explaining to everybody. That was one group.

Then, the other group was the group which developed.... First of all, we caught a lad called Burt [Burton H.] Klein in economics. I think he was the first. He, unfortunately when he came here, was not well; he thought he was sicker than he was; he had some problem which required a major operation after a year. So he was not well, and that may have had something to do with the uncertainties of this situation.

Lance [E.] Davis, I think, was the next one to come. And he along with Roger [E.] Noll, who had just been brought in about that time by Alan Sweezy, who sort of trained him at Caltech, almost bootlegged him as an economist—he happily did that, one of the sensible ways to go, to just quietly train a few economists in the nature of god knows what mathematics and things. But he had given them all they needed in economics, and Roger went on to Harvard in economics; he came back here. They both, Lance [E.] Davis and Roger, on the whole, would tend toward the model building side. The other group would tend on the humanities side. They tended to dominate, and with the help of Bob [Robert A.] Huttenback, of course, they got a large number of appointments at that stage and were able to promote a graduate program in the social sciences, which was about 1970 maybe, give or take a year or two. And then they appointed people very rapidly. Who was president then? Harold Brown, I guess. Anyway, they got it through without too much difficulty.

BUGÉ: You were executive officer of the division about that time. So what was the division doing about this?

ELLIOT: The division head was Bob Huttenback at the time that this had been pushed through, because he succeeded Hallett Smith about '69 or '70. Harold Brown appointed him. Harold Brown must have come in the summer of 1969, and fairly quickly a change was made in the

head of the division. Hallett had been there for twenty years.

BUGÉ: Yes, there was some—unpleasantness might be too strong a word, but it wasn't exactly Hallett Smith's choice to step down, was it? Wasn't there some pressure applied?

ELLIOT: Yes. [Laughter] You really want to know what happened? I do remember it fairly vividly. Backing up, there really had been a good deal of discontent in the division for, let's say, five years; to the point where Hallett received at least one anonymous note suggesting that he step down. And to this day, I don't know where that note came from. But these anonymous notes turn up, and I think it bothered Hallett. He tried to overcome the problem, but he really did not want to make any great change in the division. And then the one thing that probably a majority of the division felt was that it was necessary to do some developing, and probably in the social sciences. He appointed me executive officer in order to work on the social sciences. And this is part of another story which we can go into. It goes back to this sort of science and government program and that sort of thing. At any rate, that was my responsibility in the first instances as executive officer. But the revolt eventually was a revolt against me as well as against Hallett, because I think I might fairly say that my efforts to develop social science in the division were not all that successful. And a number of very good people that we might have had turned us down. Turned us down, why? Not always clear, because I think there were confusing signals coming from people. I would tell one thing; what Hallett told them, what Bob [Robert F.] Bacher as provost told them, and what DuBridge as president told them, I don't know. But I had the feeling they were getting confusing signals.

Well, there was this sort of unease and uncertainty for some years before, whenever it was, it was the end of an academic year. And, was it the very first year that Harold Brown came? I don't know. It would seem to be more likely 1971. But at the end, something like in May of '70, I think—yes, that's when it was; I had a heart attack in December of that year, so I remember.

BUGÉ: This might even have had something to do with it, by the sounds of it.

ELLIOT: It was a very tense period, it was the most stressful period I've had, I think, at any time.

**Begin Tape 2, Side 2**

ELLIOT: We had a lot of to-ing and fro-ing, one might say, about this time. There would be cabals and so on and so forth, getting together, paddling their own little canoe. Lots of that, lots of politicking, as one would find in a situation that's changing and everybody is looking for their particular interests and so on and so forth; that's the sort of background. Harold Brown not being one to futz around, if one might put it that way, one evening, whoever was his secretary at that time, called up and requested that I present myself at the president's office at 8:30—Harold Brown is an early riser; Bob Huttenback, quite early on, discovered the best way to get to Harold Brown was to go at 7:30 in the morning. Anyway, that was not the time that I was asked. I was asked to come at 8:30. So I went over there at 8:30. When I got into the office, which was the old Throop building there, Hallett was just coming out. He had been in to see Harold Brown. And it's my understanding that Harold Brown had told him that he was making a change; and how the point was put to with Hallett, I do not know, because Hallett and Harold Brown were the only two who were there. But I know, because Hallett told me, or somehow I came to know; or it became so obvious what had been said. Then I had to go in at 8:30. And he said to me, would I continue as executive officer under Bob Huttenback. I said, "I don't see why not." Harold Brown said, "You'd be very useful." I know the ropes and budgets, and so on and so forth. So that didn't take him long. Then, I don't know whether when I went out, Bob Huttenback was just going in, but he went in very soon after that, and he was the third duck in the row. And Harold Brown had everything taken care of by nine o'clock in the morning.

BUGÉ: By nine o'clock, the whole thing had been restructured.

ELLIOT: Exactly. He appointed him for a year temporarily, because as I recall, he didn't want Bob to be all that secure; he wanted to test him out and let him shape up and not get the idea he was going to be there forever. At the same time, he ordained, or the Administrative Council which Harold Brown set up ordained, that the tenure of divisional chairman be five years, possibly renewable for another five, but no more. Because the group of divisional chairmen that were there in 1950 was a very long-lived group, the administration was very, very stable. Fred [Frederick C.] Lindvall, gosh, he went on for nearly twenty years, too, I think. Bacher was there, except that he moved up to be provost. Anyway, a very stable administration; and probably it

was too long for any person to be here, for twenty years. Harold Brown was a very good administrator. He wasted no time.

BUGÉ: So he hadn't been there very long when he took it upon himself to do this.

ELLIOT: No. I think this must have been May 1970; and Harold Brown had been there for I'd say ten months or thereabouts.

BUGÉ: Why do you think Lee DuBridge didn't do anything about this situation?

ELLIOT: It was at the point when Lee DuBridge was about to leave. And he left, you see, in 1969, to be Nixon's science advisor when Harold Brown came out here. I think that he had the feeling probably that "there's no point in my changing things and stirring things up in the last few years of my tenure."

BUGÉ: Yes, but under his tenure things had come to this point; there had been a division chairman for fifteen years in the humanities.

ELLIOT: I think that probably Lee DuBridge did not feel the degree of tension in the division, I don't think. Though Bacher should, I suppose, have told him. And they were both kindly sorts of people, and would not like to have hurt Hallett's feelings. And when he came, you see, he was essentially, I mean, given the usual procedure, this was tenure as division chairman; that's the way they handled things. And he was given a clear understanding—I know Hallett was—that he wouldn't have too much teaching; he'd have this administrative responsibility, but he could have lots of time at the Huntington Library to work as a Shakespearean scholar.

BUGÉ: Do you think DuBridge was more in tune with the old fashioned idea of what the humanities was to do?

ELLIOT: Oh, I would expect so, and that he was not all that anxious to see any particular change. My impression would be—and I don't want to put ideas into his head—but it would seem, I think you're probably right. He would have gone along with any agreed sort of change, and by

and large, he was inclined to let the faculty generate the ideas and he'd manage them, promote them, support them, and that sort of thing. But if he and Bacher, too, were getting confused signals, as no doubt they were—what in the world do they want, that type of thing. He was well aware that Hallett was a conservative administrator. There was a chap called A. P. Hill, who came here. He came here for a year, a term, something like that, about 1963, from MIT. He was, I think, an electrical engineer and had worked with DuBridge in the Radiation Lab at MIT during the war and knew DuBridge very, very well. And I remember his once telling me what DuBridge had said to him: that under Hallett, there're not going to be any changes. And maybe DuBridge was happy with that and didn't particularly want to see any changes taking place. So who can tell?

But anyway, it changed very rapidly under Harold Brown. It had to change, too, I think; it was time for it to change. And I think Hallett could recognize that, too.

BUGÉ: You were fairly satisfied, then, when he put Huttenback in.

ELLIOT: No. I would not say that particularly; it wouldn't be truthful for me to say that. But I think there was probably no other alternative.

Bob had been working very hard politically to put himself in the position where he would be the only possible successor. And I think during his term he did a good job. He had his weaknesses, but I would think he did better than anybody else would have done in that position, partly because he's a very skillful, political type of person, a very good manager, and enormously innovative. He could think up more ideas on how to work things than you could imagine—very skillful in that. And he was handling, you see, not only the division; but he was dean of students at this time, too, and he continued as dean of students. Harold Brown made the comment that he was the only person he could think of that he would put in this position as chairman of a division as well as dean of students, and had no doubt that Bob Huttenback could handle it. One of the first things he did as dean of students was once a week he would go and sit out on the Olive Walk, and just sit down and wait for any student who wanted to come by and sit down and talk with him.

BUGÉ: And students did?



ELLIOT: Yes. And he was a very skillful gamesman. He was sort of one jump ahead of most other moves around.

BUGÉ: Just knowing to go to the office at 7:30 in the morning is already a sign.

ELLIOT: That's right; there are no flies on that guy. He is very skillful. So he was a very obvious choice for Harold Brown.

BUGÉ: So when you said no—it wasn't particularly pleasing—was that based on personalities?

ELLIOT: Yes, because I thought that he had not been entirely straightforward with me. But that's neither here nor there.

BUGÉ: But it is, because it's all part of the politics.

ELLIOT: That was my feeling. [Laughter]

BUGÉ: But you did carry on as executive officer, in any case.

ELLIOT: That's right. I said I'd do it; and, you know, Harold Brown put it to me as not disrupting the division, and so on and so forth—not that I really had anything to do under Huttenback, so that it was more of the façade-type of operation than anything else.

BUGÉ: Where, in fact, you had worked hard under Hallett Smith.

ELLIOT: For the first part; later on, it was becoming a non-job, too, because Hallett, on the whole, had a hard time delegating, too. So that this was a difficulty for him, as he couldn't do it. If you had an idea—he was very good at this—if you had an idea and wanted to do something and wanted to set up some new course programs, he would say, "Go ahead, do it." And he would not interfere at all. But surrendering any of his particular power—you see, the chairman of the division was a little dictator in those days. We had tried to pin him down by a little sort of advisory committee; and that's what it remained, very much of that. I remember he had a faculty

meeting way back in the early fifties about something or other. But after a year or two that passed, it was just too much—forget that and scrub faculty meetings, good night. Because it would be like what faculty meetings usually are, a disorganized sort of bunch, idly nattering away. And Hallett wasn't going to waste his time with these things. He's quite right in that situation. In the fifties, it all worked very well. But in the sixties, it was time for us to begin shifting a little bit and handling things in a different way. By the late sixties, even the students wanted to have a piece of the action. And that very much tended to go against the grain, uphill all the way, you see.

BUGÉ: So what do you think about where it's ended up?

ELLIOT: Now? I think we've shaken down pretty well. It's taken us ten or fifteen years to shake down, because there were a number of very bitter sort of fights, the most notable one being over Jenijoy [La Belle] and the whole business of her tenure, in which Huttenback, I think, had the feeling that the English faculty were really not up to it. And so when they recommended unanimously that Jenijoy be given tenure, he just overruled that and said, no, he just didn't believe that she should, and so recommended to the high command. Well, that put the cat among the pigeons, as it were. And the English faculty, as a man, rose up—there wasn't any other woman there but Jenijoy. So as a man they rose up in Jenijoy's defense, and led by [J.] Kent Clark, who made a spirited defense of Jenijoy and spent a large part of his time for the next two years writing copious and elegant defense memoranda, as it were. Because the whole thing got into a real state involving the trustees, the faculty Freedom and Tenure Committee, the faculty—the works.

BUGÉ: Not to mention the government.

ELLIOT: Not to mention the government in the end. And I think the matter was really finally settled by Lew Wasserman who got in the act and managed to pour a little oil on troubled waters. I think he was helpful in talking to Jenijoy. And talking to Bob [Robert F.] Christy, who, I think, was sort of the key man by that time in the administration. Was he provost then?

BUGÉ: There was a gap, wasn't there, after Harold Brown left.

ELLIOT: Then Christy was president. This was when, I think, Christy was provost. And I think Harold Brown really didn't come into the act at all significantly. I think. I know Christy was right in the middle of it and working away there.

Anyway, that sort of polarized the division.

BUGÉ: Where were you sitting?

ELLIOT: On Jenijoy's side. By and large, I think these were the people with whom I tended to identify with more than with the other group.

BUGÉ: Who were the other group?

ELLIOT: Well, Huttenback and the social scientists would be pretty solid on that one against Jenijoy.

BUGÉ: Did they have any basis for being against her?

ELLIOT: No, and they didn't really come into the picture an awful lot. I would suspect that probably Lance Davis was active in that caper; but that's about it.

BUGÉ: And it wasn't because she was a woman but because the English faculty had supported her?

ELLIOT: That was the notion, that they didn't know a good English professor if they saw one or stumbled over one. Well, I think there were those who supported Jenijoy simply on the basis of her being competent. And there were others who tended to support her because it seemed inexcusable to overrule the people who ought to know about those things anyway. And by and large, I must say though I read a certain amount of Jenijoy's stuff at the time, I tended to support my English colleagues. It seemed to me if they thought this was competent stuff, I for one was not going to deny it; unanimously, if it had been split or anything like that. And there were splits within the English faculty; so that you might reasonably have expected a difference. But they didn't. So you had the feeling that this was not the reasonable thing to do.

It was finally voted on by the division as a whole. And they voted to support Huttenback. But matters did not rest there, because Jenijoy fought like a tiger, with the support of Kent Clark, who was very good and dedicated an enormous amount of time pleading her case before all sorts of forums. So that was something people felt badly about, and it became really quite personal. Those on one side tended to doubt the morals and the bonafides of people on the other. No, a very deep division. So there was a lot of that. And during the time Huttenback was here, there were still some I know who felt that he was being just as authoritarian as any division chairman we've ever had; and it was too much of this, just sort of dealing with things out of his back pocket. Because Bob was not one to be backward in making a decision; he would not look around for someone to support him; he'd just go and take it and didn't waste any time. But the Jenijoy case meant we had to formalize procedures; and we began that process in formalizing procedures. And now we go through committee after committee before we do anything; it's very different. A promotion or anything like that would involve, if it's in the humanities, it involves humanities, then it involves the whole division, and then they make a recommendation to the chairman, and the chairman goes up to the...; and then we get outside opinions.

BUGÉ: Sounds like a real nuisance.

ELLIOT: Oh, yes. Before, in the 1950s, Hallett just decided to promote that guy. [Laughter] And if he felt he could carry the other divisional chairman, he would take it up and argue the case and say, "Look here, I think that guy ought to be promoted. He's done this, that, and the next thing." And that's it. And he didn't have to have anybody telling him what was good and what was bad.

BUGÉ: Somebody said about Caltech under Robert Millikan, "we just all agreed he was a dictator. And that was fine, because we all agreed."

ELLIOT: That's right. Did I tell you about Hal [J. Harold] Wayland's experience trying to get a microscope? This illustrates another part of Millikan's character and ability. He needed the microscope to teach some course or other. And so he went to Millikan and said, could he have a microscope, buy a microscope. And Millikan sort of looked out the window and said, "I believe we already have one in geology. Maybe you could borrow that." [Laughter] These were very

different days.

Things do change. That's what we have seen right here. And this division has changed immensely: more people, more formality in the way of doing things; less sort of general contact. I used to know everybody in the division, and know them, as I thought, quite well. Nowadays, I'll see people around and I don't know if they're undergraduates, graduates, or faculty. Or they might be in the secretarial staff, for all I know.

BUGÉ: What about the relations with the scientists in the fifties and then the sixties? Did you tend to know everybody at Caltech?

ELLIOT: I tended to know a large number. If I saw people around, I would know their face and be able to put a name to them pretty much. There were always those, of course, that surprised you, lived down in sub-basements like troglodites that never came up for air, and you never saw them at all. But if they got the length of coming to the Athenaeum or something like that, you knew them. And there were some who didn't come to the Athenaeum, like Richard Feynman, that we knew too. He used to live close to us in Altadena. But the people who tended to surface tended to know a good deal of movement around here.

BUGÉ: Was it different, your relations with the scientists, then, when it was a smaller place and less formal? Obviously things within the division changed. But I'm wondering if it became still more separate.

ELLIOT: I don't sense any change like that at all. The scientists I found always a very friendly bunch of people from the beginning, happy to explain something to these poor dumb bunnies in the humanities division—and some of them doing it very, very well; really an inspiration.

BUGÉ: Does anybody stand out in your memory?

ELLIOT: As an explainer? George [W.] Beadle was one. Bacher is good, too. And of course, more recently, Francis [H.] Clauser. He was explaining to us just yesterday at the Athenaeum how the America Cup is organized, and what you do in order to make a boat that goes through the water—that kind of thing—and the stress gauge you have on it—what does he call it? The

tow tank; well they've got a tank; they put the model in, and they yank it through the water and see what happens. So some of them are just very good indeed. Charlie [Charles C.] Lauritsen was always one that was very easy to talk with.

BUGÉ: Richard [Chace] Tolman's name comes to mind.

ELLIOT: Never met him. I think he was dead before I came here; he must have died in the late forties. I'm pretty sure he had died before I got here. But I met his wife.

BUGÉ: His wife was a psychologist, right?

ELLIOT: Ruth Tolman, indeed she was. An absolutely lovely woman!

BUGÉ: But she never interacted particularly as a professional with people on campus, I guess.

ELLIOT: She may conceivably have done. I suspect that she introduced Bob Bacher to a lot of people in this general area, like Carl Rogers and others.

BUGÉ: So that might have been the beginning of the Honker Group, or had something to do with that.

ELLIOT: It could have been; but in a very indirect way, because Ruth Tolman died, I would guess, in the middle fifties. And of course, she left her house to the Bachers.

BUGÉ: It's a beautiful house.

ELLIOT: It's lovely. The only trouble with the house is, if it had been over just a little bit, they could have put Beckman Auditorium in the center of the axis there, and not off to one side. It's a little bit off. If you moved it over, you'd carve a bit out of the house. No way it would have been possible.

