Interview with Walter Rosenblith  
by Eden Miller  
Marstons Mills, Massachusetts  

Session 5 - August 31, 2000  

TAPE NINE, SIDE ONE  

EM: Today is August 31, 2000. My name is Eden Miller, and I am in the home of Walter Rosenblith in Marstons Mills, on Cape Cod, where I will be speaking with Walter and his wife Judy. Walter began his career at MIT in 1951 as an associate professor in electrical engineering and eventually became provost of the university before retiring in 1980. Today we will be speaking about Walter's years following MIT.  

To put it in perspective, when did you decide to leave MIT -- or to retire from being provost.  

WR: Well, these are not decisions that one makes as individuals. As a matter of fact, I was already slightly overage, and Dr. Wiesner persuaded the Corporation to let me go till '80, at which time I was going to be 67. And 65 was presumably the age. In some ways as an Institute Professor, you become emeritus in the departments, but as an Institute Professor and a provost, MIT has treated me as if I hadn't really left. [Though you were mostly away for the four years you were Foreign Secretary of the Academy. JR] And there are lots of connections with MIT. There is forthcoming -- we got from Dean Khoury just a couple of days ago -- there is forthcoming this celebration of the school, and he hoped that we would come. So in some ways, MIT may have a very long lease on me for the reasons that I think I explained before. But in some way, therefore, I don't feel retired in the same way and the fact that you are interviewing me is in some sense also some activity for which obviously I do not get compensated, but my compensation is in the fact that I can do something for the Institute.  

JR: Do Institute Professors emeriti get small -- sort of allowances?
WR: Yes, that's true. I don't know how much it is, but I think, yes, there is that. Thank you for reminding me, Dr. Rosenblith. (laughter)

JR: Also you should make clear that the extension of your time was so that your retirement would coincide with Jerry's.

WR: Yes. Jerry was two years younger than I was. So that's the way it went. And people felt, since we had worked so closely together for so long, they kindly didn't tear us apart, and I wish life hadn't torn him apart.

But, okay, so let's start. I will start by some basic things. First of all, the fact that I have lived in many countries. I have lived in Austria, too young to really make a permanent imprint except for music. I have lived in Germany, and that was a very interesting experience in that period when Germany and especially Berlin was the most lively place. Then I lived in France, and no period in France was bad, but it was a period in which there was much trouble, it was a period in which France and the Spanish Civil War were troublesome, and there was a period that France had always refugees from many countries, but then it was particularly from Germany -- from Hitler. And then I've lived -- I sort of fell into the United States. And that too was for me an international experience because I hadn't had it before. But that's just the beginning.

And the other thing is of course that the nature of science is that it is international. It doesn't have a truth that is different in different countries. It may have cultures in which these truths are studied that are different, but the significance of science is that in principle, if you go from this country to another country, science -- and we are talking only about science and not about the social culture and the organization of the way in which science is being taught or science is being researched -- is the same. So in some sense this is a currency that is valid worldwide. So that is the case. Now, you have heard more than you wanted to about the whole business of security clearance. I told you that at the end, when I came to the meeting in '57 down here [at
Cape home of NAS], I had top secret. And within the years directly thereafter the Air Force, through the intermediary of RLE, gave me a -- what you might call, not a grant, it was more in the nature of a grant because I didn't promise any specific product at the end of it -- to organize and to hold a symposium on what I called sensory communication.

EM: Why did the Air Force give you this grant?

WR: They had been in touch -- the services came to RLE each year a couple of times to see what was going on, and I had spoken about the fact that I was interested not just in hearing, but the way in which organisms handle sensory communication. And it was close enough to the way in which Wiener had looked at sensory communication also. And it was undoubtedly somebody in the Air Force that thought it was worth doing. And having gotten that, they didn't put any constraints on it practically. There were funds there for me to go around, not the world, but a significant part of the world, to select people as participants. And I checked just yesterday -- I stopped many places and not everybody felt that they wanted to participate in what seemed like not a risky venture but a venture. But as a total, we got people from eight countries to participate. And that was still in the period not too far from the Second World War where international links in science had broken up. There was, as I will say a little later, an International Council of Scientific Unions -- all the fields of science. But that broke up when the war came. And people hadn't gotten together again except in spots. And so there was a symposium, and we held it at MIT, and we really had absolute first-rate people.

EM: Can you give me an idea of what countries were represented?

WR: Yes. The United States, obviously, France, the United Kingdom, Belgium, Sweden, Holland, Japan -- so it was a spectrum that wasn't worldwide, but it was certainly European -- and one Japanese.
EM: How did you know to look for these people?

WR: Well, I had been in touch with them or they had been in touch with me. Some of their students had come to the lab. I think I told you earlier that we had people from Germany, and from Japan, and that was the time when people hadn't yet established these relationships. This symposium was held in 1959. It was held in a suburb of Boston, a place that belongs to MIT, Endicott House -- an estate, with a swimming pool. And people worked in the morning, there was lunch, and then they would go swimming, or they could go and visit laboratories of interest to them in the area. And after dinner we went back to work. It was strenuous. It lasted over a week, and it was a very hot week. But nobody left. We even brought in a few ringers from the area around Boston who came and who spoke -- sort of gave their piece. One we brought was Professor Boring, who talked about the history of this in terms of psychology. Another one was Professor Stevens from Harvard, who talked about something that became a paper. I insisted that people if they gave a lecture should also write papers. So this is the book. [W. A. Rosenblith, ed., Sensory Communication: Contributions. MIT Press, 1961.] And the interesting thing with this book is that this is a copy that was printed ten years after the first printing. So it stayed a -- not a classic, nothing is a classic that I do --

JR: It is a classic.

WR: (laughter) You are not supposed to just contradict me, you know.

So that was something. And then after that, Judy mentioned that I was one of the founders of the Biophysical Society in this country, and that became quickly an international union of biophysicists that included other countries than just the U.S. Those countries, in general, I stayed in touch with on a narrow basis.

