

**INTERVIEW WITH MARVIN KUSCHNER  
FORMER CHAIRMAN PATHOLOGY  
DEAN OF MEDICAL SCHOOL EMERITUS**

**January 2, 1989**

**Dr. Hartzell:** I'd like to start with the questions; Sid Gelber, Francis Bonner, Tom Irvine and Cliff Swartz got together with me to go over plans for the thing originally and they helped me with these questions. I had a long list, take that down, so there will be some structure initially, suppose we go through the early questions, then you can free float from there. I don't want you to be confined by those.

**Dr. Kushner:** All right, how do you want to start, you want to start by my trying questions. Marvin Kushner, Department of Pathology and currently Professor and Dean Emeritus of the School of Medicine. I came to Stony Brook in 1970, it was to be July but there was no place to put me until September and so I waited out at Montauk, where we had a house and came here in September.

**Dr. Hartzell:** That was in the Surge building.

**Dr. Kushner:** In the Surge building.

**Dr. Hartzell:** How old were you then?

**Dr. Kushner:** I was 51, and I had been at New York University where I had been Professor of Pathology and Director of Laboratories at Bellevue Hospital and at University Hospital. I would guess that Ed Pellegrino was most responsible for my coming to Stony Brook; he was the one who called me and asked me if I might find the new school attractive; and I was interviewed about coming here by him and by Arthur Upton. At the time I came, it wasn't quite clear in my mind or in theirs what exactly they wanted from me, except I knew they wanted me to

establish a service and research department of Pathology. And in discussions that we had one evening in New York City at an Italian restaurant, Ed Pellegrino and Arthur Upton and I had dinner together, and Arthur, who was then Professor and Chairman of the Department of Pathology, and Acting Dean for the School of Basic Sciences, which was a separate school at that time, Arthur suggested that he was finding the job of Dean of the School of Basic Sciences intriguing and interesting and challenging and why wouldn't I consider being Chairman of the Department of Pathology, he would step out of that position and continue on as the real Dean, not simply the Acting Dean.

**Dr. Hartzell:** Not Basic Health Sciences?

**Dr. Kushner:** No, it was called just the School of Basic Sciences.

**Dr. Hartzell:** Now, what were they?

**Dr. Kushner:** They encompassed

**Dr. Hartzell:** Not physics, chemistry and biology?

**Dr. Kushner:** No, they were anatomy, physiology, microbiology, pathology, pharmacology, and a split responsibility with the Dean of Biology or Biological Sciences for the Department of Biochemistry, which predated the School of Medicine. That position had been held by Al Knudson before Arthur and when Knudson left, Arthur took over.

**Dr. Hartzell:** Do you know why Al Knudson left?

**Dr. Kushner:** Only hearsay, I was not here at the time he left, but my understanding was he had been here, I think, since 1966, collaborated with Ed Pellegrino in the establishment of the School, in the drawing of plans and was becoming somewhat impatient in the sense that he knew it was going to take a few more years before this entity actually came into existence and I believe, I was told that he left because he wanted to get on with his professional career. Why did I

come? Well, I had been Professor of Pathology and Director of Laboratories at Bellevue since 1954 and we had, I thought, an extraordinary department considering that the physical facilities left a lot to be desired. We worked in the old Bellevue Hospital Mortuary Building. The new school building was an improvement but even that was short of space and I was not Chairman of the department at NYU; I had worked under William Von Garn, under Lou Thomas and under Al Stetson; and when one gets to be 50, one gets restless. I had decided that it would be challenging to look for some other expansion of my responsibilities, in particular to run a department, to recruit new people and to pioneer a new effort. Of course, I said to my wife, "Now, I'm 50, I got to make up my mind to change something in my life, either my job or my wife." She said, "Well, change your job." I have always been fond of the Island, we've been coming out to vacation out here since 1948, indeed it was hard to for me to believe that people worked in Suffolk County, it was vacationland. But I had been aware of the development of the school, and the plans for it and I was quite excited about the prospects of coming here.

**Dr. Hartzell:** How did you know Ed Pellegrino?

**Dr. Kushner:** Ed was behind me in medical school, he was a year behind me in medical school. I knew him then; I knew him on the wards at Bellevue before he went to Flemington; I knew him when he was in Kentucky, he had offered me the job of Professor of Pathology there and I planned the laboratories for him, with him, but I decided not to go as Chairman of the department down there.

**Dr. Hartzell:** Why?

**Dr. Kushner:** I remember exactly why I refused; I think a large part of it may have been Lou Thomas's responsibility when I said to him I have this offer to go with Ed, and I had other offers, but this seemed particularly attractive because here

again was a new school that was being developed down there, and he said to me, “Not you, not at this time.” And it’s sort of like, “now, Coach, now?”