Ruth Tolman we saw a bit of in the early fifties, and I enjoyed her company. She was really a remarkable woman. So far as I know, she didn't do anything particular in regard to

introducing psychology or something like that at the institute. Where did she work? Was she at UCLA? Possibly, but I'm not sure. She may even have been retired by that time. I don't even know how old they were; because he had died at a relatively young age, I think. Well, there it is. Where are we?

BUGÉ: We left the shakedown period for the social sciences. And you were saying it's doing not badly now.

ELLIOT: Yes, it seems to me it does pretty well right now. Roger Noll did a very good and a very aggressive job as chairman. He did very well in that he was very fair minded as divisional chairman, despite his background, which might have suggested otherwise. He was, nonetheless, very fair, and a good administrator. And he was able to shout down the other divisional chairmen, too. You didn't tangle with Roger, not unnecessarily, because Roger had all the arguments. One of the classic encounters was Roger Noll and Harold Brown on the faculty board, because Roger just loved challenging Harold Brown. And Harold Brown was no slouch in these matters, either. All of this was put, I think, very skillfully, by Bob [Robert P.] Sharp. Sharp made a little speech when Harold Brown left, at the faculty dinner for Harold Brown. And he made some reference to Harold Brown's coping with Roger Noll, so he thought he'd be able to cope with the Defense Department, or something like that. He had coped with Roger Noll, which is not a bad way to put it. But Roger did pretty well, I think, as divisional chairman, and got things pretty well completed—the formalization of the division, which Huttenback had started. And because of these particular personal characteristics, he may have been able to oversell the division and grab more of the institute resources than really, in the long run, the rest of the institute was really anxious to see done. Because throughout this whole period of development in the social sciences, and particularly economics, there was, I sensed, a growing discontent in the engineering division that resources were going into this, into another one of these God damned economists type of thing, which they could happily have used over in engineering. So there was a certain amount of feeling on that account.

And obviously, we've backtracked a little bit since then in small ways, and there's no growth that I know of in economics really. And we lost on the art history business when we lost Marty [M. Martha] Ward. And of course, we lost the [Baxter] art gallery, too. But that's another

story.

BUGÉ: Can you tell me anything about that story?

ELLIOT: It's an absolute mystery to me; and it's a mystery to everybody else that I've come across. Why the president [Marvin L. Goldberger] suddenly decided to cut off the art gallery at the knees, when it was really costing the institute virtually nothing. And to cut it off in this fashion would, one would have supposed, alienate a number of people who were in a position to give quite a bit of money to the institute. It's a great puzzle. If you know the answer, tell me. [Laughter] The ax fell totally out of the blue, as if Murph had awakened one morning and said, "I've really got to do something dramatic." So he went out and axed the art museum. Well, the chaps are not going to be able to hit back. And David Grether was apparently not consulted, so far as I know. And I don't know if Robbie [Rochus E.] Vogt was consulted or not; he has not divulged that information. And the [Pasadena] Art Alliance was caught flatfooted in the same way. Very odd! So we lost that.

The Marty [Martha] Ward thing [who went to University of Chicago to teach art history]. The problem I think was that it was a bit complicated by the fact that Roger had been able to get out of Murph, I think, a number of commitments to various people. Like Brian Barry, our philosopher guy. I think he'd been promised a certain amount of places for philosophers to support him. And there was somebody else who'd been promised—Jerry [Jerome J.] McGann had been promised support in hiring people in English. And then Robbie Vogt came in and said, "Well, look here, you can't have all that; there isn't money for all of that stuff. Nothing doing." So David Grether had to sort of find some other way of squaring the circle, as it were. How can we keep Brian Barry and Jerry McGann, and still keep things going? Well, in part, he was able to do it by anticipating the retirement of Kent Clark and David Elliot. [Laughter] And in part by allowing the art history thing to end as a tenured position. And apparently that pacified the oracles, and these guys were able to get appointments. I'm not sure of the timing, but I think Brian Barry had committed himself to [Alan] Donagan, you see, at that point, or something like that; or Donagan had been asked to come. And there he was. To turn him out would renege on institute promises and that sort of thing. So we had to backtrack a little bit on appointments. The provost saw to that.



BUGÉ: But the traditional humanities have not suffered permanent damage.

ELLIOT: Damage? Oh, I don't think so. You mean in terms of the English, history, philosophy sort of thing? I don't think so. We're better off in philosophy than we were for quite a long time, where we had really no philosophers for a while. And then we had Will Jones, who was sort of part time, until we got Brian Barry. That was a long uphill battle here, too, because I think that Hunter Mead died in something like 1960, give or take a bit, and Chuck [Charles E.] Bures, who was our other philosopher, died about 1970 [d. 1974]. So there was a big gap in which we really had no philosophy at all. Now there's Donagan and Brian Barry, who's moving on and going off somewhere else—going to Florence, I think he said. I think he has a pretty nice deal, if I remember it correctly, in which he lives in Florence in the winter and then goes to Oxford for a term or something like that. So he's going to live a life of great torture. And Donagan seems to be more secure and happily settled and with a wife who likes to be at the Huntington, too. So we may have a little stability there.

BUGÉ: Is the division fairly stable now? People who come tend to stay?

ELLIOT: Oh, it always has been very stable. I mean, the turnover over here is very low. You can count on the fingers of one hand the people who have in fact left. Huttenback left. There was a guy called Dan Piper, who left in the sixties or something like that. Some people have not got tenure, but of those who have had permanent appointments, I bet you can count them on the fingers of one hand.

**DAVID C. ELLIOT****SESSION 3****April 23, 1986****Begin Tape 3, Side 1**

BUGÉ: I want to discuss the transitions in administration. But before we get to that, could you go back to when you first came, if there were any personalities that you remember, people who are still remembered, like Clinton Judy.

ELLIOT: Clinton Judy I never met. He was still alive, as was William Bennett Munro, who was another character—"Three Button Benny," as they called him. He used to do three buttons on his jacket up all the time, and none of them were ever undone. In fact, he used to occupy that office right there, on the ground floor, in Dabney, which then Horace Gilbert moved into in the early fifties, after Munro died. And Clinton Judy was still alive, but housebound, and some of the older people would go and visit him; but there was never, I think, any suggestion that we young wipper-snappers would be particularly welcomed. We'd never met him. He was very old at that point.

Millikan was still alive.

BUGÉ: Did you ever see him on campus?

ELLIOT: Oh, on several occasions; he was still quite active when I got here. He was gradually getting into a state where his mind was beginning to go a bit. He was quite active physically, and I remember having some sort of opening ceremony over in biology. I recall it was something like the biology library, that rather lovely room in Kerckhoff; I don't know whether the library was being opened, but something of significance was being done, and he was there making a speech. One of the secretaries was deputed to sit behind him and yank on his coattails if he went on too long. [Laughter] It was kind of sad. Later on I talked to him at a tea—the DuBridges had a sort of tea for the incoming faculty, I suspect, or something like that. And they would take us up in turn to go and sit on the seat with Millikan. I talked with him for a few

minutes. He was very charming and full of interest. And he got to talking about his son Glenn [A. Millikan] and how he had died and so on. But what struck me was he got to the end of the story and then went back to the beginning again. He had got to that point, and it seemed to me kind of sad, a guy who had been a great force in the community is reduced to that sort of state.

BUGÉ: He didn't talk about his own scientific exploits?

ELLIOT: No, not at all. When I was talking to him, that's all I remember is that story about Glenn.

BUGÉ: Had he just recently died?

ELLIOT: No, no. He died, I think, in a mountaineering accident or something like that many years before [1947]. He'd had several tragedies. I guess there was some grandson who was one of those children who died in a crib. So there'd been tragedies in their lives. Of the Millikan pair, Dr. and Mrs. Millikan, it was Mrs. [Greta] Millikan who used to be interested in this division, because she had a habit of reading the Sunday paper at great length. And if there was anything in it she didn't understand or wanted to voice an opinion about, she'd just call up one of the members of the faculty. I remember being called up one Sunday morning about ten o'clock, and here was Mrs. Millikan wanting to know about something in British politics or European affairs or something like that. And she wanted to get to the bottom of it. She must have been quite old. I don't remember actually clapping eyes on Mrs. Millikan, but I may have done. He, of course, was enormously good to the [Caltech] Y, helped the Y enormously with what he left to them, which was at that time about \$100,000. He was involved—actually ties in with some international stuff with the Leaders of America program, which Wes Hershey and the Y started on the basis of the Millikan legacy. I was chairman of the Y board for a while in the fifties; and we got involved with a number of national figures. [American political scientist] Ralph [Johnson] Bunche was one of them, as I recall; Justice [William O.] Douglas. People like that were brought in and they spent a couple of days on the campus. They gave a major lecture; ate with the students in student houses, God bless them. It was actually a very successful program. It lasted, I don't know how long, ten years or something like that. Then, of course, it became too expensive. In those days, one would come for a thousand dollars and be glad to have it, but not

anymore. I see our worthy Governor [George] Deukmejian gets enormous sums just to go and give one speech. Times have changed.

So that was the first leadership experience I've had.

The second experience I had was at Freshman Camp, which gives you some notion of what the administration was like. You know, they had evening sessions there, where all the groups come together and various people speak. I happened to be master of ceremonies on that occasion and had to introduce DuBridge. And I said, well, I thought that my impression of the administration was: you didn't hear them, you didn't see them; you just got on, and that sort of thing. And DuBridge got up and said, "Well, God damn it, that's the first time I have ever been given any sort of praise for having done nothing." [Laughter] But that was very much what the administration was like. It just ran along very nicely and smoothly. We didn't have an awful lot of committees. It was, in some ways, like a benevolent dictatorship.

BUGÉ: People have said that about Millikan. And it's interesting that it also seems to have been somewhat true of DuBridge.

ELLIOT: The structure was very much that. If you wanted something done in this division, you just went to Hallett Smith and said, "What about it?" And he was just likely to say, "Go ahead and do it, and don't bother me any further." If it was something that required money or it involved the rest of the institute, he'd just go and call Earnest Watson, and the matter would be done in five minutes; and no memos, no notes, no nothing. In fact, almost nothing was put in writing. It was all done quietly and easily, simply. It was really very effective—and all very congenial. We had an extraordinary group of divisional chairmen at that time; if you just think of them. At the top was DuBridge. Then Earnest Watson ran things quietly on the side—knew all the trustees, knew where all the bodies were buried, knew everything that happened on the faculty. He never went out of his office, but he had a secretary, a gal called Frances Humphreys, who, I think, was the source of much of his information. But he didn't miss a trick, that guy. He sat in Millikan's old office over in Bridge—which is now a seminar room, right next to the chairman's office, transformed by Robbie Vogt and made into a seminar room.

Well, they were at the top, and Hallett was in this divisional chair. George Beadle in biology. Bob Sharp in geology. Bacher in physics. Lindvall in engineering. Linus Pauling in

chemistry. Now that's a pretty impressive group of people. And all still alive; thirty-five years later, they're all still lively as crickets. Well, they're not all as lively as crickets, maybe. But Bob Bacher is just starting off on a third career, I think, by about now. Very active and very easy sort of people to get on with! George Beadle was an amiable sort of guy, as was Fred Lindvall. Bacher was probably more formidable, in a sense, for the young.

BUGÉ: So this era wasn't marked by clashes particularly between the faculty and the administration?

ELLIOT: Not at all. There were no clashes. I don't recall a single clash. But there was an upheaval over Linus Pauling's activities, which somehow didn't, on the whole, tend to impinge on me very much, because we were in England in '56-'57, and I think that that took place then. And somehow I was not aware of a great deal of it. There was a big crash over the whole nuclear testing stuff and Strontium 90, and that type of thing; and the fact that the Atomic Energy Commission under Louis Strauss didn't know what it was talking about, I guess. And Linus Pauling, I think, probably turned out to be right. He was a fairly flamboyant figure, and talking out in public and across the nation and abroad raised a lot of hackles, I guess. I think one of the trustees left—a man called Reese Taylor. But it wasn't so much the faculty against the administration because the administration was pretty much on the faculty's side, I think. Now DuBridge and Watson may have had to hedge their bets a little bit, since they had to face the trustees on the other hand, you know. Though the chemists may have had some feeling, I don't recall it being something that got people steamed up in this division.

BUGÉ: And what about the legacy of that era? It certainly left people with feelings about it historically.

ELLIOT: I'm not sure really what you feel there. The legacy of the DuBridge era, in general, is one of a very warm feeling.

BUGÉ: No, I didn't mean in general. Linus Pauling says that he doesn't think DuBridge handled the situation well, from Pauling's point of view.

ELLIOT: There was a certain amount of confusion, I think. And I think you're probably right; it could have been handled better, I don't know how. You just have that feeling; if people end up being as unhappy as Linus Pauling was, there was probably some poor handling. On the other hand, Linus Pauling was not one to be handled. [Laughter] I mean, he was, and I think still is, a *prima donna* par excellence. He was not going to take any guff off anybody, and I'm sure was not going to compromise on anything. You wanted to say to him, "Now look here, take it easy. You've got a good point, but you don't have to be quite so flamboyant about the whole thing." Very difficult!

There was another bit of a dustup, I think, in the '56 election, which was Eisenhower and Adlai Stevenson, the second go-around if I'm not mistaken. This was when we were away. But Matt Sands in physics and some other characters had taken some sort of very public stand in regard to, I think, this issue probably of nuclear testing, but I'm not sure about that. It had become an issue in the election; and this caused a bit of turmoil. But we were away at that time, so I don't know.

BUGÉ: But did your sympathies lie one place or another in either of these cases, even though you were away?

ELLIOT: At that time, not very strongly, I think, because this was something you could see; I mean, the flack went right over my head. What did I know about Stronium 90? Who was right? I hadn't a clue as to who was right and who was wrong. It seemed rather a pity to mess up the atmosphere, which we seemed to be doing. But these technical issues were not well understood, it seems to me, at that time. And Pauling was doing a tremendous job of educating people on what it was like. I think it was the government really he was battling on this—not the Caltech administration—and it was taking a rather poor view of the whole thing. I would think that Strauss was just not very bright about the whole thing. That's my view, but it may be looking back on it now. Of course, one knows as you go back in there that underneath it all was that very tense situation created by the [J. Robert] Oppenheimer case. And I think we are very well aware, even in this division, that Edward Teller would not be particularly welcome as a Leader of America. So feelings, I think, were quite strong. But again, it wasn't something that really involved people in this division a great deal.

BUGÉ: So you really felt protected, or in some way just distanced.

ELLIOT: That's right, because so much of that stuff, after all, was classified. And not just in this division, but nonscientists, in general, in the fifties were not much involved in many of these national security issues.

BUGÉ: Yes, that's one of the other things I wanted to ask you about. Did you, or the rest of the faculty, have any feelings or felt any controversy over the VISTA Project while it was going on?

ELLIOT: No. I knew something was going on; but what it was about, I didn't know.

BUGÉ: Did people resent the fact that something so secret was taking place and so heavily involving the Caltech community?

ELLIOT: If they did, I never knew about it. Much of it was in the summertime, you see. People would be going off anyway, doing their own thing. And at that time, looking back, I think people would not be that much concerned about people, the faculty, or even the institute's doing government work. I think it was much later that—really not until the sixties—that you begin to get that sort of feeling about the fact—well, you know, the Pentagon may be a rather dangerous sort of thing, and we've got to defend ourselves against the Defense Department, something like that.

BUGÉ: What about JPL, in this later period, when there was a question of its relationships with the army or with NASA? Was there any faculty feeling that this was inappropriate?

ELLIOT: I didn't get involved in it if there was. The only way in which I got involved in it was quite marginally. At the time of Sputnik, we had Bill [William H.] Pickering come and talk to my History 5 class on Russian and American rockets. This was fascinating, and I think this was the first sort of impact of technology, in a sense, on our consideration of world affairs, as I recall. It's sort of interesting in another way: That History 5 course, which I taught, had been taught by Bill Pickering back in the thirties or something. I don't know the origins of the course, but it was started under Millikan. And he had just said, "Well, Bill, you know about what's going on in the

world. Why don't you teach that?" And I'm not sure he wasn't, in fact, put in the catalogue as a professor of history as well as everything else.

So that was, in a sense, the DuBridge era, during which there began to be a shift in the early sixties. You see, why should we worry in the fifties when the scientists have persuaded the government that the way to spend their money was to put it into scientific research, into basic research. So the money was just coming in from ONR, and this agency, and that agency of the government. And people's salaries were going up like rockets—it seemed to us then. And in fact, there was one occasion in sort of the middle of the year in which DuBridge wrote around at least to some faculty people—if you happened to be lucky. He said, "We're doing a little better than we thought; and here is a little extra something." And that was the way things worked. So by and large, people were not complaining about the situation very much. As far as I know, there were no great plans for expansion which could not be met. Buildings were going up all over the place. And DuBridge and the trustees and so on had been very successful in managing the operation. It wasn't really until the sixties, I think—and maybe about the time that Earnest Watson retired, somewhere around '61 or '62—that you get rather more questions being asked, which leads us into that Honker Group we talked about before. When Bacher came in, that's the first thing he did was to start that Honker Group and pick out all of these clowns who had been complaining about things for the last year or two and put them all together in a room with Carl Rogers and let them talk their little hearts out. [Laughter]

BUGÉ: Were you in that group?

ELLIOT: I was in the first Honker Group. And it was called "honker" because they nailed us by holding the first meeting in the Honker; we had dinner in the Honker. So that got everybody present—

BUGÉ: Was the Honker a restaurant?

ELLIOT: Oh, yes, where the Chronicle is now; it used to have a flying duck which would move—you know, the wings would go up and down on the neon sign. [Laughter] And that's why it was called the Honker Group. It went on for a number of years. I think that first year, or maybe two, was a group of about twenty. Feynman was on it; Gell-Mann was on it; Hallett Smith was on it,



and I was on it. And there was a guy called Edgar in biology. Wes Hershey was on it. Anyway, it was a group of about twenty-five, something like that.