Then the next thing that came were two major invitations. On what basis, I can't tell. The first invitation came from Professor Baba, who was the greatest physicist at that
time in India, and he asked me to come to the inauguration of the Tata Institute, which was the biggest [nuclear] institute they had built. I went there, and it was interesting because -- I may have mentioned this earlier -- the first day he took me to an Indian dance festival, and in some ways this gave me -- the fact that if I went somewhere I should not just talk or go to the laboratories. Also, he lived up in the hills, and the fact was this was the inauguration and Mr. Nehru was there and his sister, who could tell more anti-Catholic jokes than I'd ever heard at dinner. And it was Nehru, after he had inaugurated the place and said, Look, it took us much too long. He then disappeared and went to a meeting, a rally, on the beach, with 400,000 people. And when he came back, he was a much younger man. He flirted, he became like not the serious statesman leader, and so this gave quite a different flavor to the whole place. And so in India I had a chance to meet with lots of Indian scientists. But they also took me to the Himalayas, and they took me to Khajuraho, the place where all the what one would call pornographic structures are, and the interesting thing was that they didn't push these things. They'd say, this is a possibility, but I had a driver and I had basically a plane. It was awful difficult to resist these temptations. And I remember two questions that I was asked. This was only a couple of years after the Sputnik. And then some people who were presumably scientists asked me, How come that these Sputniks -- or the equivalent that we had -- didn't fall down to the earth?

EM: Two Indian scientists asked you this?

WR: Yes. Not great scientists, but people who belonged to the scientific organizations. That was one of the questions -- why didn't they fall down? And then there was the case that we were flying up into the Himalayas, and it was foggy where we were supposed to arrive. We were sitting in Delhi airport and we were all very sorry but we wanted to see that. And then the pilot walked through and he found a coin, and he came to me, and he said, Is that your coin? It was not an Indian coin. I said, Yes. It was an American coin. And he said, Now we are okay and we can fly up there. So superstition.
EM: What was the superstition?

WR: The superstition about the fact that if you don't have a token that would essentially break through the superstition.

EM: So an American coin was the token.

WR: I'm sure that a French coin might have been.

JR: A good luck coin.

WR: Yes.

EM: So what were your impressions when you saw the good luck coin or when the scientists asked you why Sputnik didn't fall the ground.

WR: Well, they weren't great scientists. I was impressed with the fact that this was a country which had several periods of history co-exist. I think that that is probably true today though today India is the country probably that produces more software programmers than anybody else. And I must say it was a fascinating experience. I didn't first go to Baba's. The first thing I did in India, I went to Bhubaneswar, which is a provincial capital, and then I went to see one of the great temples where one walks on the outside around, and I felt that I had to lean into the temple because I didn't feel so safe -- on the other side there was no ramp -- and people coming to me, Give me your address. People who just also were tourists there. I said, What does my address do for you? How can I write you? I said, Why do you want to write me? I don't know, but I might have an idea-- I mean the culture was so different.

EM: Did anyone ever write you?
WR: No, but several months ago the young physicist who was my guide sent me an email. And I didn't have yet time to reply to him, but I will. I since then have a lot of contact with Indian scientists, serious Indian scientists, who came to the States. But this was a really extraordinary experience for somebody who has always lived in the western world.

EM: It also raises an interesting point. When you were talking about sensory communication and how you brought people from all over the world -- I was wondering in this historical period how American scientists, or the scientists at MIT, viewed the different scientific communities in Belgium or in Japan.

WR: Most of the ones that I had were safe bets because they had reputations in their country. They were members of the Royal Society, members of the Academy in France, and so on. But I think the MIT community was surprised that so many from so many different countries and different backgrounds came…

JR: …and different parts of the United States.

WR: Yes. MIT had had meetings, but they were usually on a single narrow purpose, and I called it sensory communication because I wanted it to expand. Now I should say one thing. When Professor Baba, whom I had never met before, invited me, he was a very dictatorial leader. I was one of a group of a dozen people, practically all Nobel Prize winners. And I felt a little out of place there. And I could see that in general these people gave lectures, and they started on time, and so on [?] And I gave lectures on what I had been doing and on the view of how we were going to study the brain. And he wasn't there. And I sort of after half an hour decided we would start. A quarter of an hour later he marches in. He says, You haven't started before my being here, have you? I said, I couldn't leave these people… Anyway, he said, Start again.

EM: Even though everyone had already listened to the first fifteen minutes?
WR: Yes. That was a little embarrassing. I had never encountered somebody who was that way. But a man who had an enormous culture, not just Indian. He gave me the idea -- he said when he builds a new building, he always wants two percent for art. And when I came back I discussed that with Jerry and with the MIT administration and decided that was not a bad rule. And, you know, MIT, from having been the long, gray corridor, has now become more colorful, and I think once the Gehry building gets up, it will be considered a far out place.

EM: From the plans, I think you're right.

WR: So that was my first big trip abroad. And then in the biophysics, we had gotten to Sweden before for the International [Union?]. There the meeting was an interesting meeting. You know, in many other countries, especially at that time, government had more, shall I say, respect for science. So when we had this meeting on biophysics, they gave us the big room in which usually the Nobel Prizes are awarded. And also the newspapers had a picture -- Judy sitting next to the president of the international organization [Biophysics], and I remember that it said they were eating chicken.

JR: I can't remember the [?] (laughter)

WR: But it's a more human feeling. Another time when I was in Sweden for a celebration of one of the academies, the king was not very much interested in that, but the queen and I had a long discussion about linguistics. And I think the fact that governmental officials take a serious attitude -- I haven't heard in the so-called discussions in our campaign this time, I haven't heard anybody talk about science in a serious way.

EM: I'm curious. You mentioned that you were one of the founding members of the biophysics society here and internationally, and you're talking about biophysicists in Sweden, as well as in other countries. Do these people identify themselves as biophysicists?
WR: Yes.


EM: Did the idea for biophysics independently grow out of these countries, or what was the link between…?

WR: I think we started it, and others very quickly said this is a field that we should be in. And so they formed their own, and I traveled to England, I traveled to Holland, and people wanted to know, how did we do it? And that was before the big trips. I mean there is this fact that scientists have the habit of meetings, international meetings, and international meetings not only make for contact, but also for friendships very often. And I think this came out of it. Now I think the next big trip was to Israel and the Weizmann Institute, and again I don't know who [did the one?].

JR: Kachalsky.

WR: Yes. He invited me to come and give a series of lectures.

JR: The Weizmann Lectures.

WR: The Weizmann Lectures, yes. There had been others [lecturers] before. And we came and we stayed about a week, didn't we, and our daughter came along.

JR: Even a little more than a week.