**Dr. Hartzell:** Louis Thomas The Lives of a Cell?

**Dr. Kushner:** He was the Chairman of the Department and eventually became Dean at NYU. At any rate this was very attractive to me, it was absolutely *carte blanche*, it seemed to me that the State was very behind this effort, there was a real sense of support from Albany. This was the first medical school that the State was to develop on its own from the very beginning, all the other three had been takeovers from pre-existing schools.

**Dr. Hartzell:** Did you ever see the Muir Commission report?

**Dr. Kushner:** At that time I did not, I have seen it since. Even the temporary laboratories that were planned on the south campus were extraordinarily attractive. Laboratory modules were large - 600 square feet - the offices were windowed and looked out on bucolic surroundings. And then I was told to recruit a large department, a department that was to be almost 20 individuals in size, because of the fact the faculty would have the responsibility for service work in this hospital as well, teaching of pathology and research effort in pathology. I had very little hesitation. As a matter of fact, when I look at the current efforts at recruitment and what goes into them, the negotiations and bargaining back and forth and the assurances of support and how much money do I have for this and how money do I have for that, I am a little startled, because as I recall after I spoke to Ed and Arthur at that dinner meeting in New York, I said, “Well, I’m going to think about this.” I went home and I think Ed called me the next day on the telephone, he said, “How about it, you want to come as Chairman of the department?” And I said, “Yes.” And that was it. I didn’t even know in detail what it was I was going to get, but I

knew this is something I wanted to do. Now it takes a long courtship, it takes a year to get a chairman of a department.

**Dr. Kushner:** Did you recruit Lauren Ackerman?

**Dr. Kushner:** Well, he sort of recruited himself, I suspect. What happened with Lauren was that he came to retirement at Washington University, and he is of the school that believes that when you retire, you move away from your previous place. I think it was particularly important for him because he was such a dominant figure that it would be impossible for any successor to function with him there; they would still be running to 'Papa,' and so he decided to move. I think his first discussions were with Arthur Upton, and then Arthur discussed it with me. Of course, I had known Ackerman by reputation and personally for many years as one of the outstanding figures in American pathology and I jumped at the opportunity. I said, "By golly, yes, of course." So, he agreed and I think this has been a very fulfilling time for him.

**Dr. Hartzell:** I think so, I play golf with him.

**Dr. Kushner:** He seems to enjoy this department, he has a lot of respect of the young people here, of course, they worship him. And here is, Lauren must be 84 now, maybe 85, and he is still the last work on much of diagnostic surgical pathology and in perhaps two areas he is absolutely the last work internationally, that is bone tumors and breast tumors and he's been an incredible ornament to our reputation. He had days in which he says, "Well, I'm very big in Costa Rica today," and he'll show us the slide of the material sent to him for consultation from somewhere. Off the record, of course, he also says he's an extraordinary golf player, which I never believe. You can testify to that. In other words, I think the factors that were most important in my decision was just the challenge, the

newness, the opportunity to create something, an image that I felt would be attractive.

**Dr. Hartzell:** After you had experience in an organization, you develop some ideas to what you would like to see or what you'd like to see or what you would like to see done differently and you begin to think, maybe I can do that and I think it is quite natural for many people at least to want to strike out on their own and have some responsibility.

**Dr. Kushner:** Well, the lack of responsibility wasn't one of my problems. I had an enormous service that I ran at Bellevue in perhaps one of the most famous hospitals in the world and then they gave me in addition to that the responsibility for the private hospital across the street, so that in all there were 1200 beds at Bellevue and another 700 beds at the University Hospital, and we had a very busy service indeed and a department at that time including everybody, which had 75 people at professorial rank. And I would guess with the chairman I probably split the responsibility for that department, so it wasn't that I was looking for more in the way of responsibility, I think I was looking perhaps for the opportunity to be almost smaller, but more tightly involved with the day-to-day activities of the institution. I should say that when one came here, there was a lot of rhetoric that surrounded the founding of the medical school, we wanted to be different in a number of ways, many of which I found puzzling and I had a sort of wait and see attitude toward them; the reason for it is that I never had a sense of being terribly critical of the classical formulations in medical education, both at the undergraduate and graduate level. So when Ed spoke about some of his ideas, the multi-track kind of training that he envisaged, the fact that he would educate nurses and allied health professionals and dentists and physicians together and then they would peel off at different times in their training seemed a little unrealistic to me. I