BUGÉ: And what did you discuss? What were your gripes?

ELLIOT: Now that's the question, you see. I told you how Carl Rogers started, didn't I?

BUGÉ: No.

ELLIOT: Because we hadn't a clue. Bacher said, "Come, let's have a meeting." We wondered what we had done. So we all turned up. We must have met in the afternoon and gone off to dinner later, or something like that. But we met in a seminar room behind the chairman of biology division's office—the McCollum room. Carl Rogers at the head of the table; and DuBridges was in the group and came pretty regularly. Bacher was there every time. And all these other people around the table from all divisions! So we sat there, and Carl Rogers looked at us and we looked at him. Finally, someone could stand it no longer and said, "Why are we here?" And Carl Rogers, I think, sort of said, "Well, why do you think we're here?" [Laughter] And it was clear we were getting nowhere in this way; with the nondirective counseling [approach]. So he said, "Well, why don't we start by going around the table and seeing how many of you would send your sons"—there were no women at Caltech then—"to Caltech, if they could get in." And it went around the table, and it turned out no one would dream of sending his son to Caltech. DuBridges's jaw dropped low. [Laughter] So that opened things up because then he could say, "Now, why would you not send your son to Caltech?" And in general, the complaint was the sort of narrowness of the experience; that it was not a university but a narrowly based scientific institution. I think most of them felt that their sons needed more than that and that they wouldn't send them. And there may have been some talk about the heartless and vigorous type of education the undergraduates got and so on.

BUGÉ: At that time, was there any shortage of applicants?

ELLIOT: No, it wasn't that. No, I'm sure the whole thing came out of Bacher's imagination. He was going to be provost, and he wanted to know and be sure he understood where the problems

were, and he'd do something about it. One of the first quite concrete things that came out of the first one was the no grades in the freshman year. It had a good deal of influence on the development of social science in this division; at least, the case was considered for having not just humanities but other types—political science—and more than just a couple or one-and-a-half economists, as we had then. Now you may say we've overdone it since.

BUGÉ: Sometimes it's hard to control those things once they get started.

ELLIOT: Well, you never know. You may start off in one direction, but you don't always necessarily get what you pray for; or you may, in fact, get too much of it. [Laughter] That was the sort of thing that was raised. And of course, we frustrated Carl Rogers; he was nearly driven out of his skull. He ended up with—towards the end of the period we had with him—he came out and finally said he'd been awake all night long, thinking about this thing; and he produced about two or three pages in which he complained that it was just impossible, that this group was totally against innovation and creativity. If we saw anything like creativity, we'd strangle it at birth.

BUGÉ: That's terrible! Did you agree with him?

ELLIOT: Oh, no. And I don't think he believed it either. But he had got frustrated with the group. There's a measure of truth, you know, that almost anything could be very easily knocked down by somebody in the group.

In subsequent years, Bacher had a different group. And there may have been at least two successive groups that lasted for some considerable time. I gave Bob Bacher enormous credit for that first Honker Group, because he sat in that group for six months without, as I recall, saying a word. And that must have cost him, I think, a real psychological trauma. But he did; he sat quietly, taking notes all the time about this and that—he always loves to take notes. You'd go in to see him on some matter; he'd be busily writing all this down, and he was going to keep a record of it and nail it down. Anyway, that was the Honker Group.

And then as we went into the sixties further, there were many more fights as people began to feel that things might change in the sixties. It was a little difficult for them to change, too, because DuBridges was, after all, obviously getting close to the end of his tenure. In fact, it may

have been that his original commitment had been for twenty years for the board of trustees, and I think the board had made it very easy for him to retire if he wanted to. They had built in a very good pension, if and when he wanted to take it. And there was some suggestion after twenty years that that was his commitment and he could in all fairness have packed up at what would have been about 1965 or '66, or something like that. Then they persuaded him to stay on. But I would suppose his perspective towards the end of his tenure would be a little bit different, less likely to want to stir things up and so on. And certainly in this division, Hallett was really not anxious to change anything at all, if he could help it. Divisional chairmen have got lots of ways of stopping anything that is likely to develop into what could be troublesome or could cause them to have to go on to persuade people to do things; so a lot of unrest there, too. I think engineering was going through a bit of turmoil then. Because they needed to change and develop, and it was obviously uncertain, about how they should go. Geology had already been through that, I think, in the late fifties; and had moved away from what one snidely calls the “rock chipping” kind, to geophysicists and geochemists, and people like that. And this was symbolized, I suppose, by Ian Campbell’s going off into the state service in San Francisco.

BUGÉ: The U.S. Geological Survey, I think that’s where he was.

ELLIOT: Whatever, he went off there. A delightful person! But it was not his cup of tea, this move, I think. They were moving into other directions. Engineering wanted to do that. It was clear in *this* division something had to be done about the social sciences. But the minute you say what, then there are problems. And there were problems between us and engineering. Some in engineering felt that if too much was done over here *that* prevented them from doing things.

BUGÉ: They were sort of a “poor relation,” too, to the sciences.

ELLIOT: A little bit, again symbolized by the change in their name; they’ve become the division of engineering and applied science, where the scientific element is emphasized. And it seems to me that it pretty well had been emphasized from the beginning. All the time I’ve been at Caltech, it’s been more of a scientific institution than an engineering institution. The difference is less noticeable, I think, now, because engineering is much more high technology than it was in the old days, when an engineer meant building bridges and engines and pumps—like old

[Robert] Daugherty went off. This is sort of parenthetical, but since we're reminiscing, what the heck. About ten years or so ago, I took a little trip under the auspices of the Metropolitan Water District arranged by Hotchkiss, who was a member of the Metropolitan Water District. As sort of a public relations thing, they would take groups up to see the whole California water system. One of the group included Daugherty, and we went up to the Oroville Dam and followed the whole thing down, and came to the Edmonton Pumping Station. And Daugherty was saying that he had talked to the guy who was our guide, and he was asking how much power is generated by this pump. Then the guy said that it was generating at least about 185,000 whatever, like horsepower—but it might have been that it was able to lift 185,000 whatever, a great big pump. Daugherty told him, “You know, in 1912, I wrote the first textbook on hydraulics. And at that time, I said that we'd send a man to the moon before we made a pump that would generate more than 500 horsepower.” And he'd been there throughout this whole proceeding, and clearly the dimensions were far beyond the wildest dreams of hydraulic engineers in 1912 when Daugherty was young. But that was the sort of thing that originally engineering was, and then it changed very dramatically. Anyway, all the time I've been here, I would have thought that the center of Caltech is physics, that the kids came up here—if you ask a freshman, “What are you going to be?” “I want to be a physicist.” Well, he wasn't, of course, but he didn't know that when he came here. He was going to be an electrical engineer or an applied physicist or a few other miscellaneous things. But from freshman onwards, the large mass of the congregation had their eyes on physics. If you do physics, you're all right; and if you can't do physics—a bit doubtful—mathematics in the early fifties was regarded as a service division. So are we—an adjunct. Mathematics, English! There's a tendency for most of the scientists to think everybody in humanities is in literature and just getting the boys to write—which of course is part of our function. So where are we?

BUGÉ: That's the end of the DuBridge era. And you got into the Honker Group because things were changing, things needed to change.

ELLIOT: That's right. And it was in the sixties that you get the shift. We were late in shifting, certainly in regard to social sciences. MIT was way ahead of us; they had developed far ahead of Caltech in this whole area. We just really didn't move very much in that crucial period. And the

fact that it took all that, and we were late in getting in, was particularly difficult since the whole field of social science had sort of shifted in the sixties, away from what might be a more traditional style to the mathematical, model building type, which was, I think, well, I'm sure, probably less well understood by people in the division and was, on the whole, regarded a little bit suspiciously. So that created more reluctance to move at all, the lack of knowledge, and the general perception of these sorts of number crunchers who try to turn human beings into some sort of mathematical equation. The people in literature liked it least of all, I think. They had no use for that sort of stuff. I think they quite rightly said, "Look here, you're not going to turn poetry into mathematics." It was really quite difficult, partly because a great many of us really didn't quite understand what the social scientists were all about.

BUGÉ: Who was really able to spearhead; then, finding a direction, deciding who was to be hired, and what new areas would be entered?

ELLIOT: Well, I was supposed to do that in the first instance, but that didn't turn out too well, partly because I hadn't a clue as to what they were all about either. In fact, none of us knew very much about it. Alan Sweezy, of course, was an economist, but he did not get very heavily involved except in the hiring of economists. And we tried to look around to get someone of distinction who might head the development. At that time, the social scientists we did have were, of course, Alan Sweezy and Bob [Robert W.] Oliver, who were rather different sorts of social scientists. And Ted Scudder, who's a behavioralist and strongly plugging that line; he would have liked to have had us involved in environmental studies and that sort of thing. We had no psychologists; we had no philosopher, indeed, because both Hunter Mead and Chuck Bures had died and had not really been replaced. We had a fellow called Hurtz but he didn't work out. So there were none of the sort of hard political scientists around at all. And the sorts of people that appealed to us were people like..., for example, we had fairly lengthy negotiations with Graham Allison, who became head of the Kennedy School at Harvard. And he, in the end, was unable to come—didn't want to come. The sort of general area that seemed to make sense to get into was the area of science and government, which had been of some interest in the sixties. MIT was doing a certain amount of work there. And people like Gene Skolnikov at MIT was another who appealed to us considerably. And there were some others; [Robert G.] Gilpin

from Princeton. But that sort of science and government area was of a good deal of interest to us then. We had the feeling we might sort of ease into it at that point since the fact they were at a scientific institution might have been helpful. To give you an idea of the sorts of people that attracted us, another one was Geoffrey Oldham, who is, I think, a geologist—he knew Bob Sharp quite well—who had spent some time in China and became head of a sort of science and government program at Sussex University in Brighton. However, none of these sorts of things worked. I think we talked about this before, the fact that given the uncertainty, it was hard for anybody to predict and say to the guy coming in, “You know, this is the situation and these are the sorts of prospects that you might have.” I think the prospects were described in different ways by different people. Bacher caused me a great deal of trouble, because he had a notion of the institute in terms of slots. And unless you had a particular slot here, then there was no point in promising a particular appointment or anything like that; you had to have these slots. So this division had so many slots. And you projected, as I remember, for five years or so, who’s going to retire and who might die. And unless you had an empty slot, you had nothing. We were all playing this numbers game; and the other divisions, I think, were involved in this same sort of situation. So it became a highly competitive thing; you got a slot, somebody else didn’t get a slot, type of thing. So in the end, I think people tended to cancel each other out in this battle.

### **Begin Tape 3, Side 2**

BUGÉ: Was this while DuBridge was president?

ELLIOT: DuBridge was still president at this point. When Harold Brown came, as we talked about, things became rather different and he sort of shook things up right away. But this is all under DuBridge. In the end, after having essentially failed to get quite a large number of guys, which doesn’t help you either in this sort of process, it turned out Harrison Brown made a suggestion. Harrison was a lot of help because he was becoming interested in the population problems. And he had long been interested in the impact of science on society in general, with a lot of projects. His main efforts had been as foreign secretary for the National Academy for a good many years. So he became more and more interested in the work of this division and finally came over here and started to work out of this division, I think, when Hallett was still

chairman. He suggested that we might be able to get Burt Klein, who was at that time the chairman of the economics division at RAND [Corporation]. I'd known a succession of chairman from the division at RAND—people like Charlie [Charles J.] Hitch, who eventually became the president of the University of California, and a man who went off and became, I think, provost of Williams College, or something like that [president of Resources for the Future, in Washington, from 1975-1978.— ed.]. A very distinguished bunch of guys! And now we had Burt Klein. I'd not heard of Burt, or I'd just heard of him and not really met him. He came over and was a very persuasive talker.

And we hired him. Well this turned out, if I may say so, to have been a mistake because he had very, very unusual methods of operating—a very peculiar sort of chap. And this might have become known to us; but when someone approached him, he requested that we not talk with the RAND people, because he wanted to tell them if he was leaving, first of all. So that was a mistake, I think, because I could have talked to some people at RAND very quietly and found out some of his eccentricities; because he's a very eccentric character, and not one whom you would expect to build up and develop a particular area. And yet he'd been in that sort of job at RAND and may have done it very well. It may be that because of his difficulties, when he came here and tried to do things, I think he put people's backs up considerably. I think when he came over here, he may have been under a difficulty because at the end of his first year, he went off and had major surgery for, I think, some type of cancer. And that may have been preying on his mind all that year, because I think he knew he was going to have this particular operation all that time. He wanted to come into an academic environment and write a book, which of course, he eventually did write, no doubt about that. And that's what he would have been good at. He unfortunately got involved in a situation of trying to develop the social sciences. He knew where good people were and that sort of thing; but somehow, it got the social sciences off to a little bit of a difficult beginning, I think, and created all sorts of tensions, which might not otherwise have been created. And that was my fault; it was Burt's fault; it was Hallett's fault—may indeed have been the high command's fault up there, too, I don't know. But certainly within this division, that's where the fault lay. And it was Burt Klein who suggested they hire Lance Davis, who moved up about a year or so after Burt came. And pretty soon, Lance began to throw his weight around here, and that created further difficulties—though not in a sense for him, because Roger Noll had been hired at some stage then; and he and Roger Noll sort of teamed up at that point,

really to get in the sort of economists, first of all, that appealed to them. That's how the social sciences started, and that's about as far as I go because by that time, of course, Huttenback came along; and he and Roger were increasingly going off and managing their own affairs as a separate sort of subdivision of the division. And this is a very different style of, I think, social science from the one which we had envisaged in the first instance. That's about a full stop on that one, I think.

BUGÉ: That perspective must have been fairly generally held by the humanists, don't you think?

ELLIOT: That perception?

BUGÉ: Of the highly quantitative approach to the social sciences.

ELLIOT: The people in literature, by and large, were the least responsive people in the whole of the institute, to the idea of any sort of social science. They just suspected it wasn't going to do them any good at all, and that they were concerned with things like human values and artistic... These boys were not going to be helpful.

BUGÉ: Well, there are social scientists who are not—

ELLIOT: Oh, they had no objection to Alan Sweezy, Bob Oliver, people like that, that had come in in a very different framework and were teaching the sort of economics which these kids, growing up, really ought to have if they're going out into the world, so they know where to place their bets, if nothing else. And of course, a lovable guy like Alan is not going to be objected to by anybody in the division, never. The literature people just didn't care for this whole business at all.

Among the historians they tended to feel a little differently; because they were interested in politics and economics, and that sort of thing tended to be the sorts of elements that were of use and interest to me. And Rod [Rodman] Paul had a good many, very strong feelings about the whole situation, very positive feelings. I think he was quite interested in anthropology. I think he would have started off with anthropology had he been able to. Ted Scudder came, I think at least in part, I'm sure because of Rod's efforts. Rod was increasingly becoming concerned about



his own research and getting time to do that, among other things. Also, he was concerned about promoting research within the division. And in this, of course, he would be seconded increasingly by Dan Kevles, who came here about the mid-sixties. Dan had the feeling that this division should not be a bunch of second-class citizens. This was the sort of line he tended to take, that we should do no more teaching than the scientists did, and the rest of the time should be on research. That was a very big shift.

My own feeling was that what we'd been brought in to do primarily was to teach the undergraduates, and then after that, we could think of other things; but our prime responsibility was the teaching of the undergraduates. So I tended to feel that way, not that I was the least bit against the research aspect, but I would not have been as ambitious as certainly Dan was, and possibly Rod was, to appear in the same way as the scientist. They were very anxious—and quite rightly, I think—to get people who were absolutely the very best you could possibly get anywhere. The market was shifting at this time, too. Somewhere in the late sixties, early seventies, PhDs in things like history and English were a dime a dozen, and you could take your pick. In the fifties and sixties, it was a whole lot harder to get the top PhDs from Harvard, Yale, Princeton, and that sort of thing. So this was a shift, which was quite noticeable by then and made it possible to get some very high class people.

BUGÉ: By this time, you're talking about when Harold Brown was president. What does his administration bring to the campus and to the division, after the initial shakeup?

ELLIOT: He brought the initial shakeup—also, I think, a fairly steady support to Huttenback all the way through.

BUGÉ: In terms of the direction of hiring?

ELLIOT: In terms of that. And then, of course, the provost job changed, too. Christy succeeded Bacher about a year into the Brown regime, which meant you had your two clam-like figures at the head of the administration. [Laughter] Very able guys, but boy, their ability to communicate on a personal level was just about zero.

BUGÉ: Also willingness?

ELLIOT: Willingness to communicate? I don't know if they were willing or not. I think after Huttenback came in, the main thrust came from Huttenback and not from anyone up on the high command. I don't think Brown or Christy were doing very much.

BUGÉ: But if they had wanted to change anything, they probably would have.

ELLIOT: Yes, if they wanted to stop anything, they would have stopped it, no problem about that. Harold Brown had no problem dealing firmly with situations, none at all. A fantastic guy! Gosh! Bright! But it's too bad that he really had the total inability to communicate—just like this, just sit down and talk.

BUGÉ: Who did he see? Did he communicate things to Christy, and then it was Christy's job to disseminate information? Or was the administration really becoming more isolated?