WR: Yes. There were lots of things we learned of course at the Weizmann Institute. They were doing work not so much in the fields I was interested in, but they had first-rate physicists and computer scientists. I should say to you that the Second International Meeting of Biophysics was held at MIT. People came from all over the world.
EM:  Was that because of you?

WR:  Well, yes. Because I was in a position to offer an institution that would be willing to have it, because it is some headache to run an international meeting, and MIT had a certain number of biophysicists, not just me. Other kinds who were good people. So in Israel there are many anecdotes to tell, but I don't think we can afford to do that. But the thing in Israel which struck me at least was that there were several institutions -- one was the Weizmann and one the Technion, which I visited at some later time -- who were competing with each other. And then the Hebrew University, which was more in humanities, and the medical school (to which I was later a consultant). But it was a country that was and has been all along in a state of turmoil. There was a question of immigrants and so on, and…

TAPE NINE, SIDE TWO
WR:  There is a story that a friend who drove us around Israel said -- A visitor came from Australia and was shown the country and our friend said, This is our frontier with Jordan, this is our frontier with Lebanon, and this is our frontier that… And the visitor said to his guide, now I know all your frontiers, where is your country? But the quality of work at the Weizmann was very great, and they had been mainly in the physical sciences -- chemistry and biology of a more classical kind -- but they are now working a good deal in brain work.

EM:  How did Israeli science differ from American science during this time period?

WR:  I think it was basically a question of scale. Lots of these people had been trained here, and lots of the people had come back and forth. Of course, in Israel there are layers -- there are people who were there before the state was started. But we didn't meet many of them. They were not the people who had the contact with the outside world. They were in some ways the ones who made the fields green. They were in botany and fields of that nature. But today they are up there in the most -- I would
think that they are in genomics and they are in tech, high tech. It think perhaps a bit too much. But for them this has become I think an export matter. They can export their people [experts] and they can export products.

JR: One should say that at the time that we were in Israel I would think that even the purest of pure scientists in terms of parts of their work were also more interested in doing some science that would help the country.

WR: Yes. There had been people who had been in the fight -- the war when the country was formed, and the interesting thing was that, again, the prime minister and all the important people knew these people personally. So there was a connection there. We were invited to the prime minister's home in the Defense Department. And he had heard that I had been in India and had talked to Nehru. And he wanted to know my view of the universe and thinking -- I mean all these philosophical problems. And, you know, this is a difficult thing to do. Even to Nehru you can say something, but you can't say, My friend Baba will explain this to you better. But there it was a very social occasion, but at the same time there were traces of the fact that the prime minister had known my father forty years before that. And they had disagreed on what the language of the country should be. And he didn't first remember, but when he remembered he brought statistics -- he said, what did the soldiers from the Army -- in what language did they send letters to their families? And he said, Ninety-five percent in Hebrew, and maybe five percent in French, since there was an immigration from Morocco, almost zero percent in Yiddish. And then he said, You are convinced? As if he was arguing with my father. But the culture of the place has changed so enormously. At that time the kibbutzim were the places where people lived, and families were living together and children ate together, and they were communities. Now much of that has gone by the wayside. Recently when people discussed do I want to go to Israel, I said I'm not so sure.

Well, anyway, this is two of the major trips. But they sort of made for a pattern because from then on people invited me to come and give lectures and talk about
institutional things. So I had this pattern that I talked to some group or maybe to the same group about the work done in the lab, and then they would ask -- the United States has developed a large scientific community. What are the various institutional forms that you have developed? People always wanted to imitate MIT. And I said, not so fast. You have to have a certain, I think, willingness to deal with many issues, but the fact also was that when I went to countries and people used to want to come to our lab. So the international flow kept on going.

EM: What features of MIT did they want to imitate?

WR: They were particularly interested in the way in which MIT had developed interdepartmental units. That was very interesting and not that way in other countries. And they also were interested in how does MIT decide that here is a new field or a new department that can be created. And I think for instance in Israel they developed the American-Israeli National Science Foundation, which presumably is more or less symmetrical. Of course, it can't be in terms of resources, but symmetrical. But that way also. Then the fact of how does one deal with the government in various institutions. Many of the institutions in Israel depend on donations from people abroad. And given the way in which the donors are, they either want a building named after them or they want somehow a relationship for what they have given. Donors all over the world, but I think Israeli take the top spot in that respect.

JR: But their donors aren't Israeli usually. They are English and American.

WR: Yes. Also they are very international in the sense they invite people. And for instance while for long years in Israel you couldn't play Wagner in music, there was no problem in bringing in German scientists. You would think that music is as international as it comes. But that was not the case. But they gradually have developed a pattern that Arab students now come there. And also many students from developing countries. And of course the fact that they have developed high tech
with respect to agriculture is transmittable to other places. Maybe these were the two crucial trips in that respect.

After that lots of other things came. For instance, I went to the Papal Academy. The first time in connection with the fact that there shouldn't be nuclear proliferation. There were people from thirty countries at the Papal Academy, and we had sort of a session of two or three days, and we wrote a piece with all our signatures. And the pope was happy to have that happen there and to discuss with us -- not much, but discuss.

EM: Did the pope invite you?

WR: The pope invited… The president of the Papal Academy was my friend Chagas from Brazil. And he probably had the idea, and then they decided which countries to invite. No, there were several people. There was Professor Press, whom you met the other night. There was Charlie Townes, there was Father Hesburgh, who is not a scientist, but who was there too. And it was an interesting gathering, again meeting people along different dimensions but all with the desire to prevent nuclear proliferation.

EM: Why did the pope feel the need to invite scientists?

WR: Because he felt that scientists have a special access to the knowledge of what it could do. And I think…(You were going to say something?)

JR: No..)

WR: We went another time…

JR: You didn't finish your thought about the pope.
WR: And I think that the pope had the feeling that the church has to take positions on outstanding moral issues. When we went -- that was for a more scientific meeting.

EM: Had you been political earlier about nuclear proliferation?

WR: Yes.

EM: What else had you done?

WR: When I was in South Dakota and the bomb dropped. Because of an interesting leak I knew what the problem was. We had a meeting of alumni who said what they were doing during the war -- everybody was bragging about what they were doing. There was one man who said, You guys are all doing unimportant things. What I am working on is going to do away with all the armaments and so on. And he gave just enough hint that I knew that must be the atomic business, so I started to study up and four days later I gave the first lecture at the school.