am very chauvinistic I would guess is the word for what the requirements for the training of physicians and the medical school as a kind of apprenticeship, it substitutes almost for the old fashioned form of training in which one worked alongside of a physician and learned that way. There has to be a kind of personality development that goes with it that makes it hard for me to see how one can train physicians as just a higher grade of technician. At any rate, I was always intrigued by the attempt to change the curriculum and in the 60's, when much of the planning for this school took place, of course there was a lot of ferment for change, just almost change for its own sake. There are two senior physicians who said things that amused and instructed me, I think, in regard to curriculum: one was Dickinson Richards, a great professor of medicine, who was head of the medical service for Columbia, NYU, who subsequently won the Nobel Prize, who used to quote Mr. Dewey and say "It don't matter what you teach the children, as long as they don't like it." And the other was another internist, Rockwell Levine, who was chairman of the Department of Medicine at New York Medical College, who said one day to me at a meeting, "Marvin, I have a wonderful idea for a curriculum." At that time everybody was busy changing things around and he said, "You teach anatomy and biochemistry and physiology first, then you teach pathology and microbiology and pharmacology." But Rocky I said, "That's what they did in 1500. He said, "Exactly, I'll give them footnotes." Well, anyway there is some reason to believe that the way you teach medicine is to start out by teaching the structure and function of the human body and then go on from there to teach its aberrations and the things that cause these aberrations and what one does about them. That seems so logical that it's hard to begin to think about varying it. At NYU at the time there were changes that the faculty were interested in and I was sort of amused by that because there is nothing that substitutes for an enthusiastic

instructor and a willing student. One of our associates said, “You know if you get a lousy poker hand, it doesn’t matter what order the cards are dealt in, it’s still a bad hand. If you get a good hand, it doesn’t matter either, it’s still a good hand.” So we were less hung up, perhaps, on what are accepted. One year they had decided at NYU to try teaching anatomy in the second year instead of in the first year, which is sort of an incredible kind of attempt; they wanted to teach the approach to the patient first. One of our young cynics got up and he said, now, he said to the class I’m for cussing thing number one over here and there’s thing number two over here, but don’t worry about what it is, we’ll tell you about it next year. Well, some of the tortured attempts at curriculum reform seem to me to be of that order and I remain a kind of classicist in terms of how the curriculum should be constructed. The content, of course, is enormously different from what it was 50 some odd years ago when I started in medicine, exactly 50 years now, 1939. But the structure, the skeleton on which this is based, I think, remains the same.

**Dr. Hartzell:** The human skeleton hasn’t changed.

**Dr. Kushner:** That’s true, that’s exactly right. The other thing that hasn’t changed is the quality of an outstanding physician, and I think that one can’t lecture this; I don’t think one can lecture on how to be a caring physician, how to be compassionate, how to be involved with your patients. That you can do, if you have to teach that and I’m not sure you have to, maybe the place where that kind of selection is made is initially at the admissions committee if you were astute enough to pick people. After all we’re dealing with young adults, we’re dealing with people in their early twenties, we’re not dealing with children. But it’s hard to detect those qualities, but

**Dr. Hartzell:** You have to demonstrate them in the Rounds.



**Dr. Kushner:** Exactly, to see a great clinician or great physician work is such an impressive thing. The students realize it, I think, after a while. You can see it in part in the physicians they pick for their families. They are full of insecurities, they are terribly anxious, and this is a feature of medical students, they need constant assurance that they are going to be capable of bearing this responsibility for people in desperate trouble, who are going to turn to them. Here they are, just out of college and they are all of a sudden they are supposed to be, begin to be advisors.

What do you tell a patient, when a patient sits down in front of you and you have to tell the patient that he has cancer or she has cancer. I think of my own teachers in that regard who used to say that dealing with that kind of patient perhaps requires the highest exercise of the art, the idea that this patient needs constant support, that they have to be given some hope; that one comes into the room and says well, we tried that yesterday and it didn't work, we have something else we are going to try today. And it has to be indicated to the patient, okay, yes you have a chronic disease, like a number of chronic diseases, you're going to have bad days, you're going to have good days; but we're going to try to multiply the good days and work together on this problem. Otherwise, the patients run off for cures in Mexico and go to five other doctors and get mutilated surgically, very often, when there is no reason for it, get poisoned by drugs for which one would have to try to find some reasonable explanation. So, those are things which are not included in the written curriculum but are part of the gradual enlarging experience that a medical student should have, and I just don't think that you can design a curriculum that will improve on the fact that you give them a certain amount of basic information and then you go on to show them how one handles clinical problems, not all

clinical problems, they are not going to be experts in all kinds of disease. That was a bit of, perhaps beyond what you required.

**Dr. Hartzell:** That's great, this is exactly what I want you to do. In other words, not be bound by the questions. I think you been over 6 reasonably well, what about 7?