ELLIOT: Well, it was, in a sense, becoming isolated because Harold Brown was sometimes in Millikan [Library] and sometimes in Helsinki; but to us peons down here, we didn't know which. The paper would come back the same way, like a rocket, no problem. I'm sure the Pentagon helped him immensely in communication. I mean, you could send a note and have it come back with his microscopic writing there by return mail. It was an absolutely incredible performance. His secretary said that he could keep them busy for about a week on the work he did between here and the airport. I told you the time I went to RAND with him, didn't I? The point at which we sort of crossed most frequently was on the California Seminar on Arms Control and Foreign Policy—now International Security Foreign Policy Seminar—which he had largely set up with Harry Rowan in RAND and McGeorge Bundy in the Ford Foundation. And he called me up and said, “You're going to be the co-chairman of that”—or more or less in these words. So we'd have a committee meeting once a year, sometimes at RAND and sometimes over here. The first time I went over with him, he said, “The driver's going to pick me up. Want to come?” I said. “Sure.” I thought, well, we can profitably deal with a number of crucial issues that are coming up as we go over. I didn't realize that Harold Brown didn't need to be briefed on anything by me; he knew exactly what was going to happen long before I did. [Laughter] Then we got in there, and he started off to read the *Wall Street Journal*, which the driver had brought with him. And I gazed out the window. Until we got over to RAND; and then I thought, “Well, that's all

right; on the way back, I'll get that *Wall Street Journal*." That wasn't how it worked out, because he sent the driver back to get his files. So while we were meeting there, the driver was going back to Caltech, picking up his mail and bringing it over to RAND. So on the way back from the meeting, I found they'd left the *Wall Street Journal* back at Caltech. I looked out the window again, and Harold Brown went on with the mail.

We had a meeting at the Athenaeum here. And the RAND people were caught on the freeway and were a little late in turning up. Harold Brown got there at noon, and so did I. And he waited sort of drumming his fingers on the table for ten minutes or so; then he jumped up and went to the telephone and told his secretary to send over the files. Well, I mean, my conversation isn't all that scintillating, but... [Laughter] But that was the sort of thing he did.

BUGÉ: That's really very strange.

ELLIOT: It is strange, and compulsive. And you might think that if you're really busy—he didn't even say excuse me—you know, "I've got to get on with this crucial thing coming up," or something like that, which you'd understand. But to sit down and get your nose into it as if you were trying to avoid talking or communicating at all, very strange.

That's actually the real difficulty he had with the faculty. He was a brilliant administrator, as a bureaucrat unbelievably good, and really saved the hide of this university, I think, on the financial side by wisely bringing in David Morrisroe. And instead of Caltech losing its shirt, as Yale and Stanford at this time nearly did, by following the advice of McGeorge Bundy, Caltech did pretty well. And he really tightened up the administration, got rid of the whole stable of architects we had over here—you know, there's a room over there all built for architects—swept them out; swept out the security force, and all that sort of thing, which I would judge all made a lot of sound sense. We'd ceased building; what did we need to keep on the architects for? So he was very good. On the business of just meeting with two or three people, on a committee—brilliant, absolutely brilliant. You got him into a committee, and as an infighter he was unbelievable; he was two jumps ahead of anybody. And even Roger Noll—he was half a jump ahead of Roger Noll. Roger Noll really got under his skin in faculty board meetings; but then Roger Noll loved to do that. It was fun for Roger Noll, and not quite so much fun for Harold Brown.

BUGÉ: It doesn't sound like he was a man who had a lot of fun.

ELLIOT: No, I don't think so. But an extraordinary guy, and I think did a lot of good at Caltech, and maybe more good than we recognized at the time; so he did pretty well.

Christy was a good faithful sort of servant and a good communicator. He communicated well on the steering committee. That was an organization, again, that goes back to Bob Bacher, who had all sorts of bright ideas, and this was one of them. Just as he was leaving as provost—or he may even have left and had been then a faculty member—I think he was; he had ceased being provost; he was a member of the faculty, had not yet retired. He got on the Academic Policy Committee under Sam Epstein. And it was that committee that dreamed up this Steering Committee notion. The Steering Committee was dreamed up, first of all, in order to improve communications between the administration and the faculty—just this problem Harold Brown had. It consisted—and consists—of the officers of the faculty, four elected members of the faculty board, and the provost—the idea being that that would serve as a channel of communication between the faculty and the administration, and do a number of other things, too, like most steering committees or presidiums. It would draw up the agenda for the faculty board and so on. And if problems arose, the chairman could use it as a sounding board to do or not do certain things. But one of its prime functions in the beginning was to create a means of communication. The people on the Steering Committee could say, with the provost sitting right there, “What about so-and-so? What the hell are you doing about this?”—that type of thing. And he could say, “Well, I don't know,” or “I'll go and talk with the boss,” or whatever. And he would come and say, “Look, you've got a problem and we don't know quite how to handle it. What's the feeling of the faculty?” And we could kick that sort of thing around. So it was a very good idea.

It was enormously valuable in the Brown era because Christy was very faithful at communicating; and with Brown communication did work.

BUGÉ: So even though he was something of a clam, he wasn't bad at listening.

ELLIOT: Oh, as a clam, in a sense; he's not in any sense a blabbermouth. I mean, he's not going to sort of spill the beans. If you compare Christy with Robbie Vogt, you've got two different cats there. Of course, it was fun to see Robbie and Christy together; Robbie was chairman and

Christy was provost; we had some funny episodes there. Robbie just loved to tease Bob Christy and needle him and that sort of thing. So we had some fairly lively times, lengthy meetings.

BUGÉ: This was while you were the secretary [of the faculty]?

ELLIOT: Yes. And I would spend quite a lot of time with Robbie. He's a wonderful guy, and I'm just very fond of that man. I'd go in there on what I thought was a minor business, like the agenda for the faculty board, and two hours were shot for sure.

BUGÉ: Just you and Robbie Vogt?

ELLIOT: Yes. He'd tell me stories about this, that, and the next thing. Absolutely fascinating! He's a great raconteur; he can't resist the compulsion to talk. He outdoes Bacher; Bacher is a sort of clam-like figure compared to Robbie. Bacher—I'd get him, too, because he still talked about some of these national security things in which he's interested; and half an hour is his time. Robbie was two hours. I've just met an awful lot of longwinded people. Burt Klein is another; he was a whole forenoon. If he came in, he would sit down and just talk and talk and talk; we were supposed to be trying to develop a social sciences program, making proposals to the Ford Foundation, Rockefeller Foundation, and so on. Money is another matter; we'll get back to that, though, when we're dealing with the development of international affairs; because we can talk about the Carnegie, Rockefeller and Ford—all sort of came into the act at one stage or another, and had a bearing on the situation, very much so. Yes, Burt was a very longwinded chap. And I had another one, because the first executive director of that California seminar, of which I was co-chairman. First of all was Fred Iklé—who is now the Undersecretary of Defense—who was the other co-chairman; that is now Charlie Wolfe. The executive director was a fellow called Ciro Zoppo—it's true; it means "lame" in Italian, as I understand; so it's Ciro the Lame. Well, he's not got a lame tongue; God, I've never ever in my life come across someone who could run on like Ciro. So there was a time in my life when the guys nearly drove me completely mad—between Burt Klein, Ciro Zoppo, and Robbie Vogt. Oh, it was terrible! And for years, I had one or the other; I couldn't have lived with two of them. Of course, it always puzzled me how Robbie was able to get anything done—always talking an immense amount. Because I presume he's not singling me out as an audience; he's got all sorts of other audiences.

BUGÉ: Maybe you're a better audience.

ELLIOT: No, I don't think so. Well, I didn't stand up and run. [Laughter] I wasn't about to, because he's fascinating.

BUGÉ: But it's funny that Harold Brown wouldn't say a word to you, and Robbie doesn't quit.

ELLIOT: That's right, two so totally different characters. No; prying a word out of Harold Brown was very, very difficult. He'd answer a direct question or something like that, but he wasn't about to sort of give of himself; which was too bad, because he had a great deal to offer. It may be that Caltech was really just too small for Harold Brown; he needed something large like the Pentagon to manage. [Laughter] I'd like to know how he compares with Caspar Weinberger; because he looks like a sort of similar type—little managerial type, knows the answers to everything, with little electrons whizzing around there.

BUGÉ: This is getting into recent history, but how does Murph [Marvin A.] Goldberger follow Harold Brown?

ELLIOT: How, or why? [Laughter] Well, we're talking about talking. And I have not seen all that much of Murph. But I have a feeling that he was, at least for us in the beginning, inclined to shoot from the hip a little bit, to let his mouth run away with him. For example, he'd get up and answer a question on the faculty board when he didn't really know the answer to it. I think this is probably a mistake. It may be I'm not in as close a touch now, but I suspect he may have learned a little bit, or been directed by Robbie to layoff and wait, and that sort of thing. Because he had great difficulty by having things he said, and may have said quite simply without thinking too much and said it at point A; and at point B, somebody said, "You said this over here." "Oh, I did? Yes, well." That's a bit of a difficulty, I think.

It's not for me to make criticisms of Goldberger, but I think he has made some very unfortunate decisions, which the institute can live with, I don't doubt, but he has sort of done it in a way which has caused a maximum amount of confusion. The first one was on the army, the Arroyo Center—the first big one where, again, he seems to have plunged into it without feeling out the situation first of all, but just plunged in and said, "Sure, we'll go ahead and do it." I

remember when I was first told that that's what he had done. I couldn't believe my ears. I thought this seemed to be...what he plans to do. And at first, I thought he would get away with it, but he didn't. It would have been much wiser to go a little bit more slowly and find out whether there's any real support for it on the faculty, and if so, how do you go about it. One notices that when DuBridge started the VISTA Project, he didn't say at any stage, "Yes," to anybody, I think, until he knew jolly well that Bacher or Lauritsen, Fred Lindvall and Clark Millikan, and people like that, were all supportive. And once you have that situation, have guys like that in your camp, you do what you want, but not before. And I think that Murph just jumped in a little bit too fast on that. There was no need, because there was an army contract that they could have tried something out, and if it worked, it would work. And if it didn't work, you could quietly strangle it; no one would be hurt by the whole thing. But to try and plunge in and create—I mean, you say, "We are going to create this big thing like a RAND Corporation," that terrifies people. My God, what's going to happen now?

BUGÉ: But it does seem like the faculty was looking for somebody who was a contrast to Harold Brown.

ELLIOT: Oh, I think you've quite got it, that the sort of friendly atmosphere of Goldberger, the fact that he came in here and was amiable. He'd say, "How do you do," and greet you on the campus. And was on the campus—you could see him—and he had lunch in the Athenaeum; he sat down and told stories. I think when he came around, first of all, I'm sure that appealed to people. I forget now who the competitors were. Was James [C.] Fletcher one of them? There was another guy, the fellow who is the head of the University of Utah. I think it was Fletcher who was sort of the governmental type [NASA administrator]. But then, whoever it was, was a little bit more of the managerial style of person. And Goldberger's sort of warm approach to people was, I'm sure, greatly appreciated. And I think that that was an important aspect of the way people felt.

BUGÉ: You have to wonder if people are now looking back at Harold Brown and saying, well, he wasn't very friendly but he did create a direction for Caltech.

ELLIOT: Yes, he sure didn't gum up the works, or anything like that, and didn't make many

missteps. If he did get his foot in hot water, he got it out very quickly. [Laughter]

BUGÉ: So what do you think will happen in this next transition? Do you think people will be looking for somebody with greater managerial skills?

ELLIOT: My own personal feeling is—and I would have a feeling it might be fairly well shared by many of the faculty—that so long as Robbie Vogt's up there, we don't have to worry too much about what goes on in the further reaches of the administrative hierarchy. I think the faculty has enormous confidence in Robbie Vogt because he's a guy whose heart is clearly in the right place, who is not... I think nobody would have the feeling that Robbie is a sort of self-serving type at all. He's a very hard worker; he has shown himself able to deal with critical problems, like the radio astronomy thing—of course, with the help of Joanne Pearson, and others too, I'm sure. These ladies are all of great assistance to us, as Kent Clark pointed out.

BUGÉ: But if somebody is hired as president, they may not—

ELLIOT: But who is going to be the president? You were saying that a new president might have the feeling that he didn't want to be overshadowed by Robbie. Sure. Of course, the next president might be Robbie; I don't know.

BUGÉ: Do you think that's a possibility?

ELLIOT: He would certainly be different. I don't know; it's hard to see Robbie just in that light, up in that sort of presidential spot. But anything that Robbie does is going to be first rate, in my view. I think he'd drive himself into the ground as president if he had to do all that sort of stuff—all the sort of social aspect of it, the public relations aspect of it. Of course, he might arrange it that somebody else who wanted to be the vice president does all that aspect of it. You're not going to get an argument from me against Robbie Vogt on anything, almost. As of now, I haven't found anything yet to make me feel doubtful.



**DAVID C. ELLIOT****SESSION 4****May 1, 1986****Begin Tape 4, Side 1**

ELLIOT: When I came to Caltech, there was that History 5 course that I talked about, which sort of plunged me into the current affairs/public affairs, which was, by and large, not my bent. I had basically thought that history stopped about a generation before the present time, since you've got to let the dust settle a little bit. And the idea of contemporary history sounded to me a little bit like a contradiction in terms. However, you come to any university you have to do some good things that are not right particularly up your alley. I think, if I'd had an absolute choice, I'd be working in the eighteenth century. There was not much opportunity here at that time in the eighteenth century, though I did some work in the Napoleonic period and eventually moved back into the seventeenth century, where there is stuff at the Huntington Library. But anyway, that's parenthetically. I got plunged into public affairs in History 5, and I was responsible for that along with Alan Sweezy. And pretty much the rest of the division—most people would plunge in. There was a chap called John Schutz, who would lecture on American government questions; and Rod would talk about American foreign policy; and Alan would talk about the effect of the Marshall Plan. And I got to talk about anything that nobody else was prepared to talk about. The whole of the senior class had to take that; and that was one aspect of this sort of public affairs.

BUGÉ: So you coordinated that class with all the guest speakers?

ELLIOT: I essentially coordinated it. Theoretically Alan's and my name were both in the catalogue, but Alan is not a great enthusiast for doing sort of routine administrative stuff. [Laughter] So he was quite happy to let me do it. And we had a grader from JPL, called Tom Vrebalovich, who worked with us for years and did all the grading of papers, which was, of course, a great help since there were about upwards of 150 papers every year.

BUGÉ: Did he attend all the lectures?

ELLIOT: Yes, I'm pretty sure he attended them in the beginning. Maybe after he'd been through it a year or two, he was less enthusiastic about that operation.

That was one thing. Then, at the beginning of Hallett's regime, he got what I think we've mentioned before, a grant from the Carnegie people to do something in this general area of public affairs. And two things happened. One was that we started the Public Affairs Room—Hallett did, under Doris Logan, who did a spectacular job and tended to coordinate a great deal with that public affairs lecture in that she would have a big display on the wall and that sort of thing. And we'd in general deal with the problems that happened to be current; either the news was making it current or we were making it current for the boys, one or the other. That was one line.

Another thing was this grant made it possible for us to become a founding member of a university consortium, which put together the American Universities Field Staff—now called the Universities Field Staff International. We were a member; Stanford was a member in the first instance; Brown University, Harvard Business School—about ten universities. And the AUFS had men who had been trained in the Institute for Current World Affairs and under a foundation [Crane-Rogers Foundation] which had been founded by [Charles R.] Crane, the plumber, way back when—you know, in Chicago? His name was Crane; he'd been very interested in foreign affairs in the immediate post-war or WWI period. [Crane was secretary of the original Committee on Armenian Atrocities in 1915 and helped author the King-Crane Commission Report of 1919 on the conditions of non-Arabs in the former Ottoman Empire.—ed.] He and a man called Walter Rogers, who was then the editor of the *Chicago Daily News*, had been sent by Woodrow Wilson to Armenia to look into the situation there. Because you may remember, there was a proposal in the Versailles peace settlement to give the United States a mandate for Armenia as part of the carving up of the old Turkish Empire. And the United States resisted that idea. But this man Crane was involved in all this; and he realized in this period that the United States really didn't have a competent knowledge about a great many parts of the world out here in the sticks. So he provided some money for a foundation, which would train young Americans in areas of the world that America really knew nothing about. I think this was set up in 1926 [1925—ed.]. The sort of things that he did: There was one lad in that pre-war batch, John [N.]

Hazzard, who went to Russia and went through the Russian law training—and he's only just retired recently as professor of Russian law at Columbia University. Another lad oddly went into law, too, in Japan—since 1945, he's clearly had a very crucial position in Tokyo, and I think, has a very lucrative law practice in Japan. [Laughter] A third one was Phillips Talbot, who took the Indian Civil Service training course in either Oxford or London University—a regular course which the people going out to the Indian Civil Service would take; and they went out to India, hoping to learn about that part of the world. Rogers's and Crane's idea—but particularly Rogers's idea—was it doesn't matter what the guys are interested in. If they're interested in fly fishing, so long as they're interested in something, they can go out to a foreign country and they can latch on to people who are also interested in fly fishing, trout fishing—you name it—and they can get into the society there. So these people started off from a wide range of interests.

Well, this is the background. Phillips Talbot, whom I mentioned, became really something of a successor to Walter Rogers. He was after the war the fair-haired boy who'd been in India for a good part of the war, and also in China with the OSS [Office of Strategic Services]. But he came back to this country, and he thought of doing something which had been in the cards for some time: trying to make use of all this expertise, these guys who'd spent several years living in Indian villages and Japanese law schools and so on, and make their knowledge more widely available to the community. And he thought the best way to do it was through universities. And this was a time in the 1950s when we didn't have people traveling all over the world. The faculty stayed then. A few rare people like [Richard P.] Feynman would go down to Brazil or Murray Gell-Mann would go and show the French how to do nuclear physics, or something like that. But most of the time, we stayed right here. And none of them had been to Russia; none of them had been to Africa—almost nobody had been to Africa anyway in the 1950s—and much the same for Latin America. So that these lads would come; we would get four of these lads from foreign fields each year.

BUGÉ: Did you ever get anybody whose special area wasn't academic, somebody who had studied fly fishing but had done it in a different culture?