EM: This was before the bomb was dropped?

WR: No. After the first bomb was dropped. And then in the next two years I gave fifty lectures all over the Midwest. That in some sense was an international area. I talked to churches, schools, colleges, Rotary Clubs, I even debated with Senator Mundt at a meeting of teachers. As you know, talking for me is not difficult. But nevertheless, I had -- and I had stuck with that -- and then the people who lived in the place where there was more concern about nuclear matters kept in touch with me and sent me things. We didn't have email, but snail mail was at that time good enough. I just mentioned the meeting with the pope, but it is something that is quite different of going and giving lectures on research for institutional -- how one institutionalizes things.
Another form of international activities is the fact that MIT has a lot of international alumni. And when I became administrator at some level I had talked a good deal about my work to the alumni around MIT and in the Boston area, or alumni meetings or in Chicago. But then there were requests from the Japanese alumni that I should come, from the French alumni where after I had been there the alumni clubs for Harvard and MIT met together, and for alumni in other places.

JR: Brazil.

WR: I went to Brazil. Yes And in Brazil, among other places, I gave a lecture -- Brazil has quite a few admirals who trained at MIT. And I gave a lecture at the Yacht Club where the famous race starts from. But these were different kind of things that I did. This was mainly quasi-MIT ambassadorship of a low level ambassador.

EM: And this was while you were a professor or while you were provost?

WR: No, I was both. As a provost, there were more requests presumably. But the MIT alumni thought that I had a good pitch -- I mean, not in terms of money, but this was something that alumni either wanted to see that things are as good as they were or they want to see that there are new things that excite. And that's perfectly all right.

Then comes a new period, before I became foreign secretary. In 1976 the National Academy set up a committee to work with the Chinese. We didn't know who our opposite numbers would be -- but work with the Chinese, help them get over the consequences of the Cultural Revolution in terms of education and research. They felt they had fallen behind. And so in 1976 a group of us, I would say about a dozen or so, went to China and went to various universities and met also with people who were from the Chinese Academy of Sciences. But it was just after Mao had died, and people still were mainly suffering the consequences of the Cultural Revolution. The superstition was reinforced -- I mean the superstition was that Mao's death was a terrible thing, and the superstition was reinforced by the fact there was a big
earthquake and that very often in countries like those who are really not rationally scientific -- in fact I'm sure in Japan all these explosions have created a great malaise in the population. So we went there, and we sort of overlooked what one could do and saw there was so much that one trip wouldn't do it. So Press had been leading that trip, but there were people on it who knew Chinese history -- they were specialists, and they are people who to this day are still consulted by our government. And of course the problem that the Chinese had -- did we come in order to -- essentially for a mission to get them to change their regime or were we really limited to doing something for education and research.

EM: I find it surprising, given the political context of the United States and the political context of China, that there was this collaboration between scientists.

WR: Well, we had collaboration even with the Russians as a Communist country. But some of us knew some Chinese scientists. I think Press knew some. I did not know any, and when I saw that this was becoming a major thing and was going to be going over years, I took the following personal strategy. Obviously, I would learn more if I had known Chinese, but to learn Chinese was a commitment of time that I couldn't make, so I either made sure that wherever I went there was one of my colleagues who was a specialist in Chinese history and so on or I asked for an interpreter. And I think I learned more that way than if I had tried to get something in bad Chinese. Our country -- you asked the question -- we were briefed before we went, and so on -- but our country at that time was not worried about what this collaboration would be, especially since the emphasis was on education.

EM: They weren't worried that better educated Chinese scientists might make more of a threat?

WR: No. '76 -- who was president? Carter, Ford? Neither of them would have worried about it. So this started a series of trips as a member of the committee on communication with China, [which?] was an Academy committee but we also had a
component from the American Council of Learned Societies, which was humanities, and I think it developed into something that was -- you know, you didn't have a feeling that you had a lot of impact to create change, but you did have the feeling that if we keep on pushing, something will come. For instance, not everywhere could we go, but they had become so committed to the Russian model of very narrow universities that they had -- I always give this as an example -- they had a University of Iron and Steel. Now imagine a University of Iron and Steel -- labeled that way. Upstairs you can see the medal I got from them. I said, What do you think a university is? That was always my question to them. Not only in science and technology, but what else do you do? Well, that we do in the high school. They get Chinese history, and so on. But they had no feeling that there were in all fields of knowledge advances to be understood. And that was awful.

EM: What do you feel a university is?

WR: Well, I tell you, a university has to be a place where people can, if they have the necessary facilities, explore their curiosities in relation to a younger generation that has to renew the place continuously. And I think a university also has to have a relationship to the society or to the community that surrounds it. Now that's quite a task, but that's really what I think a university has to be. And it has to have a contact to the past.

EM: What type of contact?

WR: Well, the contact with the past is to understand the way their fields developed, the way the relationship of a university develops to local communities and to the country as a whole. The question is, when Jerry was alive, he was a leader for the academic community in the whole country. I think today a leader like that doesn't exist, but there are many leaders, and the voice of academe, which was heard significantly under the Kennedy presidency and maybe to some extent under the other presidencies since then -- not all of them -- is something that I think is very hard to do. I mean,
people say, learn mathematics, but mathematics as such is not going to give you a vision of what this country should do with its enormous talent in the sciences and technology. And the fact that -- I think in some ways for a long time the president of Harvard was the person who spoke for the community, and then in the years of trouble the president of Harvard didn't come out so well. I think today the president of Princeton, in my opinion, Shapiro, is a man who has resonance to society and knows about a university. And I think the president of MIT today is not a person who is an extraordinarily visionary person, but he does an honest job, and he is recognized…

TAPE TEN, SIDE ONE

EM: Today is August 31, 2000. I am continuing my conversation with Walter and Judy Rosenblith about Walter's activities in the international community and his years following his retirement from MIT.

WR: As I said, the president of MIT is recognized as an honest broker between the university and the country and a man who has an institution that is in good shape. I think there are other people undoubtedly, but when I look through the advertisements in the Chronicle of Higher Education, the number of places that seek presidents is striking. And places that you wouldn't believe. Of course, it used to be that Harvard's president had to come from Harvard. This is no longer the case, but MIT's presidents aren't always MIT alumnae. Gray was the last of that line. And Howard Johnson wasn't, Jerry Wiesner wasn't, and Vest isn't. So I think there is diversity being introduced, and some of the diversity comes from the fact that institutions change in response to the way the society changes. But I do feel that Princeton is an institution that…

EM: A [?] institution? In terms of old money?