ELLIOT: Oh, one of the most successful was a fellow called Al [Albert] Ravenholt, a great friend of the Bachers, who was a newspaper man by training. He had spent quite a bit of time on the

joint rural reconstruction program in South China; that's how he got involved in it; and either before or after that, he was brought back by Walter Rogers. He went to Harvard for a couple of years, maybe a Nieman Fellowship, that type of thing. Because sometimes these lads lacked—if they were in newspaper life, for example—they may have lacked the discipline of some sort of academic frame; or they might have academic training and need exposure in the field, in living in Indian and Chinese villages, and so on. There were a number of newspaper people, and for very good reason—Walter Rogers himself was a newspaper man and not an academic type. For another thing, all these lads were accredited to the *Chicago Daily News*, sort of stringers, so that they had press credentials anywhere they went and could get into press meetings and so on. Well, we had a number of guys who became very familiar, very well known and very well liked here. The general pattern was they would come. Each one would stay for about ten days. They took part in a term seminar, which I gave. They would manage to get in two weeks, you see, in the ten days, two meetings of the class, and there's a total of eight; and with an introduction and a conclusion, you had a term. And they would lecture in History 5. There would generally be at least two, or maybe three, faculty people who would have them to dinner with a group of six to eight members of the faculty. They might go and talk in the student houses; they would always talk in the Y—the Y in the 1950s was very active in international affairs. They had a Y forum at lunch—on maybe Wednesdays, I believe, which had started off when I came, first of all, in 1950. It was basically run as a little graduate school—graduate student lunch that they had in one of the small, private dining rooms, and there might be twenty people there. Within a very short time, and partly stimulated by the AUFS, they would have a luncheon that would take up the whole of the Hall of the Associates [in the Athenaeum], week after week sort of thing, at which the main group would be faculty. And then, as you got into the sixties, the changing circumstances meant that the faculty began to travel all around the world; they didn't need to be told about what was going on. And it would become more and more staff, and people from the town and so on. And eventually, the whole thing faded away. But in the fifties, there was this sort of “lamp-lighting” function which the AUFS had to perform in getting people just simply interested and involved in what's happening in the world in general.

BUGÉ: Were the scientists as receptive to this, or was it mainly people in the humanities?

ELLIOT: No, there were some very active scientists. Murray Gell-Mann was quite active. I can recall Feynman at one famous case, when there was a lad who'd come up from Brazil where Feynman himself had just been. And guess who told us about Brazil? [Laughter]

Bob Sharp was quite active. I can remember Linus Pauling throwing a dinner party for some of these guys. The Harold Waylands were very active for years on this venture. Milton Plesset was another. The Bachers. Fred Lindvall. All around the institute, the brightest and the best guys were sort of interested in it—eager, interested, alive, wanting to know about what was going on. And in some cases, would have a special interest in a particular area, and they would try and pin this guy down for a sort of individual session.

BUGÉ: And the students were equally enthusiastic, or did it mostly attract the faculty?

ELLIOT: I would think it had more of an impact in the fifties on the faculty than on the students. It's hard even to get the students at Caltech to read the newspaper, as you know. They have a hard time fitting it in. But insofar as they had time, they would participate. Some kid who was interested in the Y would tend to be interested in this. Anyway, that was the fifties.

We got into the sixties, and the Carnegie people proposed to give Hallett some more money to do something more in public affairs, foreign areas type of work. And here we got a group together—Bob Bacher was in it, and Charlie Lauritsen; and the others, at the moment, I don't recall—to try and figure out what we ought to do with this money to have the most effect on the Caltech community. Charlie Lauritsen's suggestion was, first of all, that we—and I think I mentioned this—that we should study the VISTA Project, how that came out and what happened as a result of that. Eventually, that was thrown out, as it was pointed out to Charlie—which he well knew—that it was a highly classified subject still at that time, and none of the report had been declassified.

BUGÉ: So why was he suggesting it?

ELLIOT: In my view, he was the sort of crucial figure in the whole VISTA Project, and he was the sort of common central figure that held it all together.

BUGÉ: So he wanted to be able to talk about it, do you think?

ELLIOT: I think he wanted to be able to talk about it. He thought it would be a useful thing to do—and it would have been; it would have been enormously instructive if we'd been able to dig into what the VISTA Project was all about and what happened to it, and whether it had any influence at all. It would have been a very interesting question to dig into.

But as it turned out, we flowed, as it were, with the tide and got into the arms control issue, which was just arising in 1960. Hitherto, people had talked a lot about disarmament, but not very much about arms control. And this idea of arms control was beginning to surface as people began to realize that here these weapons of one sort or another were here to stay, and the problem was to try and get them under control, and not to wish them out of existence, which was going to get us nowhere. I think this feeling was becoming stronger among the nuclear physicists, who were really the only ones very well informed on the subject. And of course, their natural tendency had been—and this is probably why they'd only just come to thinking of arms control—their natural tendency was to look at a problem and say, “Well, if we work hard enough at this, we can solve it. We've done difficult things before. Let's get with it, boys!” And the idea that you might have to live with a problem was something, I think, that some of them constitutionally found it difficult to accept.

Anyway, we started on this..., and it was just a bit after the Harvard/MIT group had started on the same line; and they started off with a sort of joint faculty group which met at MIT and then at Harvard, and worked on the problem and did it very coherently and produced a very famous issue of *Daedalus*, which became something of the foundation for all later thinking on arms control; they sort of mapped out the field. That book had not yet come out, but we were aware of the activity there. And so the two who got landed with this whole enterprise—of putting together a faculty committee of some forty to fifty people who would be interested in going forward and then continuing in a committed way, none of this in and out business, but coming regularly to weekly meetings—was Matt Sands in physics and myself. And we started off—we went to a conference in Endicott House outside Boston to begin with, which was the first time that I met Harold Brown; he was at that conference—he was at that time, I think, the director of the Livermore Labs. Anyway, Matt and I went to that conference and listened to all these guys who had been thinking about the problem for some time to see if we could pick up any information.

When we were there, I recall going to MIT. We went to Harvard because we met a guy

called Gerald Holton, who was interested in sort of science and public affairs—he was the editor of *Daedalus*. I have a feeling he became—in fact I'm not unsure that he is not now the editor of the *Scientific American*, or something like that, something which is having a hard time these days, as I recall. Anyway, I remember meeting him. We went over to MIT, where Matt Sands, of course, had been. I tell you, I had a hard time keeping up with Matt Sands's married life, because his wives kept changing dramatically. [Laughter] He had left MIT only a jump ahead of the sheriff, I think, as he told me the story; because the wife whom he had discarded—or had discarded him—was, I presume, after him for alimony or something like that. And so he'd come out to Caltech quite willingly. But he'd been a good friend of Jerry [Jerome B.] Wiesner and others at MIT. And I remember our going out to the faculty club at MIT and Matt Sands talking a drink out of a somewhat unwilling Jerry Wiesner—I don't think he was all that anxious to provide Matt and me with a drink at the faculty club. And I think we talked to some other of Matt's friends, and then came on back. And that summer I went to what would be the second conference of the Institute for Strategic Studies in London, which had just been founded by a group there of really churchmen and academics and newspaper people, which has since become, of course, the most notable organization in this field I should think. And there I met a number of people who I was able to bring to Caltech later on and talk to the seminar. One of them, I remember, being John Strachey, a very famous [British] Labor Party figure.

Anyway, the upshot of all of that was that for the next two or perhaps three years, we had this faculty seminar with these forty or fifty people in it who'd meet once a week on Wednesday afternoons, I think, and talk about various subjects with one of these learned people who had come in from the outside. And that person would usually give a lecture—in perhaps Culbertson—to the Caltech community and talk with the seminar, and that would be his stint. The only mistake, I think, we made there was not to arrange that we publish their talks; because what happened was they went off and got them published in *Foreign Affairs* or by UCLA or something like that. And we paid for them, which is a little—I missed a trick on that one.

BUGÉ: That's kind of hard to anticipate.

ELLIOT: Well, in the beginning we thought this is a sensitive subject—and many of them public figures, military officers among others—why don't we have it off the record all the time so that

they can talk freely and so on. Well, they talked reasonably freely and then published it anyway.

We first of all had in the summertime a small group, about half a dozen people from RAND Corporation who came over and tried to get us dry behind the ears—and one thing, of passing interest later, one of these was Daniel Elsberg—and that got us acquainted with the RAND people. And then the stars began to come; like, I think possibly Maxwell Taylor was the first; well, on the military side, Maxwell Taylor was one. Sir Geoffrey Bourne from England was another; he had been, I think, commandant perhaps of the British army of the Rhine and also out in Singapore. He had one arm, and was a great tennis enthusiast—so we turned Virginia Kotkin loose on him; she's a great tennis player, too; so they had a good time together. [General Lauris] Norstad was another who came here; that was a little later because it was after his tour of duty was over, and that would have to be then in something like the fall of 1963. There was an Admiral Red something-or-other. Charlie Lauritsen just knew an enormous number of people here, of course, particularly the Navy. [Henry A.] Kissinger was here—Kissinger was here twice, I think—Dennis Healey from England [Britain's Defense Secretary in the late sixties], and Fred [Frederick William] Mulley [British economist and Minister of Aviation and Disarmament in the sixties—ed.]; Jules [Salvador] Moch from France [UN delegate to Disarmament Commission from 1951-1960]. I don't think we had any Germans.

BUGÉ: So several people would contribute names or suggestions, or contact people that they knew?

ELLIOT: No. By and large, I did it. And the biggest help I got was from Charlie Lauritsen and Harrison Brown; these two knew an enormous number of people and had a lot of contacts. If there were some like Maxwell Taylor or Norstad, DuBridge wrote to both of them; and he may have written to some of the others. Dean Acheson was here; I'm sure he wrote to him. And Dean Acheson, I know when he was due to come out because he was to come out at the time of the Cuban Missile Crisis, which was the fall of '62. Well, he was due to come out here on something like a Tuesday or Wednesday; and Monday morning the phone rang, and it was Acheson himself personally—which impressed me—saying that he was sorry, he had rather urgent business and he'd have to postpone this talk. The urgent business was the Cuban Missile Crisis, and he was about to get on a plane to go to Paris and explain the whole thing to General



DeGaulle. And he had a wonderful story to tell about that: Marching into the Elysée, and here's DeGaulle at the table way across the floor like Mussolini, but very receptive and a staunch ally; yes, he would certainly stand by the United States in this crisis and so on; what else would one expect. Well, Acheson didn't come then; and the speech he was going to give at Caltech, he gave about a week or so later at West Point. And it was a speech in which he talked about Britain's position, and about its looking around for a role, that it didn't know what to do, it hadn't found itself, and it needed to find a new role in the world; the empire was gone. And this infuriated Britain on the whole. It wouldn't have worried Acheson—his moustache twitched up and down.

He had a wonderful story to tell about going over—and he was a magnificent raconteur. After he delivered his lecture one night, about ten o'clock, I said, "Do you want to get back to the Athenaeum? If you'd like, you can come on over to our house and have a drink." "Oh," he said, "I'll come and have a drink." His wife said if liquor had not been available he would have invented it. Then we went over, and he sort of flustered my wife because the kids had been through everything—there was all sorts of junk all over everything. You know, wives don't like to be surprised like that. But it was such fun. He acted very easy and charming, sat down there, and told stories. And one story he told was about the funeral of King George VI [in 1952]. He went over to represent the United States—I think at that time he was Secretary of State. So he got over to London and went wherever the service was—I think St. Paul's Cathedral. And then they all went up to Paddington Station where the train was going to leave for Windsor and the interment in Saint George's Chapel. So he got down to the platform and all the foreign office people were putting people into the compartments; and they shoved Acheson into the diplomatic coach. He got in there, and he was going down the corridor; and he could see in compartment after compartment there was somebody who was going to ask him for some money or something—you know, every country represented. He'd be there for an hour, getting his ears pinned back by some clown—and he wasn't going to have that. He walked up to the end of the coach and went into the next coach; had a look in, and here were the British chiefs of staff and General [Henry Duncan Graham] Crerar, a distinguished Canadian officer. They caught sight of him as he was about to retire. And they said, "Come on in, come on in." So he went on in and sat down with these chiefs of staff. They had a bottle of whisky up there on the table. And Crerar said, "Well, boys, here we are," and he divided the whisky among six people in six cups

and said, “Down the hatch!” and down the hatch it went. And they began to talk. And Crerar noticed a steward going down, and he said, “Steward, here! You’ve given us an empty bottle.” [Laughter] So he returned the bottle and they got another bottle, and down the hatch again.

The upshot was, when they got to Windsor, they were looped. [Laughter] And, you know, “Brothers in Arms.” Crerar said to Acheson, “You don’t want to go with all these diplomats. Why don’t you just march up here with us.” So they set off. And you know there’s a sort of winding road up from the station to Windsor Castle. And he saw the castle up there, and got in line and he started off up in this direction, and Acheson says to Crerar, “Where the hell are we going?” “Oh,” says Crerar, “don’t worry. We’re going to take it in the rear, take it in the rear.” So they wandered all up there—the proper way actually—and they got up to the castle. And Saint George’s Chapel by that time was already packed with the wives and children who were in the pews. And all they could do, these guys, when they came in was to stuff them in the aisles. And there was Acheson in the center aisle, along with Crerar and the others. And as he said, “All these playing card figures up there by the high altar,” with the white spade beards and all the rest of it—Lord Lyon King of Arms, and the rest of it, Garter King of Arms. They were standing there waiting when one of these “playing cards” keeled over—presumably fainted—and there was all sorts of commotion. And little Sr. John’s Ambulance men appeared. “Excuse me. Excuse me,” pushing up the aisle. Acheson asked, “What in God’s name are we going to do now? They’ll never get him out.” “Oh,” says Crerar, “don’t worry. All they’ll do is pull up a stone and bury him.” [Laughter]

So these were the sorts of stories he told, absolutely wonderful.

Another very small story I remember with General [Lauris] Norstad. He was a very impressive figure, straight as a ramrod. When we had a cocktail party in our house, he instructed our daughter—who slumped around like teenage children do—and he said, “Young lady, stand up straight, and look me in the eye.” And oddly enough, she does; she’s as straight as he is now, as a ramrod. His techniques were very skillful; I watched him operate during this situation. And you know, one of the great difficulties at a cocktail party is dealing gracefully with the sort of “buttinskis”—how do you include them without interrupting the flow of conversation. Norstad managed it beautifully. He would simply—when somebody came up like that—he’d go on talking and just put his hand on their shoulder, or something like that, and include them physically that way. And it struck me as a sort of masterly gesture, with no interruption; that

person felt very happy, not rejected or anything of that sort, and sort of brought into the flow of conversation.

BUGÉ: That's interesting. I wonder if he did it intentionally or if it was something that happened spontaneously.

ELLIOT: He was a pretty spontaneous guy, but I'm sure he had learned a lot, too. He was a sensitive guy, I think, and the antennae were just out there. There are some who perceive things and there are others who don't perceive.

I can't remember who it was, but one of these generals impressed me particularly—it might have been Norstad or Maxwell Taylor—by the way, he sort of handled the problem of not giving away anything and yet being perfectly frank. He was perfectly frank about his personal life; he'd tell you how he met his wife and all that sort of thing. But not a word about meeting Adenaur or General DeGaulle, or something like that, no personal touches there. But in regard to his personal life, an open book. It was disarming; made you think, what a friendly sort of guy this is, open, above board.

We had a lot of fun. It was a lot of work. I used to go down and meet these guys at the airport. The military were very impressive. Maxwell Taylor almost got infuriated when I tried to lift his bag for him. He was not a young guy. He was a senior officer and all the rest of it; but by God, he was going to carry his own bags and none of this nonsense. That's impressive!

BUGÉ: You must have done a lot of entertaining, too.

ELLIOT: I think you ought to speak to Nancy on that. [Laughter] At that particular point, we moved down from Altadena, I think at the beginning of all this caper. Nancy was determined that we would move down from the hills. She was going up and down like a yoyo, taking the kids to school, going back, feeding them dinner, coming down to Caltech in the evenings, that sort of thing. So we got a house over on Arden Road here, which is quite close, and that was a big help. But yes, there was a lot of entertaining. It seemed to me we must have had a cocktail party for all of these guys; and that was almost a weekly affair, plus hosting dinners which might be in the Athenaeum or something like that.

BUGÉ: Did your wife, then, attend all the dinners?

ELLIOT: She was there until she was cross-eyed, bless her heart. In fact, she was so cross-eyed that later on when Henry Kissinger became Secretary of State, she said, “You know, I don’t care for that guy very much.” And I said, “Well, you know you’ve entertained him.” And she said, “I have?” [Laughter]

### **Begin Tape 4, Side 2**

ELLIOT: That whole thing, to cut a long story short, that whole business with these people coming, eventually moved out of this sort of faculty seminar into what became the regular National Security Seminar, which I’ve given now for the last twenty odd years.

BUGÉ: Where did the money come from to fund this original seminar?

ELLIOT: From that Carnegie grant that Hallett got maybe about 1960. It funded a number of things, too, that started up there. Some of the other ones, like Bob Oliver, may have had a good deal to do with trying to put something together in regard to Africa. There was Fred Lindvall and Bob Huttenback and Bob Oliver and Ned Munger—they all traipsed off to South Africa to do something. Bob Huttenback found Gandhi’s tracks here and worked on that. But they were more concerned with development; it was a developmental seminar. And Alan Sweezy, I’m sure, was involved in that, too, though he did not go to Africa.

BUGÉ: Was this economic development?

ELLIOT: Yes, economic development—that was a big, hot issue. It made a lot of sense; and we thought that whereas the arms control issues tended to attract the physicists and historians more than any other, the economic development might be more interesting to the engineers, people like Fred Lindvall and others of that sort.

BUGÉ: And that tended to be the case?

ELLIOT: Yes. I think there were some engineers involved, though not many, and that project really didn't get very far, it seems to me. It sort of faded out of the picture somewhere; it faded out of my picture, anyway.

BUGÉ: So Carnegie must have given a substantial amount of money to have funded several years of the seminar you're describing.

ELLIOT: It was fairly substantial. When I talk about fairly substantial, I doubt that it was more than a half a million, but a half a million then was quite a lot of money. I would guess it was more like \$300,000.