WR: No. In terms of its spirit, if I may say that. But it has changed. I think to some extent the setting up of the Institute for Advanced Study changed it, and I don't know who
was the president before Shapiro -- Bowen? I think these were people who took a broader view of the function of the university. But, of course, to communicate that abroad is extraordinarily difficult. In most countries that had authoritarian regimes, they didn't want to hear about this. They were going to tell what to do, professors didn't have first amendment rights -- academic freedom, what does it mean? It's still -- in our country there are plenty of places where that's true. And I think the Catholic schools in general have a very difficult time. What do they do if the pope says one thing, but the American Catholic community or the students there say something else? Well, I think this is probably…

JR: You didn't get from the Academy and the Chinese universities on to the World Bank.

WR: I think that enough had been achieved in the four or five years that we had worked from the Academy with the committee with the Chinese counterparts, such as they were.

EM: When you say worked for the Academy, was this when you were foreign secretary or…?

WR: Not yet. I became foreign secretary in '82.

EM: And what year are you talking about now?

WR: I'm talking about between '76 and '82. The problem was that in earlier times -- the Academy elects some foreign members -- but in earlier times not only didn't we elect any Chinese but we didn't know whom we should elect. There was not much knowledge because of the way the channels of communication ran -- from iron and steel where do you go? Materials or what? You don't know. But nevertheless there developed a considerable amount of, in some cases even friendships, but in other cases at least respect. We started understanding what their difficulties were, and we knew that this we can push them on and then this far we can't go. I will never forget
when we got into difficulties with local authority, we finally were invited to the Great Hall of the People, and we were sitting in that place where always the foreign visitors sit all around long tables with translators and usually a vice premier of the Chinese, and I wish we had had secret recording devices, because it was absolutely fascinating. The Chinese were not used to being -- at that time -- one of those visiting professors would tell them how to do it better or what was wrong. I remember I got hell once from a vice premier for -- I can't even remember what it was, but he thought that I had talked about things that had not been, as far as he was concerned, in our domain. And that we talked about it -- that was his domain. I should really see whether in the Academy archives the people who came along with us may have written reports about that. Mary Bullock [now the president of Agnes Scott College] would have been excellent. But the fact was, here we were a committee of professors, and we were in the Great Hall of the People with all the pictures and all the photographing and it was in some sense a fake, but it was not a fake because it meant that the Chinese wanted to somehow get out of the misery of the Cultural Revolution. Well, after that…

**EM:** Before you go on -- did you ever feel that you had overstepped your boundaries?

**WR:** I don't think so. Maybe as a group, we sometimes felt that. We kept in touch with each other, but I think there were many things -- we felt that we were supposed to really tell them how to improve and what to do. We didn't go too far. I mean, if we went too far, people like Ochsenberg or others who know the Chinese would have told us. That's why we had our own people along. We just, as they say in baseball, we called it as we saw it. The question was, not everybody saw it the same way. Well, in some ways the Chinese were unhappy that while we came with plenty of advice, we didn't have any money.

**EM:** Is that what they wanted?

**WR:** Well, I mean certainly they wanted resources, and we told them things that we thought were there, and they could do by themselves, but you can do them by
yourselves only if you really believe in them. But the fact was there was clearly a need for money. So in this whole process there developed a relationship with the World Bank, in which the World Bank was going to try to support things that a properly vetted committee would suggest and would be accepted by the Chinese government. And that led to a committee that was half Chinese and half American, though we had one or two Germans in it too. So it was more or less an international -- it was no longer just the Americans. But there were two co-chairs. The co-chair on the Chinese side was a wonderful woman who just died this year. I think we may have talked about her? Xie Xide was a physicist. She had a Ph.D. from MIT, but she had gone to Smith College also, and she and her husband had suffered enormously during the Cultural Revolution. But afterwards she was made a member of the Central Committee, and when I traveled with her in a train, she was recognized like celebrities would be recognized here. It is true that she was tiny and she was limping, so she had physical characteristics. She was a very wonderful person.

JR: Was she president of Fudon University at that time?

WR: Yes. She was president of Fudon before that. And I think that working with her made things acceptable to the Chinese, and I have upstairs the final report of our committee. And the World Bank got its money's worth.

EM: What did you tell the World Bank?

WR: We told them that they should try not to imitate any particular country in its structure of education, but education should in general be basically the role of universities. That there should be a certain amount of freedom, and they ought not to take narrow slices of reality to study them. And I think to some extent this had the effect of a lot of Chinese students wanting to go abroad. And I think that's true to this day. We have benefited from that enormously. The Chinese may think that we brain-drained them. I wouldn't be surprised if they felt that way because the people who are the best can get fellowships here, and I think also the Chinese never got any feeling for
the relationship that a really educated person ought not to know their own field only, but also, for instance, social science and humanities as we call it. So I must say, when I read the international section of the Chronicle of Higher Education, I do not find much these days about the Chinese problems. Also, of course, they have developed other problems since then.

JR: Let me ask a question though. When the World Bank set up this committee, that was during the period that you were foreign secretary, was it not?

WR: I'll have to check that.

JR: And Dale Corson [president of Cornell University] was the first American co-chair with Xie Xide. And then, when your term as foreign secretary ended, Dale Corson, who'd been there I think two years, stepped down and you replaced him.

WR: I think you have it just right. More than I. But I'll check it. The other thing is, of course, that a lot of people from that part of the world now go to Australia. I have never studied the Australian educational system. They certainly are not embarrassing in any way, though some of their leaders embarrass one. But I can't speak to that. I think that someday I shall try to see what the situation now is with respect to China. So in some ways what you have here is not just a work in progress but it is something that I just have not kept up with enough. And in general, I would like to know whether the Academy has a committee. I'll find out whether the Academy has a committee for communication with the People's Republic of China. What developed there was something that never had previously developed. Our Academy met every two years with the appropriate opposite number in the Royal Society, and now the Chinese have also an engineering academy. And one of my students -- post-docs -- is going to have next year a meeting here that brings together the people from the Chinese part of medicine and our Institute of Medicine. The whole problem -- we always stuck away from that because of Eastern medicine, you know. That's a very interesting thing.
JR: One might also mention that in terms of the kind of changes that took place with Xie Xide started an Institute of American Studies at Fudan University after she was the president and before she died.

WR: Our friend who told us about her death said that the position that she occupied in Chinese society was identified by the fact that the president of China came to her bedside. I mean, symbolically this is enormously important in China.

Now I have completely left out Fulbright.

EM: You've completely left out a lot of things because we've jumped to your years as foreign secretary and there's more I wanted to ask you about China, but it might be better if we back up and talk about how you became foreign secretary.

WR: What happened is that I had been an honest worker in the National Academy, but the Academy started having relationships with other academies -- with the Royal Society, with the French Academy, with other academies -- and what happened is I was appointed as chairman of the ones with the French, which is understandable, and then with the others. And every four years there are elections, and I was called by the chairman of the nominating committee and asked whether I would be willing to run. In other words, you don't get nominated. You have to be elected by the membership. And I said, Who is running also? And the man who ran against me was so well known and had done so many things in government and so on -- he had been at MIT too at one stage, but then he went elsewhere. And I said, I don't have to worry about this. He will be elected.

EM: Do you remember who it was?

WR: Yes. Guy Stever. Then the surprise came -- I had been elected, not by a landslide, I can say, at least from what I heard… I mean all these things are kept somehow…
JR: I think we ought to interject into that that he came to me and told me that he had been asked to do this. He assured me first of all -- and I had been looking forward to some retirement activities -- he assured me first of all that he would not be elected, and secondly, it was only two days a week that the job required.

WR: Okay. You might tell the hairy truth. (laughter)

JR: Walter has a habit of turning any commitment into a full-time commitment, and among other things, I had insisted that he agree to run only on the condition that they supply him with a regular hotel room in Washington. And the Academy agreed. It wasn't just that he spent two days a week in Washington, but maybe three, and maybe two out of the country, and so forth. So for the next four years, I saw very little of him. I should have known, but I'm not sure whether I was smart enough to really expect it, but it was a tremendous problem for me because he was running all over the world. I was teaching, I couldn't run with him because I have jet lag and he doesn't, and he was just gone a heck of a lot of the time. So he took a fair amount of flak from me during those four years, but he persisted in his commitment to the job.

WR: But you stuck with me.

EM: Did you ever waver in your commitment to the job?

WR: No.

JR: But I should say that his successor both didn't get an apartment out of it, if I remember correctly, or took a better apartment on his own, and did spend two days a week. (laughter)

WR: Well, the fact was we had tough problems at the time. All the problems of the dissidents and Russia -- Soviet Union. And the negotiations with the Russians -- they
absorbed almost half a week by themselves. And there were lots of members of the Academy who kept pushing us. And the officers went to Moscow. And there was also at the same time the problem about -- we educated the Russians about the problem of nuclear proliferation and bombs. And so it was really a matter of state practically.

EM: The Russians didn't know…?

WR: They had the opinion that if they had enough bombs, there was really no problem. And also at that time they had enough client customers, and so it took a long time, and that committee we had -- a joint committee which still exists -- some of the people in there were considered for prime minister later on. But I think that the military, as so often, gave the civilian heads an entirely false idea. Just like Putin said, They didn't tell me how serious it was. Maybe you had a better experience when you worked in…

EM: I didn't deal with…

WR: Such matters. (laughter) I didn't really suspect it. Every meeting of the Council of the Academy dealt with the Russian story.

EM: What else besides nuclear proliferation was the Academy concerned with?

WR: Well, the Academy was concerned -- I think at that time, the question came up more and more -- would we have problems with the Japanese? There was a period when the United States thought that the Japanese were out-competing us. And [NITI?], which was the organization there, was our bugaboo there. And the whole question of trade came up and the question of security. Who was going to be allowed to come into the country? I mean the things that to some extent Los Alamos has dramatized. Now yesterday, from what I read in the New York Times, they have apparently diminished the constraints. So there were plenty of problems of that nature. And
then the continuous problem, which doesn't impact particularly upon foreign matters, but the question was, why is our education in the sciences so lousy compared to other countries? And then the problem, if you take countries that are rebuilding like Germany, what kind of relationships do we establish with them. And that, of course, to some extent, has to do with the International Council of Scientific Unions. And that Council of Scientific Unions, while it doesn't have much money, has some brains in it and influences, and tried to influence UNESCO and so on.

And then, I was involved in the International Brain Research Organization, IBRO, and the formation of IBRO is dramatic. The day that Kennedy was murdered I was in Paris, on my way to Moscow for a symposium at the Soviet Academy. And I called Judy, and Judy called Jerry in the White House and said, Should they go? Because nobody knew who had done the assassination. And we were told we should go. And I think in some ways this was one of the most dramatic things -- we went there and in the evening when -- the meeting is several thousand people from all over the world, and the fact was that the name of Kennedy really dominated that. And the most touching thing to me was we had a light in our room that didn't work, and we called for a man and he came, and when he heard…

TAPE TEN, SIDE TWO
WR: …when he heard us talk, he said, Engliski? And I said, No, Americanski. My Russian is very limited. So he buttoned his coat and went over and shook my hand. And to me this was one of the real effects…

JR: …muttering Kennedy and with tears streaming down his face…

WR: Yes. So these were the problems that we had.

JR: But that was well before you were foreign secretary, so you have retreated from where you were.
WR: Sorry. That was '63. But that led to the symposium honoring the Russian physiologist [?] -- and there were people from brain research from many countries, and that led to the formation of the International Brain Research Organization, which I had a lot to do with.

EM: Those were a lot of big issues to have to deal with as foreign secretary. I'm wondering how your going to Russia and your talking about the dangers of nuclear proliferation - - how did you present that to the Russians when your own country was continuing to build nuclear weapons.

WR: Well, we were as honest as we could be, and to us the problem was, we knew that the Russians knew how to build but we were trying to see -- and Jerry was aiming to get an anti-ballistic missile treaty,¹ which we are now trying to break. And I think the way we established relations with the Russians were at the beginning quite rough, but as time went on we both felt that we were learning something that had to do with the world of the future. And we I think learned enough that the Russians were willing to enter into negotiations for the anti-ballistic missile treaty, which before they hadn't been.