BUGÉ: So when the seminar evolved into the class, which you give now, did that mark the end of the Carnegie money, and since has been carried by the school?

ELLIOT: Yes. It sort of faded into the school, in the same way the original Carnegie grant in the fifties had paid for the American Universities Field Staff contribution for a year or two or three, and then was picked up by the institute, too. We were still, at that time, in the division. This was part of the background in which we came to develop the social sciences; we hit up Carnegie on public affairs. I was able to get some money from Rockefeller—I think \$200,000—about 1966, with which we hoped that we might then be able to develop what seemed to be allied with the political sciences. We'd been doing all this discussion of political problems, international affairs without any political scientist on the ground at all. From the point of view of the experience of the undergraduate, they ought to have some opportunities, in the social science field. We tended to think of it as something which was necessary for broadening the undergraduate experience. And then this leads in part to the development of the social sciences, which as they began to develop, would link up with the feelings of some of the people in history—particularly, like Dan Kevles and others who were much more interested in things like research. And, of course, obviously the economists began to think of graduate school and people began to say, no, you're not going to get any of these people unless we can promise them graduate students. So the whole thing developed in that sort of way. So that is the public affairs angle.

The History 5 thing, as we noted, disappeared [in 1967] in the sort of reorganization of the whole undergraduate curriculum; and partly because there was already more interest, more

knowledge about foreign areas and public affairs than there had been back in the fifties.

BUGÉ: I want to ask you about the evolution of this seminar into the class. Was there no resistance to the ending of this for the faculty, even though the faculty was doing more traveling and maybe was a little better educated?

ELLIOT: No, because gradually the numbers sort of dwindled a bit. But still, faculty continued. Charlie Lauritsen continued with it, I think, to the end of his days.

BUGÉ: Coming to your class?

ELLIOT: Right. Maybe in the late sixties, there might be six students, and Charlie Lauritsen and me.

BUGÉ: So when the Carnegie money ran out, it wasn't ever a question of it being funneled into a different program or anything more?

ELLIOT: Once the money ran out, there was nothing to funnel.

BUGÉ: I mean, there was no effort? Is there a feeling on your part that it could have gone longer?

ELLIOT: No. The real job had been done. The faculty probably had had enough of that three-ring circus. I told you about the time that [Sir] Solly Zuckerman and I. I. Rabi were here?

BUGÉ: No. You must be doing this in your sleep or talking to someone else.

ELLIOT: I have been talking to Peter Fay. For some reason he has got into quizzing me about some of the past.

On this occasion, my wife and I, and the speakers, and perhaps the DuBridges, and one or two others, were at a dinner at the Athenaeum before the evening talk. They were going to do a duet, as it were. We had dinner, and at about a quarter past eight, walked over to Culbertson

where the evening meeting was to be held at 8:30, and walked into Culbertson and there was not a soul present, not a single body, nobody. Fortunately, a few turned up eventually, but not many. And here in this great institution of science, with I. I. Rabi, who you'd thought would have drawn them out of the woodwork. And not just I. I. Rabi, but Solly Zuckerman, who's probably the number one guy in defense science in the United Kingdom—certainly was—he was “Mr. Science” in government. And both enormously able, distinguished people; and nobody there. I had a feeling at that time that if a hole opened in the floor... [Laughter] Anyway, that was one of the moments.

But the faculty tended to lose more and more interest. Charlie Lauritsen continued. Very faithful guy; if he started something, he was going to see the thing through to the end. And Harrison Brown, of course, was enormously interested, and kept on being interested; he was very often not here, but he really became more interested in these public questions than in looking at meteorites. So he came over here somewhere about 1970; he just transferred his division and became a professor here. Except that I'm afraid our social scientists didn't like that idea very much, this growing social science group. They didn't like the way in which an amateur was working away on these public problems which they thought should be theirs, I think. He didn't understand the theory at all but he could understand the numbers, and they couldn't pull any wool over Harrison Brown's eyes; he knew what we were up to and could understand an equation if he saw one. Anyway, he was treated very poorly in this division, in my opinion.

BUGÉ: Do you think that had anything to do with his leaving?

ELLIOT: Oh, I think a very great deal. He was a very tactful nice guy, and he didn't come out and say, “I'm just going to get out of here,” or anything like that. But it's clear; if the place had been a little bit more welcoming. You see, he could relate easily enough to the behavioral types—Ted Scudder and people of that sort. And he and Alan Sweezy and Ted Scudder developed quite a promising population program; that could have gone ahead quite happily. But when Huttenback came in, I don't think he cared for it either. I would suspect that in one way or another, he just eased him out, made it uncomfortable enough. And there were some, well able to make it uncomfortable—even for Harrison, a distinguished figure in the sciences and in public life. But they may have felt it was a bit too much competition for them. I don't know. I was

sorry to see Harrison leave; I thought he was a splendid guy. Of course, he had his own personal problems at that time. He and Rudd got divorced somewhere in there, just before he left. So there may have been other reasons—on the Matt Sands level—that tended to make it seem to him a good idea to get out. That poor guy had a hard time, because he was a very active guy to be struck down by—what was it he had? He got lung cancer; I think when they operated, they hit some nerve or something which paralyzed him; he couldn't walk, he couldn't run. He was in a wheelchair. I have not seen him for years now and heard very little about him. He went, of course, to the East/West Center in Hawaii.

BUGÉ: But he's been paralyzed ever since?

ELLIOT: I just don't know the condition. Every now and again I'll see Rudd, and I'll ask her, and she'll tell me as much as she knows. I'm not sure he hasn't come back to Arizona, or some place there. Again, a nice guy, and we could have done a number of interesting things had he been able to stay.

BUGÉ: When Harold Brown came, the seminars were still going on?

ELLIOT: No, it was going on as a class at that time. I remember Harold Brown came and talked to the group—maybe not the first year, but possibly the second year, because he came and talked about the SALT negotiations.

BUGÉ: So he probably would have participated in the seminar if it had been going on as a faculty seminar.

ELLIOT: Oh, I'm sure he would have. Well, you can never tell about the president, because they get trapped on all sorts of things. DuBridge did not come very often to the seminar even in the early stages. I don't even recall his being there at any time, but I'm sure he must have been with a number of people.

One of the most interesting groups that occurs to me right now is a group—about a half a dozen—we had in the early sixties from the Soviet Academy of Sciences, headed by a man called [Alexander] Topchev, who was the vice president of the Soviet Academy of Sciences, and



a number of other scientists. Plus a little man called Pavlichenko, who was their watchdog—KGB escort, or whatever you'd like to call him. And of course, they tended to think of me as a CIA character; they obviously are not going to turn these scientists loose. Who is this lad who's not a scientist? [Laughter] Well, they were an interesting bunch. And Madame Topcheva came, too. And the one thing they wanted to see when they were here was the Oaks Theatre—it was a theatre over on Fair Oaks, a cinema; it showed the sort of risqué movies—skin flicks.

BUGÉ: How did they even know it was there?

ELLIOT: Oh, they found out at once about this degenerate capitalist society, you see. [Laughter]

BUGÉ: They weren't really interested; they just wanted to verify how degenerate the society was.

ELLIOT: Exactly! They wanted to check it out.

BUGÉ: So who got the honor of taking them to the skin flicks?

ELLIOT: I don't know. I think they got pointed in that direction. I didn't go with them. Harrison could have taken them; he would have had no qualms about it. He'd do anything to be helpful; he wouldn't mind that. A resilient sort of chap, Harrison; he was really enormously helpful in the whole program.

Now when Harold Brown came, he developed a slightly different tack by—and I think we did talk about this—setting up the California Seminar, with Harry Rowan and McGeorge Bundy.

BUGÉ: Yes, you mentioned that. But I'd like to know what the chronology was.

ELLIOT: That, I think, came to pass in about 1970, though it could have been '69.

BUGÉ: So it was after the seminar had become a class.

ELLIOT: Yes, that's right; that other seminar. And the California seminar was a rather different

thing, and a much wider range.

BUGÉ: And your participation was probably because he knew that you had coordinated the other.

ELLIOT: That I had been involved in this sort of stuff, and knew the people over at RAND, and so on and so forth. He sent me over, first of all, to a sort of founding meeting, which was held at Harry Rowan's house, who was then president of RAND, somewhere over on the West side. And Fred [Charles] Iklé, who was now one of the Undersecretaries of Defense [Undersecretary of Defense under Reagan administration –ed.], was there I think. And Albert Wohlstetter must have been in on that; and Fred Hoffman [of RAND]. But I was the lone representative from here. But it was set up so that Harold Brown would be on the steering committee, the executive committee, along with the president of RAND and other people—and Murph is now.

BUGÉ: Were there other academics then?

ELLIOT: In that first go-around, the committee was really just Caltech and RAND—except that Albert Wohlstetter at that time was a professor at Chicago; and later, Harry Rowan went off to be a professor at Stanford. One other lad who was there—I think, though I'm not sure—was Alain [C.] Enthoven, who had been one of McNamara's bright boys [was appointed Assistant Secretary of Defense for Systems Analysis by President Johnson in 1965 –ed.]; he'd been at RAND, I think, and then had gone; he certainly worked under McNamara, and then had gone to head Litton, a health division of Litton Industries [in 1971]. So there was a certain variety. Then it became more so as various groups spun off from RAND—all these special little research companies that spun off from RAND—and there was representation from that. Nowadays, of course, one of them is Ray Ohrbach, who's an old Caltech undergraduate and provost at UCLA. And the first director of the seminar was a fellow called Ciro Zoppo—I know I've mentioned that name before—he was a professor of political science at UCLA. But I was the main academic type in this.

BUGÉ: And what did you talk about then? Did you have any outside specialists, again, come in?

ELLIOT: No, no. This was just the group that set it up. These were the specialists. The organization was set up on the lines of working groups, which would meet periodically with an outside speaker or at one of their own. There was a working group I was with last night, where I gave this presentation—all the other guys from the academic world, from business, from the professions, from RAND, you name it.

BUGÉ: What do they call the seminar?

ELLIOT: It's called the California Seminar. It was originally called the California Seminar on Arms Control and Foreign Policy. It is now called the California Seminar on International Security and Foreign Policy. They changed the name in order not to worry some of our sponsors, like Rockwell International or Lockheed or Northrop, or somebody like that, who get the jitters when you talk about arms control.

BUGÉ: But there's no trouble with content; and you can talk about arms control to your heart's content, no matter who's sponsoring.

ELLIOT: Of course, absolutely right; you can do that. And the participants from the aerospace industry may or may not get tired of it.

BUGÉ: Do they protest?

ELLIOT: No. I don't recall any protest about anything that they discussed at the seminar at all—on the line taken or anything like that.

BUGÉ: But there must be a fair amount of disagreement.

ELLIOT: Yet they're gentlemanly or ladylike. The attendance of ladies last night at the seminar was low, much lower than usual. There's usually quite a group of women there; there are quite a lot of women at RAND, and none of them seemed to be there. And the very, very lively and a sort of flamboyant gal, Nancy Greene, who is the wife of Lorne Greene, the actor, has gotten involved in this whole area; and she is very talkative on the subject, too. But very few women

last night; the main one was Nina Byers, a physicist over at UCLA. And, of course, Judy [R. Goodstein, Caltech's Institute Archivist]; and my wife; and that was it. But normally there've been about four or five women, at least in that sort of group. I must have scared them off or something.

BUGÉ: So your class has been ongoing since that time.

ELLIOT: Yes.

BUGÉ: And what is it called?

ELLIOT: National Security.

BUGÉ: And the seminar at RAND is ongoing?

ELLIOT: You mean this thing called the California Seminar? It's not at RAND. We were at the Tower Restaurant, as you know, last night. Central downtown locations seem to be the base because people are coming from all directions against the flow of traffic.

BUGÉ: Who participates in this group now? It's obviously gotten much larger than when you started attending.

ELLIOT: It's been fairly big from the beginning. But, as I said, business people, academic people, professional people. The largest group is sort of people in the defense industry and political scientists from all over southern California. And it's, in turn, also linked up with rather special links with a similar group that works at UCLA. There is a big University of California operation in this general ball park which is run by Herb York from San Diego [physicist who became UCSD's first chancellor -ed.]. And we have a Rockefeller grant of \$300,000 to work with them on some of the projects.

BUGÉ: But who supports the ongoing group?

ELLIOT: Now that Rockefeller grant, half will come to us and half to the university. And we have contributions from companies like Boeing and Lockheed and various foundations. The Ford Foundation, of course, was the basic supporter for years; they started off with the original grant, and I think a five-year grant of about \$300,000 or something like that.

BUGÉ: It sounds very complicated to me, the different organizational affiliations. I mean, the money is neither going to Caltech nor to RAND, nor to anybody else.

ELLIOT: But it is; it's coming to Caltech, every penny of it. And we keep the accounts; I sign off on everything.

BUGÉ: So you're in charge.

ELLIOT: I've got the money; Caltech is the banker. It is run jointly; Caltech and RAND are jointly responsible—were in the beginning, and I suppose, theoretically still are now. And the money is given to Caltech, all the money. Ford in the original grant got the heebie-jeebies about the thought of giving something to the RAND Corporation in this area, feeling perhaps that there would be a certain bias or slant. They felt more comfortable giving it to an educational institution. So we've simply done all the banking since. Of course, since every little grant usually means a different system of accounting, the accounting must have driven our financial wizards just about up the wall. The number of accounts—you know, those printout sheets that you get endlessly—it's just unbelievable the complications. But nonetheless, they've got a system going now. The offices are over in the clean part of RAND because we don't do anything but unclassified work. But part of RAND is clean; and you can get into it and out of it, and that sort of thing, whether you're cleared or not.

BUGÉ: This brings me back to when Charlie Lauritsen wanted to talk about the VISTA Project in the fifties. You talked about the VISTA Project last night, correct?

ELLIOT: Yes.

BUGÉ: But that's not totally unclassified, is it?

ELLIOT: Most of it is. [Document on desk.] It was declassified in that form—certain portions of pages blacked out, especially regarding nuclear warheads—in 1980. Of course, since I don't know what the classified part is, I can't say anything about it; except that I think I know what it is about, because you get hints in the document about what it would seem to be. But without knowing, you can't tell. All I know is that when I was aware of what was not declassified, some of it seems sometimes a little silly. But it's the numbers, I think; they just don't like numbers to be passed around. The numbers don't mean much to me anyway.

BUGÉ: What about the abortive Arroyo Center?

ELLIOT: I'd forgotten about that. We did talk a little bit about that. The first time I became aware of that was when Marty Goldsmith came in, sat over there, and told me that the institute wanted to set up a research group for the army within JPL, or attached to JPL. I think he just talked about really setting up, in his terms, something like the RAND Corporation for the army. And I said to Marty, "I don't believe you!" The idea of setting up something like RAND from scratch! He was involved in about a two-year project to consider the feasibility, so he really had a hard time. And what surprised me most of all—and I think I've said this before—was when he finally told me, he said, "Goldberger has agreed that that's what's going to happen." Well, if the boss says so, that's the way it goes, I suppose; and no doubt he's got the support of somebody to do it.

It turned out that was not the case, of course, as the whole thing began to develop. And people got very angry about the whole thing. I had no great objection to their doing this. I thought it was going to be unlikely for them to produce something of the quality of the RAND Corporation just sort of overnight; that would be pretty difficult. And if they were going to do it, they probably had to have somebody of the quality of Jesus Christ—not necessarily with his attitude to life, but certainly sort of that quality of superior charisma that he exhibited—and that would be hard to find. It turned out that there were more problems than even I thought of at the time, but it marched ahead; and since he was prepared to fund the sort of research which I was interested in, in regard to the early history of nuclear weapons, I didn't mind; I'd be perfectly happy to go along with that idea. It was he who purchased that for us.

BUGÉ: Who's he?

ELLIOT: Oh, for the Arroyo Center, that was Marty Goldsmith.

BUGÉ: So there was money already.

ELLIOT: That's right. And we got the copy of the VISTA Report; think Judy [Goodstein, Institute Archivist] set it up, and she made contact with the guy in the military section of the National Archives who produced it and was prepared to turn it out. Marty Goldsmith paid for it; and I've read it. [Laughter] And he enabled me to go to Washington and do a little bit of work in the National Archives and go and talk to General Norstad. The guy they got to head the Arroyo Center also put me in touch with Ivan [Alexander] Getting [founding president of Aerospace Corporation, 1966-1970 –ed.], who was one of the key figures on the air force side and helped to get that whole thing started.

Joe [Joseph B.] Koepfli was interested in the Carnegie Seminar because he'd been scientific advisor to the State Department and, I think, had done a lot of work with the State Department for a period of about twenty years. So he was very interested and came for a while. Then I think somewhere in the middle sixties, he went off to Santa Barbara, though I saw quite a bit of Joe for a while, and enjoyed him, too; but I would say about the middle sixties—it was not Santa Barbara, more like Carpenteria, that he had a house on the beach there. I'm not sure if he's a Rhodes Scholar or not, but his graduate degree was from Oxford; I'm not sure what he took there. He certainly was over there for a while; and the patina perhaps rubbed off a little bit. I think he comes from an old California family.

BUGÉ: I want to ask you, you mentioned Charlie Lauritsen being very active in your seminars. Did you know him well?

ELLIOT: I got to know him very well because I'd see him almost every other day. I'd be trotting over there, asking him about this, that, and the next thing, to talk about possible speakers in the seminar. And he had more suggestions than you could name. Bernie [Lt. General Bernard A.] Shriever was another one we had. He was very interesting; he was the guy who had built the intercontinental missile system. He was head of the missile systems command or something like that, and a great friend of Charlie's. He was a fine upstanding young man. But there would be a long list of people that Charlie would put us in touch with. He would call them and so on and so

forth. So I saw a lot of Charlie. And I think he was one of the wisest guys I've ever come across; very thoughtful, very deliberate. There was no shooting from the hip with Charlie. He was a very quiet and a very modest man. He spent a lot of time going to Washington. I remember one occasion meeting him. I think I was going on the plane as he was also going on the plane—of course, he was probably traveling first class, and I was back with the peons. But what struck me was that he went to Washington, and all he took with him was a little lunch box; I mean it was about that size. And he stayed, I think, at the Cosmos Club, and probably had a number of shirts there. He didn't need another suit because he always wore the same blue serge suit—I've never seen him wear anything else. But Charlie was a wonderful guy, and I saw a lot of him. There are not too many stories about him, really, because he was on the whole so quiet. I told you his own story about explaining to the generals how these electrical systems go out?

BUGÉ: No.

ELLIOT: Well he said he'd be meeting with these generals in the Pentagon; and he kept saying to them, "Now look here, electrical systems go out; these things are going to fail; and you've got to be prepared for that." "Oh," they said, "no problem; we've got a backup system." Charlie said, "They sometimes fail, and at the same time." "Well, we've got another backup system." And Charlie says, "Well, sometimes they all fail. What about that?" And at this moment, all the lights in the Pentagon went out. I hope Charlie wasn't making that up and I hope I remember it correctly. But it was one of these more dramatic things, which I thought was—

He was one of the least flappable persons I think I've ever come across—very calm, very collected. At the time of the Cuban Missile Crisis, most people were really a little bit nervous. There was a feeling of what's going to happen? Charlie would say, "Don't worry. Nothing's going to happen." From the beginning; and he was right. He was very rarely wrong. A remarkable person! And I'm told he was called *the* professor over at physics. All these other great wheels were lesser lights compared with Charlie. He just attracted an enormous amount of respect.... And he was just good through and through. You couldn't put anything across on Charlie. I mean, he wasn't soft; but by George, there wasn't a streak of meanness in the guy, I don't think.

It was a pity, in a way, that a number of people in this general area died, on the whole, a



little early, earlier than you might expect in the sixties, which, I think, set back some of our efforts somewhat. When I think of Charlie Lauritsen, who I thought had still a lot of mileage in him when he died; and Clark Millikan was another, who suddenly got struck. As I recall, two things happened to Clark Millikan; that if you treated one, you just exacerbated the other. I forget what they were, but it's sort of a Catch 22 situation—some internal things with incompatible solutions.

Then, of course, Bob [Howard Percy] Robertson [Caltech alumnus and professor of mathematics and mathematical physics from 1947-1961] got knocked off in the sixties, too, with that motor car accident, which was most unfortunate. He was very helpful, too, particularly regarding NATO affairs. He used to go over to NATO [was scientific advisor to the NATO Commander from 1954-1956] and meet with that group that [Theodore] von Kármán had started—the AGARD [Advisory Group for Aeronautical Research and Development]. He would leave here and go on the night plane to Paris and get there about seven o'clock, and start into a meeting at nine o'clock, that type of thing—backwards and forwards like a yoyo. But then, as a sort of a mathematical physicist, he didn't really need more than a pencil and paper for his equipment; there was no great apparatus or anything of that sort. So he was another interesting guy. He made a mistake on one occasion when going back to Pasadena. He had a cheese shop on the Avenue de la Grande Armée that he liked to go to before coming home. He would go home, and Angela, his wife, would have a party all lined up and he'd come back with this great store of cheese. Well, on one occasion, he was going back I think on a military plane, and handed it to the steward. The steward did not put it down below, where it would be cool; he put it in the cabin. And half way across the Atlantic, "What's that smell?" [Laughter] Bob's cheese, which was getting riper by the minute. He was a splendid fellow, too.

And then George Beadle was interested in all this, but he left to go to the University of Chicago. So that the middle sixties saw a lot of the people who were involved in that sort of seminar just fade away. Horace Gilbert [Caltech business economics professor, 1929-1969] was a faithful attender, from beginning to end.

We keep backtracking. What was your question?

BUGÉ: I just wanted to know what you had to say about Lauritsen.

ELLIOT: Ah, a wonderful person! And I think central to that VISTA Project, because he had been out in 1950 to Korea with General [James M.] Gavin. And in a sense, VISTA developed out of the deliberations there—why don't we do a bigger and more general study. And one of his friends was Ivan Getting, who was in the air force research and development agency which was set up in '51, and they got interested in some of these problems, too. And no doubt Charlie and this guy were quietly talking over a beer in Washington.

**DAVID C. ELLIOT****SESSION 5****May 6, 1986****Begin Tape 5, Side 1**

ELLIOT: Let's see, the seventy-fifth anniversary, which took place in 1966. I was not on the committee which decided whether or not Caltech was going to do anything at all about it. I know that DuBridge had a meeting of some sort and called a number of people in; and he presumably decided, "Well, we're going to do something." And it is then I came into the act because—I forget how it came off but—somewhere, I rather think that Hallett Smith was deputed to ask me if I wanted to do this or not.

BUGÉ: Did you have a choice?

ELLIOT: In the first instance, yes. At the beginning I was asked if I would do this. And I can remember being horrified at the thought that I would be, as it were, sidetracked into fooling around with what seemed to me like a public relations enterprise of doubtful validity in an academic institution—in terms of faculty; obviously very different in terms of administration. The next stage was that the president sicked Chuck Newton on to me, who was then his assistant. Chuck is a fairly, I won't say devious man, but he has certain instincts about how to go about things.

BUGÉ: It's required by the job that he be able to manipulate people at the very least.

ELLIOT: You've got it, exactly. And I remember we went off up to San Francisco to see the fellow who had done the MIT convocational-whatever in regard to probably their one hundredth anniversary, I think. He was in architecture, I think chairman of the humanities enterprise at MIT—I forget his name now. He'd talk to me about what had to be done. And the trouble is that even though I talked to Chuck, he asked me what could be done and so on and so forth; and eventually you get a little softened up. I think that at some stage in the proceedings, DuBridge

had simply said, “You know, I can, after all, just order you to do it.” I think it was a matter of the president just pushing me around, that’s what it is. Anyway, I got stuck with that. And that would be in 1965 I should think. I went to see Bacher, as a matter of fact, who was then provost, and asked him whether this was a thing in which I could be most useful to the institute. And he gave me a strong affirmative on that. And since Bacher was, after all, in charge of deploying the resources at the institute in an academic way, it seemed not unreasonable to do it, though I will confess I was very reluctant to get involved in that caper.

BUGÉ: That seems like it must have been a mammoth job.

ELLIOT: Well, it was a caper. The amount of work was not all that bad, a bit nerve-racking as you had an awful lot of things to put together. But Virginia Kotkin [who became the humanities division head secretary in 1955] and my own secretary, Betty Elliot, whom I snatched from Wes Hershey—she’d just come in to work at the Y and agreed to come over and work on this—and she was very good, keeping things straight and so on. And, of course, Virginia Kotkin not only knew the institute enormously well, but had a very strong practical sense and was by that time also developing a great skill in casting—in putting people in the right spot. She was the backbone of this division for close to twenty years—the middle fifties to the middle seventies. She developed the talent; it wasn’t there in the beginning; she just learned what people you could put in various places. So, these two did a fantastic job.

We had sort of a steering committee operation on which there was representation from all divisions. Fred Lindvall [from engineering] was on it. Harold Wayland [from applied mechanics] I think was on it, and properly, since he was, after all, the great institute expert on food and wine, so he was on it. Harrison Brown [from geochemistry] was on it, and enormously helpful because he knew better than almost anybody else the scientific talent around the country and who would be good speakers who would speak on this, that, and the next thing. I don’t remember particularly what other ones we had. We must have had somebody from physics, but I’ll be blessed if I can remember who it was. Anyway, all the divisions were represented and got together. And it was decided in some way—DuBridge would come from time to time, too—it was decided there ought to be some sort of colloquium attached to a convocation type of thing. And the subject of the performance should be science and society—try to decide the impact of

the scientific world upon the world of art and social issues and so on. We had people speaking on various issues.

Why did we choose that? Well, for one thing, it was a sort of direction in which you will observe we seemed to be going in this division, trying to mine that particular area as we moved into social science. So that became the theme.

The original intention was that the convocation would be held in Tournament Park. That was when we thought that the president of the United States would be here—and until very close to the end, that's what it looked like. Henry Dreyfuss [industrial designer and Caltech trustee] had designed an absolutely magnificent platform, with steps leading up in front of the great broad platform where the faculty was sitting, and trustees and the president—you know, that type of thing, with all the way down, flags fluttering in the breeze. And the president, you see, would land on the football field by helicopter and come straight in. Fencing all around us; security would be great, and there'd be no problem. And there'd be plenty of room for all the people who'd want to come out and see the president of the United States.

Well, President [Lyndon B.] Johnson was becoming a little less enthusiastic about public appearances by this time on account of all the Vietnam business, and I think maybe especially on a university campus. But before this was known, I went to the White House with [James R.] Miller, who was the public relations guy before Graham Berry—he now sits up in the state of Maine or New Hampshire and writes novels. He and I went to the White House. We took along a model of the platform and everything, which we had made up in order to show the security people and explain to them what was going on. It was interesting to go into the sort of executive offices and through all the police escort and all that sort of thing, which was not as rugged as it is now, but still we had security. And we got on in and sat and waited around for the staff to come and talk to us. They didn't seem very enthusiastic or plugged in or interested, as I recall. Nonetheless, it took all the interest, I suppose, which it was worth at that time. And then it was finally decided the president wasn't going to come.

BUGÉ: You didn't meet him personally on this trip?

ELLIOT: No. I don't even recall whom we met; it wasn't somebody that rang any sort of bell with me, as I recall—I have no vision of him whatsoever. I remember being in the place, but

that's it. And we made our way back; and some time later, the president said, well, he couldn't come. But that was about August, and it was getting very late. And I, more or less, said to myself, well, too bad, and didn't think a great deal more about it. But within twenty-four hours, DuBridge had called up and said, "Well, we better cancel all that stuff in Tournament Park and come over to the usual commencement spot. Because we don't want to spend all that money if the president's not coming; and there aren't going to be that many people either." He was right on the ball and didn't miss a single trick on that. So we backtracked and did a lot less compelling things than we might have done for the president.

So it boiled down, then, to the, well, you know the arrangements; and I think we had a pretty good time. I can recall that we had the main sort of dinner celebration at the Huntington. The Athenaeum would not have been up to it at that point; it didn't get into the ability to handle that type of thing until much, much later—and now they do a splendid job with big bashes like that—and they could have done it beautifully.

BUGÉ: That many people could have fit? It could have held the crowd that came to the dinner?

ELLIOT: Well, they could as they do with Associates' dinners—have all these tents up and that sort of thing. We didn't have any more at the Huntington, I shouldn't think, in their big ballroom.

There was one mildly amusing incident there. I was running around at the Huntington with last minute things. And as I went by their office, I began to smell something burning. I thought: That's all we need is for the hotel to catch fire now. [Laughter] So I went to the office and I said, "Don't you smell something burning here?" And he said, "Yes, I do." I think I was meeting somebody, so I went out to the front of the hotel and said to that little red-headed Jimmy, if you recall him, "Is something burning?" And he said, "Yes, there is; maybe the incinerator." They had an incinerator out there, but it didn't seem to be that. Nobody seemed to be particularly worried.

I discovered what was on fire was me! I had my pipe in my pocket, and it burned a hole right through my dinner jacket, which I have to this day, sort of sewn up. But there was a fire all right. [Laughter] I don't remember being particularly burned or discommoded, but my coat had to go to the invisible menders the next day.

It was a very formal dinner. There were two things about which there were, I think, some problems. One was that it was impossible to accommodate even all the faculty at this dinner; there was no place we could have held it that we could have done that. I remember, a year later no less, I was called up by somebody who said, “How did you select the people for this dinner?”—he didn’t say he had not been selected or anything, but—how did it all come about. And I told him. The way it came about was I went to each divisional chairman and asked who should be invited from their division.

BUGÉ: How many people from each division did you take?

ELLIOT: I have no idea now, but I would suppose there were about three hundred at the dinner. And so if you include wives and trustees and that sort of thing, you couldn’t have got more than a hundred members of faculty. So maybe about one in three or one in two-and-a-half of the faculty, but it was mainly faculty. They had another opportunity a little later on, very shortly after that, because we came up to DuBridge’s twenty-fifth anniversary [his twentieth, in November 1966], and we held it in the same place. It was a big dinner in which he got some sort of presentations. And I had to speak at that. At that time, I was vice chairman of the faculty. And Jesse Greenstein [executive officer of astronomy] spoke and I spoke. Was I vice chairman or was I secretary at that time?

BUGÉ: What year was that?

ELLIOT: I don’t recall. Oh, I must have been secretary by that time.

BUGÉ: I have you down as secretary from ’73 on.

ELLIOT: Then it must have been twenty years; so I must have been vice chairman. That’s what I thought, because each one of the officers of the faculty made some little speech and made part of whatever presentation we gave to him. No, “presentation” leads me back to the seventy-fifth, because we had a problem about what to present the president if he came here, what sort of presentation could we make. We thought and worried about that. Finally, we determined that the thing to do might be to give him something unusual, like a piece of a meteorite. So

DuBridge got on to that. And Clair Patterson [from geochemistry] had his hooks on spare bits of meteorite. [Laughter] It was like getting blood out of that guy to get it. DuBridge really had to lay the heat on to get this bit of meteor.

BUGÉ: I've heard he has a bit of a temper.

ELLIOT: It came out at that time. He just thought that these meteorites were for scientific purposes and the hell with presenting them to a clown like Lyndon Johnson. Anyway, you have to make some sort of gesture to the president. But I forget whose idea it was, whether it was DuBridge's idea; it could have been Harrison Brown's because he was a great meteorite guy, after all. But however it came about we got this bit of meteorite. What happened to it? I'm not sure that we didn't somehow manage to carve off a piece of that later on when it didn't go to the president and somehow went to DuBridge. I have that sort of feeling that that's the way we unloaded it eventually. So that's another one of these episodes. There were, oddly enough, not many episodes.

The ones who got very angry at the whole performance were the engineers, because there were no engineers selected to appear on the program; and there were some from outside talking about things which they thought were engineering subjects, you see. So some of them felt quite miffed. Well, Fred Lindvall had not proposed any of them, so what the heck. They didn't know that, of course.

BUGÉ: It's all you. I see.

ELLIOT: [Laughter] And this division has been doing them in ever since! But now we've got these economists taking up money, and it could easily go to engineering.

The rest of the people didn't seem to be so concerned. There was some difficulty, I think, in that this was about the turning point between the relatively staid and stable period in universities and wild cutup business that we were about to enter into. And I think there were some who would have criticized the whole operation as being much too conservative and formal and so on; it might have been better to have a looser operation—cut out the formal dinners and have picnics on the grass sort of thing, and involve everybody; make it a great family affair; don't start selecting people for dinners; none of this black tie stuff. That and the engineering



business were the two sorts of criticisms I heard.

BUGÉ: Even at the time there was talk about doing it in a more casual way?

ELLIOT: No, none at all. No, just looking back, as people saw it developing. And you see, this is really about the turning over point essentially. If it had been done five years later, it would have been much less formal, I think. Five years earlier, it would probably have been even more formal—well, no, it couldn't have been much more formal. Our formal occasions were pretty formal. We did have an al fresco sort of bash down on Mussolini Piazza and that general area for a sort of dinner with students and almost the whole community, with wilder sorts of bands and stuff like that. So they got involved at that time. But most of the occasions were a little formal. And that occurs to me as being the main critique.

BUGÉ: That's interesting. By the time they're celebrating the hundredth, I suspect it will be quite formal again.

ELLIOT: Oh sure. The pendulum has gone back, very definitely, the other way. We'll be wearing ties before long. We used to come and teach class with ties and jackets.

BUGÉ: It's interesting to see it all happening.

ELLIOT: I had one little reflection the other day. I have a certain amount of sympathy with old Queen Mary. You will recall until the end of her life, which was something like in her seventies, she would appear in Edwardian costume, particularly her hats which were Edwardian if they were anything. And it occurred to me that as you grow older in life, you modify your customs changing with the times, but only up to a point. There comes a point where you say, "That's not for me. That looks awful. I'm not going to go that way. I'm just going to stop." And it is frozen. I think I will not, for example, go the length of getting into these narrow-ankled trousers that one sees around, usually unpressed, unwashed or anything else.

The seventy-fifth [anniversary], for a while, took up a lot of my time. But there was one great benefit. Afterwards, the institute sent Nancy and me off; we had a great and glorious time in Europe for about two months. That was a great pay-off as it were. So at that time we went to

Portugal and Greece, and then we flew to Rome and met a couple of people. We did a spectacular bit of jet-setting. We flew into Rome in the afternoon, and had dinner with some friends; and they poured us onto the plane about ten o'clock, literally poured us on. We went tearing out to that airport, and they just got us in as the plane was about to take off, and this was about ten o'clock at night. We were flying to Athens, where my good friend Phillips Talbot was ambassador [from 1965-1969]. We'd been uncertain whether to go to Athens because the Greek coup had just taken place. The Greek colonels had just ousted the government, and we were very uncertain what conditions were like. I went to the embassy in Madrid and asked about it and they said it was very unstable there and they didn't know what was going on. But we went. And the stewardess on board the plane said that no one would be able to leave the Athens airport when we got there until dawn because there was a curfew.

Well, we got into Athens. And Nancy was fishing out her postcards, ready to sit down and write letters and postcards, when a big tall guy with a moustache and black hair appeared. And he said, "Are you Mrs. Elliot?" And she said indeed she was. "Well, I'm the ambassador's driver. Come with me." Then he asked, "Where are your bags?" And Nancy said, "They're in there." He got a porter, carted them through customs, and took us off to the ambassador's car, which was waiting outside. We set off with a police escort, with flashing lights and so on, down the freeway to the city of Athens.