JR: Incidentally, that was all contributed to by the existence of a group called Pugwash. And it was very clear that this group of scientists would have -- as indeed Jerry Wiesner did and as the Academy was doing -- were also against proliferation in their own countries. It was going on, but they weren't in favor of it. They were trying to reverse it.

WR: Yes. That in some sense gave us a veridicality.

JR: And Jerry was very involved in Pugwash, which got the Nobel Peace Prize a few years ago.

¹ See his chapter on the ABM in Rosenblith, ed., Jerry Wiesner.
WR: Yes.

EM: Were you involved in Pugwash?

WR: A little. I think maybe the most dramatic thing that I did internationally with the Russians is at the time when the dissidents had very great difficulties to make their voices heard, we had a meeting in Moscow of their officers of the Academy and ours, and I and another colleague of our delegation decided to go to a seminar that they [the dissidents] held illegally. And we went there trailed by other cars, and we went upstairs and we talked to them. And that was a very touching thing, but one also realized that these people had been so separated from the reality of the country that what they said about their own situation was true, but they no longer had a perspective as to what it would take. And to some extent I see it now -- that some of the people who have left Russia and have gone to Israel are troublemakers in Israel. People who get into a diaspora, that's a very difficult thing, and when you deal with people -- wherever we went, and we went to different countries -- whenever you deal with people who are in this diaspora situation, as a member of the Academy you have to meet with them, but you also have to try to understand what the context is. That's a tough thing.

EM: What did the Academy end up doing with regard to [NITI?]?

WR: We had a committee which told us that we should work with the Japanese and that these things would work themselves out.

EM: So you sought a collaborative relationship?

WR: Yes. And I was involved in that collaborative relationship. I don't know when it was. It was probably after I had been foreign secretary.

JR: What about the Academy's relation to developing countries.
WR: Well, the Academy in developing countries -- the Academy did not do an enormous amount.

JR: They sent you to a variety of such countries. (laughter)

WR: She remembers that. Well, it was MIT -- I went to Cairo. It wasn't the Academy as such, but somehow I became a member of the board in Kenya of an institution there of insect physiology -- you know, my specialty. (laughter) So you see I was not very careful in accepting things.

JR: What about Malaysia?

WR: Well, that was the Academy. I went to Indonesia on my first trip, and in Indonesia the major point was that we should try to help them to develop their educational system. And I started out by explaining that in this country we had had land-grant colleges. Then I went from there how that developed. And I gave lectures for several days about institutions. Then I met the man who became the successor to Suharto -- Habibie. He didn't impress me at all. I think the situation in Indonesia was better [than China] in the sense that they tried to create institutions that were more broad. But the temptation in developing countries is to pick a very narrow field and then get trapped in it. I went to Malaysia, and Malaysia was not dictatorial at that time. In Malaysia they had been a little better oriented toward the future of what a university might be. Kuala Lumpur did not yet have the highest building in the world, but I think there was left -- and I say that with hesitation -- from the colonial era some of the European pattern of education. Not what I would have liked, but they were there and they had the funds and all we could give them was advice. So I'm glad you mentioned that. But I must say, in spite of the fact that there was no university on Bali, I went to Bali. (laughter)

JR: Who insisted that you do that? (laughter)
WR: My guide.

JR: Your wife insisted before you left this country, dear.

EM: Did you go too?

JR: No.

EM: You had mentioned earlier that as you traveled as the foreign secretary, you told people, yes, I'm the foreign secretary of the Academy, but you probably know me as the provost of MIT.

WR: Well, in many places people didn't have an Academy -- I mean the Academy might write the letter accrediting me, but they asked me where did I come from, and MIT was better known than the Academy. So I felt often, especially when I went to alumni groups as an ambassador from MIT, and the foreign secretary people said, What is a foreign secretary? People are puzzled. Now at the present time I should say that Sherry Rowland, who is at the present time the foreign secretary, is engaged in a major effort to create an international research council for problems that are long-ranging problems where various academies can work together. Now that at the time I was there wasn't possible. But maybe this is the globalization cocktail.

EM: How did you describe the National Academy of Science to people who had no idea what an academy was.

WR: Well, pretty much everywhere you could find that there were elite organizations. So I spoke about this as an elite organization that elected the best scientists in several fields. And that resonated. But the important thing was the fact that there is really an election and that there wasn't somebody who nominated. I think that was the important difference.
Okay. So we'll forget Fulbright. Though it was a very important thing.

EM: Would you like to say a few words…?

WR: Fulbright Scholarships -- when I came to MIT, I don't know who had the idea -- the first thing they put me on was the Fulbright Committee at MIT that helped people prepare applications. And then I knew Fulbright who came to MIT. But the next time I heard about it -- that was when Carter was president -- that I had been elected to the board of Fulbrights for the country. That in some ways -- I mean it has a certain number of people that come pre-selected and then it says, how many to each country. And as long as we had money, we paid for that, but later on we said, You guys [some of the other countries] make more money than we do, so you should participate in that, and people went both ways on Fulbrights. And after a year on that board, I was elected by the members of the board to be the chairman. And the first year as chairman went reasonably well. And the second year the man who President Reagan had -- did all kinds of things that I considered were, to say the least, dirty. And I got into a fight with him, which was not the most pleasant thing.

EM: What position did he hold?

WR: He was a guy who played the piano at the Reagan's -- a friend.

JR: Well, he was a Reagan appointee to the committee.

WR: He was not a member of the committee.

JR: No?

WR: No. He came from the outside and told us what we couldn't do. The effect of that was that I wasn't re-nominated, and that wasn't bad.
EM: I would like to ask a series of over-arching questions. One thing that has been clear as we've done this interview process is that if one job stops, another job seems to come out of nowhere to fill its place, or a committee assignment appears -- and I'm wondering, do you ever see the work stopping?

WR: Well, I didn't have much after my stroke till last year. I mean I just wasn't up to it. All I could do was watch TV and read newspapers. And I haven't even read many books for that period. And I think email injected new lines of communication, and I ask myself, will I get sucked into too many things, and what is my capability.

JR: And what is your priority.

WR: Yes.

EM: What do you see as your priority now?