We hadn't been gone five minutes before the cavalcade stopped. And the policeman from the lead car came back to say, "We're going to have to stop here because my light has gone out. If we go any further, we'll just get shot." And Nancy said, "Well, let's just stop." [Laughter] He said, "It's all right. I've radioed for another car." And pretty soon another police car came along that led the procession; and then we came, and the other police car followed on behind in order to get back safely to Athens. In the city it was absolutely quiet except in the main square, where they had tanks and troops and that sort of thing. And we went up to the ambassador's quarters.

It turned out to be very fortunate because the ambassador wasn't able to do very much because of the uncertain state of affairs. The best thing he could do was to keep his trap shut and not give any indication of what the United States might be doing or thinking. So we were able to take off and take a tour around Greece with him, which was sort of fun.

And then, to beat all, we were going back; and we were going to fly back on Olympic

Airlines from Athens to Vienna. We got down to the airport in good time, I having reconfirmed my tickets beforehand. We got down to the airport; the ambassador wasn't with me but his deputy chief of mission was with us, seeing us off. And the clerk at the counter said, "I'm sorry, the plane is full." Of course, this infuriated the chief of mission guy. He said, "Here's a guest of the ambassador," and all that sort of thing—"goddamn plane is full, it's absurd, ridiculous." They'd clearly just simply oversold the plane and paid no attention to anything like reconfirmations. So we had to wait there for another plane, which meant that this time we went through Zurich and got Vienna somewhat later. And this, of course, caused some altercations with Scandinavian Airlines. But I was interested that the clout of the embassy was not quite as much as I thought it might be. I thought surely we could have bounced somebody. But they didn't. [Laughter]

So that was how the whole business ended.

BUGÉ: So that was your prize.

ELLIOT: That was the prize, as it were. So in the end, it turned out to be not a bad experience; it was actually sort of fun.

I guess what's been the greatest fun at Caltech—I think I've been able to do simply different things all the way through, instead of grinding away. Well, I've taught History 1 now for thirty-five years.

BUGÉ: That sounds like a bit of a grind.

ELLIOT: And that's enough. I'm going through it for the last time right now.

BUGÉ: It's true you're retiring?

ELLIOT: Oh, yes, sure. A month, six weeks to go. I'm ready. Yes, I think that's been the interesting thing—very different things time after time.

BUGÉ: Well, this leads us into the years you spent being secretary of the faculty, because I don't think anybody else in the history of this or any other institute has written such wonderful

minutes.

ELLIOT: Well, I think Ward is doing a great job of writing them right now. But it's kind of fun to write the minutes. And I think he has it, too, that feeling. In fact, the provost was commenting on it today, how Ward in fact does a great job of putting some of the relatively illiterate comments of the faculty into English. [Laughter]

Anyway, it's something of a challenge to first of all understand really what is going on, especially if they get into some of the scientific fields. Quite clearly, I just didn't have a clue on some of the things I wrote. But they rarely talk about that; it's mainly a question of the administrative fiddle-faddle these people are arguing about, and whether the kids should do two units of that or four units of something else; or whether the deans should be shifted around in particular ways; or whether we should take on the Arroyo Project or not take it on—things of that sort, which are readily understandable in political terms usually.

The most fun as secretary of the faculty, probably, was on the steering committee, which was a new device when I came in as secretary. It was I think the brainchild of Robert Fox Bacher, who had experienced the need for some better form of communication, an informal way of communicating between the administration and the faculty. He spent a brief period on the Academic Policies Committee when Sam Epstein was chairman. I was on the committee at the same time, and I didn't realize until afterward what Bacher was after and how he had managed to launch this, but he's a very savvy guy, which you probably know. He had got the committee to agree that this would be a good thing, and it was. And it was primarily thought of as a group in which there would be real communication with representation of the faculty, and the provost always being there as the chief academic officer. So when Bob [Robert Palmer] Dilworth became chairman of the faculty, this whole process began, and Christy was provost; and he would appear regularly. I think Christy—I don't know how long he appeared, but I'm thinking of something like two or three years—I don't think he missed more than one meeting, which was very impressive. The other members of the committee missed very few. Bob Dilworth missed none, and I think I missed none. And who was vice chair—Fred Anson [from chemistry] probably was at that time; he took these things a little less seriously sometimes and was not always present as often as some of the others were, until he became chairman himself.

But there was a good interchange at that point between the faculty and Christy, who then,

I'm sure, passed things on to Harold Brown. There was good communication, which was badly needed at that time because Harold Brown had a hard time to sort of get the message through to the faculty and to get faculty to understand what in the world he was up to, and so on; or just communicating. So that was a helpful sort of thing.

The first case that we had that came up was Peter Miller, who had succeeded Winch [L. Winchester] Jones as dean of admissions. Miller was given the heave in a rather abrupt fashion, I think, because the administration got a little bit panicked because the number of applicants to Caltech undergraduate school dropped off rather sharply the year before. And the administration had the feeling that this was the fault of the admissions office. So Peter Miller was out and sent on like that, at the beginning of the academic year. And Stirling Huntley was brought in from Stanford allegedly at the suggestion of Neal [Cornelius J.] Pings—I don't know that, but that was what was regularly rumored.

The faculty was a bit concerned about the abruptness of this and the way it was done. But I think Harold Brown tended to do things fairly quickly and get on with things and not horse around.

BUGÉ: So there hadn't been any warning leading up to it?

ELLIOT: Not that the faculty knew; but this was a new group of faculty officers for one thing, coming in, and we had no recollection of it. Of course that passage of responsibility would have been known in subsequent years because there would have been a record of the steering committee work. So I think we probably gave Christy a hard time on that one; and he became aware of the feelings of the faculty, I don't doubt. But that's the sort of thing it was there for; to explain what our points of view were. And Christy was very good; he would bring up issues which he thought would be helpful to him to have some input from the faculty on. And though the steering committee did not purport to speak for the faculty—God knows very few people would dare to do that—nonetheless, we formed some sort of sounding board and advised, let's say, the provost, how it might be possible to get more information, conceivably which committee of the faculty they ought to, or might, send the matter to be discussed at, or kicked around and solutions developed, or something like that.

Over the years we had quite a lively time, I think, on that committee. The liveliest, of

course, under the current provost [Robbie Vogt], who was then chairman of the faculty; his great love was to stir things up. And at that time, the cause célèbre was Jenijoy's [La Belle] case. I don't think we directly discussed that at this committee; this was not something that would come to us. After all, it was being dealt with by the Academic Freedom and Tenure Committee. Robbie was very much involved. And Robbie, as all chairmen of the faculty, tended to consult with the steering committee as a whole—or individual members of it, as being people that he might consult with—I suppose, in part, because it may have some of the feeling about official secrets that a cabinet would have. He hoped, I'm sure, they would not be great blabbermouths. But who knows. Anyway, that was wild.

I found it a very helpful and pleasant thing to be dealing with all these scientists when this division was in a bit of turmoil. And the less you saw of people around here, the better off you were for a number of years. There was a lot of, shall we say, coming and going and that type of thing.

BUGÉ: Did you ever feel insecure yourself?

ELLIOT: In what sense?

BUGÉ: That you might go?

ELLIOT: No, because by that time I had no particular interest in going. I wasn't all that far away from retiring, after all.

BUGÉ: Well, I wanted to ask you about the times you were solicited to go to other places. Certainly people were interested in inviting you. And there's no indication that you seriously considered it at any point.

ELLIOT: Not very seriously, because basically it was fun here, and really for the reason I suggested—you did different things. During that latter period, though, after I ceased to be executive officer, the people who were doing things around here were ones with who I was, on the whole, out of sympathy, I would say. And so it tended to be a rather more staid period for me, in terms of the division. I didn't pay much attention to things unless they were getting out of

hand; and put much more effort into the affairs of faculty in general.

BUGÉ: That's terrific that you could do that, that you could shift your emphasis.

ELLIOT: Oh, it's absolutely lovely! That's the great thing about Caltech, that that is possible. The period when I was being solicited was the period when I was really much younger, in my forties; and this was happening in the sixties. There were one or two places that wanted me to come and be president of the college in the early sixties, two in particular. Looking back on it, I think probably I was pretty lucky. In one case, the president who succeeded did a very fine job and stayed on for ten or twelve years, maybe longer; ended up with ulcers. The guy who took the other job I don't think lasted more than two years. It was just getting into the late sixties, and that was a terrible, rough time to do that sort of job. So I was preserved from that business.

Oddly enough, the first major offer I had I might have been quite tempted to go to, except for the fact we'd just bought a new house and were getting established in that, on Arden Road. And that seemed like a very nice place to me. I didn't really feel excited about moving. So at the time when the offers came, I was not much interested in moving. And later on, when you might have contemplated it, they'd rubbed you off their lists, you see. So I think that would be a fair statement.

BUGÉ: That you were able to equalize things by turning your energies away from the department at its worst.

ELLIOT: Oh, yes. I didn't want another heart attack or anything like that. I'd had enough of that. So I decided I was not getting involved in any of these arguments; and avoided meetings as much as possible—they just made me angry. But it was not always possible to do so. I was really in the position where there was not much they could do to influence anything I was going to do. I could go happily around with what I was doing and get on with it. Plus or minus, they were not going to affect it.

BUGÉ: You must feel very good, to have that degree of independence.

ELLIOT: Yes. Well, the institute's very good about those things.

BUGÉ: I don't have the years here, but the list of institute committees you served on—institute committees rather than divisional—is very long.

ELLIOT: There's an awful lot of them. Well, it is only a relatively few who serve on committees, as you know. There were some committees that really were a complete waste of time, and I think I never went to them. There's one way back on faculty/student relations; and that really is a nonstarter.

### **Begin Tape 5, Side 2**

ELLIOT: If you really don't want to stay on a committee, if you don't go they'll get you off next year. Infallible! I leave that nugget of wisdom to you. [Laughter]

BUGÉ: In the years that you were a faculty officer, did you feel that you were a member of an elite group? Did you hobnob with the trustees more?

ELLIOT: No. I hobnobbed with the trustees much more in the fifties and sixties, and particularly when Albert Ruddock was chairman of the board, because we knew him quite well. I think we may have talked about this. Way back when we first came, Albert Ruddock was living in Santa Barbara; and he had what was really a gardener's cottage. We used to go up there quite a lot, and got to know Albert and Margaret very well; and her brother, Alexander Kirk, who was just a lot of fun. There were other trustees living in Santa Barbara that we knew somewhat, too. Later on, Si [Simon] Ramo was one that we saw quite a bit of at the time of the seventy-fifth anniversary because he was involved in the "Caltech At the Leading Edge," the Brown campaign, or whoever's campaign it was at that time. The old board of trustees, up to about 1970, I must have known almost all of the trustees, I think. I did attend a board of trustees meeting out at Thunderbird Ranch, or one of the clubs out at Palm Springs. I think I told you about my delight in meeting the *Times* family—this was Norman Chandler, and I was able to take his money off him one afternoon of golf. I put it down to the fact that he had stuffed me already full with two martinis before we teed off, and I'd never felt so relaxed in my life.

[Laughter] And I really took the pants off him. All the bets that he was pleased to make he lost. I was very pleased about that.



Buffie [Dorothy Buffum Chandler] at Santa Barbara we met, too. And any others that came in sight in Santa Barbara, we'd tend to meet up there. So a lot of the trustees I tended to know then. The board since I'm really not familiar with at all.

BUGÉ: So being faculty officer didn't involve you with the board.

ELLIOT: No, the chairman of the faculty is the only one who tends to get involved. As you know, he's on the administrative council; and I think on some things he attends the board of trustees, too. So neither as vice chairman nor as secretary did I really come to that. They would kindly invite us to some dinner for ARCS [Foundation] or an Associates' dinner, that type of thing, every now and then. But beyond that, no.

BUGÉ: So after saying that you were more involved with the institute at large than with the division, I notice that in '78 you were recognized as outstanding teacher. So your classes must have continued to be some satisfaction.

ELLIOT: Oh, the classes continued. I mean, the one consolation all the time. [Laughter] Well, in part, that's a political job. I think my teaching went pretty well. But I simply happened to have in that particular class a young lad called [Ray] Beausoleil, who went on to become student body president [in 1978; received BS in physics in 1980]. And he was a promoter if ever I saw one. I assumed that he had decided for his own particular reasons, whatever they may have been, or the goodness of his heart, I don't know, to promote that particular enterprise. [Laughter] I don't knock it; it's perfectly respectable.

BUGÉ: Is there anything in the consulting that you've done that's been of particular interest to you?

ELLIOT: No, they've really been fairly marginal. But I did become familiar with a number of people over at RAND, which was quite interesting. The first person I did any work with was Fred Iklé, who is now, I think, one of the Undersecretaries of Defense. He was fun. And then later on, I became a consultant to NASA—that is, I worked with JPL in a group which Al [Albert R.] Hibbs ran on arms control matters. This came out of that faculty seminar thing—Al Hibbs

used to come to that. And he decided on that when he went back to take the appointment at JPL. Afterwards, he would try and act essentially as the arms control advisor to NASA and deal with space issues. He had a killing schedule, I thought. He would go to work up at JPL on Monday, Tuesday, and Wednesday. Then got, I think, the helicopter down to the airport, got on the red-eye special on Wednesday night, and spent two days working in Washington, on Thursday and Friday; took the shuttle up to New York on Friday evening, and taped a broadcast [hosted NBC's educational program *Exploring* for several years -ed.] on—oh, it's the sort of thing on interesting things in science, that type of thing. I remember his doing one on the nuclear power plant up north of San Francisco—Bodega Bay—on the effect of that. And he would tape that broadcast, get on the plane, and fly back to Pasadena on Friday night. And off again to work on Monday morning. I used to work somewhat with him. It was a two-way street, because he came down—I think when I went off to Europe on that trip after the seventy-fifth—Al came down and taught the National Security Seminar. So we saw quite a bit of each other for a couple of years. He was one of the two or three of the scientists I saw quite a lot of. I have not seen very much of him now for nearly twenty years. But at that time, we saw quite a bit of each other.

I consulted with the Ford Foundation way back in the late 1950s, and spent a year or more on trying to introduce non-Western studies into undergraduate curricula. That carried me around with a fellow called John [Scott] Everton [American college president and diplomat] to about sixty colleges and universities throughout the country. So I saw a great deal of the academic life of this country; it was very interesting; a lot of the country, too; criss-crossed the country. And set up a number of programs. The Ford Foundation then, as now, was quite keen on getting cooperation between institutions; and that was one of our big ploys. The earliest one was up in the Connecticut valley where the non-Western studies became a vehicle for the cooperation of Smith, Amherst, Mt. Holyoke, and the University of Massachusetts. And they began to start a little jitney service to take students around to these various colleges. It took a long time for them to develop cooperation. I think one thing I decided after that was that the cooperation between institutions, and particularly academic institutions, was very difficult. We got it started then. Since then—I think in the last twenty years—it's become old hat to them; they cooperate on all sorts of things. Even two years later—after we first gave them whatever it was, \$100,000 to start it up on non-Western studies—I went back a couple of years later to see how things were getting along; and individual colleges were still deciding on when their terms should begin and end as if

the others did not exist; they would all do it individually without consulting each with the other. That never occurred to them; “This is the way we do it here at Amherst.” “It’s too bad it doesn’t happen to fit.” “No, it doesn’t fit Mt. Holyoke at all.” And as for Smith there, they’ve got a reading period or something like that. But the idea they might all just decide to have terms begin at the same time—impossible. So they had a complicated system, I imagine, of trying to equate the amount of work one person had done in nine weeks with what somebody else had done in ten weeks. So it was sort of crazy. And the Claremont colleges, they have the greatest difficulty in cooperating—mainly at that time, I think, because Pomona had the feeling that everybody would be just latching on to them, and that they’d be supporting the rest of the enterprise, as it were. They felt themselves to be, by far, the strongest college; and they would just do it their way. But these were the sorts of things I did on the side.

BUGÉ: That sounds interesting.

ELLIOT: That was interesting.

BUGÉ: So you say you’re looking forward to retiring. What activities are you going to continue or pick up? What do you see?

ELLIOT: I’ve got some research to do in the two fields I’m concerned with—the seventeenth century and sort of modern strategic interests.

BUGÉ: We haven’t talked at all about your seventeenth century research. Can you just briefly tell me what it is?

ELLIOT: What I was interested in was the politics of the city of London, specifically at the time of the Restoration; because at that time, Godfrey Davis [British manuscript scholar and archivist] was busy working on that period at the Huntington Library, and he suggested some things there. So I got to work on the city of London there, and on the elections to the common council of the city of London in December, 1659—which meant tracking down about several hundred inhabitants of the city of London. So, as a result of that, I’ve got a compendium of somewhere, I would suppose, of around 1500 people that I’ve developed information on.

BUGÉ: Have you been able to pursue this over the years? Or have you had to wait till you retire to pick it up again?

ELLIOT: No, no. I've completed one aspect on the elections themselves; and that was published several years ago. And then I was interested in following up what the more important people had been doing in the commercial way, and how they made their money and so on. And that's what led me into looking at the career of Alderman Fowke, who was Lord Mayor, one of the earlier lord mayors, under the Commonwealth—1651, I guess. So I've been looking at his career and other related matters. There's an ongoing project there, which I have no difficulty with following up; that's not any problem.

The VISTA thing raises a number of questions in my mind, which I'd like to follow up. Perhaps you have read Willy [William A.] Fowler's letters, his correspondence, his papers in regard to this, which he told me he didn't have. But apparently some have turned up, and maybe you have them in the Archives by now. It would be interesting to see what he may have about the VISTA Project.

BUGÉ: Your research on that is ongoing also?

ELLIOT: Yes. There are a number of questions—mainly, what was the effect, if any? And there are one or two lines which would be worth following up, I think—on some individuals particularly.

Then I've got a garden that's got lots of things to do in it. We hope we can travel, too. My wife is a travel nut; so we plan to do that. I don't know what she's going to do, of course, after—when I push off and she's left to travel alone. Because having had a look at some of these blue-haired ladies that go around on tours and stuff, I told her I'd come back and haunt her if she'd do any of these.