WR: Right now my priority is the most important thing is to get back to some work habits that allow me to make real priorities. As long as you don't have work habits, you can't really make priorities. But we went to -- four years ago -- to a class at FIU [Florida International University] in Miami of memoirs. To a class on memoir writing. And I think this has given us an impact -- that everybody is writing memoirs, it now says, but I saw at that time that Judy could write beautiful pieces of memoirs, while mine were just, here are the facts. It was really no writing. And now I hope, after we have gotten through with this, and this has not been a burden on me -- it may have been a burden on my sleep because it stirs up the neurons in the brain -- after we've gotten through with that, Judy you might say what you have done.

JR: That your next priority is writing the HS&T chapter or piece.

WR: Yes. I hope I can do that.
EM: Do you see yourself writing your memoirs.

JR: If I had time, yes. This project has been time-consuming for me. I've also been taking physical therapy, which is time-consuming, so I never find time to do that. But what I did do -- and I may as well say it on the tape, I think -- was that I am still unpacking things from moves, things that I haven't seen for so long I didn't know I had them, and I have run into a treasure trove of documents that Walter's family managed to get to this country, I know not how, that include all his father's visa applications to different countries, include his mother's report card in conservatory in 1903, records of every school Walter ever attended, his vaccination certificates, and so that at the moment I've been very much immersed in his family history rather than my own. My daughter, however, wants me to go to Pittsfield with her before we go back south to do some more digging on my family.

WR: But you have quite a few pieces.

JR: Yes. I have little pieces. I also have an oral history I did for SRCD [Society for Research in Child Development], which I've got to go over and listen to the tapes and see how well it was transcribed or whether those were my goofs or the transcriber's goofs. (laughter)

WR: So, you have other questions?

EM: Yes. Looking over your career, what would you say is your moment of greatest pride?

WR: I feel that I have been very lucky in my life, and I think pride -- I think the fact that besides our marriage we have maintained a lot of friends in many fields over the years and that, even though I haven't gotten a Nobel Prize, the community in which I live has considered what I did and to some extent, perhaps especially as a provost -- I
mean MIT did not know that much about the foreign secretaryship -- the provost was probably the thing of which one could be most prideful. Maybe that's why I was very severe on my successors.

EM: Out of all of the people you list in your community of friends, who stands out the most?

WR: Well, I think our neighbors. We will have this weekend a little gathering because in September is my birthday and is our anniversary.

EM: And how old will you be turning? Can I ask?

WR: Yes. 87.

EM: And how long have you been married?

JR: 59.

EM: Those are some big numbers. (laughter)

JR: Yes.

WR: And the Menyus -- the name of the neighbors -- he was my student in 1943. You tell the story of the house.

JR: We spent so much time visiting back and forth and after they started having children, that became more and more difficult. And we decided to buy a two-family house together. We had a friend who helped us arrange the legal and financial details of this and he said, Well, your friendship will be over in six weeks. And we lived in that two-family house for thirty-eight years -- in Brookline. It's not just that they are our
best friends, they really are family to us. And they'll be here. And their daughter and one of their grandsons and one of their sons.

WR: And babysitting, of course.

JR: They used to babysit our kids, our kids used to babysit their kids, and to a slight degree, their kids babysat our oldest grandchild.

WR: We had a door between the two houses, and what you did is say, Knock, knock, and then go in. It was three stories on each side.

JR: And we would have coffee, tea, or a drink together maybe three times a week and a meal together once a week.

EM: And how often do you see them now?

JR: Not often enough.

WR: When we go into town, we used to stay at their house, which is part of the old house. They still live there. Okay. That's our best friends.

JR: But I would say that at our 50th wedding anniversary there were four people who had been his students when they were in the Army in South Dakota.

EM: So you really do keep in touch with people. If you could change one thing, what would it be -- about your career?

WR: Retroactively? I think I would have tried to carry some of the ideas I had more into fruition.

JR: Which kind of ideas?
WR: Well, when I started with computers, I think there were many things one could do which I have not carried through -- partly because many other things interfered, and partly because probably I let my career get in the way of it.

EM: And by your career you mean…

JR: Administration.

WR: I would say institutional obligations, it's not always administration. I have a feeling that especially once MIT had been good to me -- I have a feeling that I have many institutional obligations, but I have been involved in so many international organizations where I really didn't have to do as much as I did, and that made also for a lot of travel. And what you [JR] said the other day -- that we could have done something together. And of that I'm very sorry, retroactively.

EM: What do you think will be your most lasting contribution to MIT?

WR: I would say that together with Jerry -- I don't think that I could have done it by myself -- together with Jerry, we sailed the MIT ship through troubled water, and we made MIT into a more human institution. Is that fair, Judy?

JR: That's fair. I think you also created a new feeling that just didn't come out of the war only of building cross-departmental institutions within MIT.

WR: And cross - inter-institutions -- with other institutions. Yes.

JR: It seems to me I've heard you answer Eden's question about what…

TAPE ELEVEN, SIDE ONE
EM: Today is August 31, 2000. I am continuing my conversation with Walter and Judy Rosenblith regarding Walter's years after MIT. Was there something else you wanted to add?

WR: Yes. I think that Dr. Killian always used to say, the important thing was to leave a place better than when you came. And I think I would say that in some sense I left MIT better than when I came -- more open, more widely sensitive to needs of individuals and society. But the fact is that I never was obsessed with a Nobel Prize, even though some of our best friends -- though we don't see them much -- are the Cricks, and I think he was not changed much through the Nobel Prize. Do you [JR] agree to that? He remained the same kind of person -- brilliant, but he didn't wear the Nobel Prize on his sleeve. And too many people get overly committed to this kind of honor. And maybe this is -- when the letter came from Japan, I couldn't believe it that at this age of mine anybody would still want to give me a prize. And it wasn't really the prize but what it permitted us to do that I'm proud of.

EM: What did it permit you to do?

WR: Well…

JR: Go around the world -- on their money. (laughter)

WR: Yes. And also it -- not only going around the world but the fact that physically I was able to do this, which I wouldn't have believed. And then I think that, what you have done -- the oral history -- it has made me -- and I'm not saying this is the greatest pride, but I'm very happy about all the things that it called back. I have a much better view of what my life has been. And that I think -- if one writes memoirs, that's what it should be. It shouldn't be just bragging, but it should give you a feeling for what your life has been. That I think is perhaps the way I would leave it. How about you?

JR: Yes.
EM: Thank you very much.

[End of interviews]