**Dr. Kushner:** My understanding of the purposes behind the creation was in very practical terms to fulfill a need that was perceived at that time of there being a shortage of health professionals at all levels, including physicians. It's sort of strange that within a decade that reversed itself and people again decide that we have too many physicians, which I have never been convinced of, by the way. I don't know how one accurately measures the demand for medical care and its reality. Also who decides who has a doctor and how this is paid for.

**Dr. Hartzell:** The Muir Commission report, I think they had done quite a little research on relations of the number of doctors to the population before they ever came here. I remember I had been on the job here in '62 about two months when two people came into my office unannounced, one was Malcolm Muir and one was Lester Evans and they explained their purpose; and what they wanted to do was to establish a comprehensive health science center on the campus of a growing institution rather than put it someplace where the administration was already set with a lot of traditions and it would be hard for the existing establishment to take on something different and do justice to it and they were looking for a situation like that. They thought ultimately that Stony Brook would be that kind.

**Dr. Kushner:** I think I understood that. I think I also understood the fact that there was a perceived shortages in New York, particularly in rural areas and in the central city. And that there was probably a remarkable foresight in putting in an

institution in association with a university center. Actually, this kind of design, and in fact when we came here we understood that we wanted to make this a school, a medical school, certainly with responsibilities and involvements that reach from the city line to Montauk and Orient Point, was to be a sort of example to other underserved areas, in a sense, of how one could provide really first-rate medical care to an area that is not provided for and wasn't simply sending another two or three physicians in or getting people to move to rural areas but really establishing a center of attraction; and it's surprising how, even in this affluent County, how much was required to provide first-rate medical care, it just wasn't here.

**Dr. Hartzell:** Suffolk was exporting about 800 people a year for tertiary care in New York City.

**Dr. Kushner:** And a lot of the care that was being given out here that was termed secondary properly belonged in a university hospital. However, that I think was a mission that was given us, and I think we fulfilled and we fulfilled it in another way too. It was my understanding that we would try and recruit the existing medical people out here to the teaching effort, because there is no better way to learn than to have to teach. Indeed, when I try to conceive of programs in continuing education, one of the most effective programs is to require a physician to teach because there is nobody who can shoot you down in flames faster than a medical student if you are not really up on what happened last week in the NEW ENGLAND JOURNAL OF MEDICINE, and that has happened in part, not as thoroughly as one would want because we were a little naive about the geographic difficulties, this is an area that was very widespread, we're talking about 100 miles from end to end. We, I think, managed to avoid a lot of the town-gown struggle

that attended the establishment of new schools in the '60's and when they were being founded all over the country, although we had a little bit of that.

**Dr. Hartzell:** I think Ed did a good job with that, he was aware of it, of the problems.

**Dr. Kushner:** He had a knack of immediately understanding what individuals and people in different settings required and he probably promised them that. Some of it was extraordinary, for instance, there was talk at the outset that students would come here for two years, come to the University Center for two years and then be sent out to hospitals and the rest of their training would take place there and the model being the English college hospital. The English university training takes them through basic sciences, and then they go off to Guy's or St. Bartholomew's and their diploma reads from the hospital and that is sort of what Ed had hinted at, that they would be graduates not of State University of New York but rather of the State University of New York at Stony Brook (LI Jewish Hospital). Well, when we started to recognize what it was we had to do to maintain surveillance and to control this enterprise, it became clear that that was not at all feasible and so these hospitals had to be disabused of that.

**Dr. Hartzell:** You had to have some hospital, make use of the hospitals until you could get your own, couldn't you.

**Dr. Kushner:** That's right, but we could not, it turned out, that we couldn't expect that the hospitals, with the staffing they had and the busy practitioners could provide the kind of central direction and curriculum design and surveillance and maintain the standards that properly belong to the responsibility of the school, also that the students would opt for pediatrics at one place and obstetrics and gynecology at another place and internal medicine in another place and we did have a lot of help from the community hospitals. That was an important part of our

initial start; we could not have begun without them. We didn't open the hospital until 1980, I guess, and the school had been in existence for 9 or 10 years by that time, so we needed these hospitals desperately. And, of course, every physician envisages himself as a professor, they had to have a little help in fulfilling that role. Now, Stony Brook when I came here, I think a little enamored of the idea too, I said, I came from a medical school which was off-campus and we never saw the people in the undergraduate and graduate schools because the distance between Washington Square at NYU and 34th Street where the medical school was, 28th to 34th Street was impassable, there was no interchange at all. I said, now I'm going to be on a campus with professors of English, Archeology, Romance Languages, it's going to be such an invigorating experience. Well, it is in a sense, except I'm afraid I never go to spend much time with them. Indeed, one of the pleasant experiences I've had here has been serving on committees in which there has been an interchange with people in the natural sciences and with people in the arts. But, we can do more of it and just in passing I might say that one thing that I felt very strongly, I said this to John Toll, I've said this to interim presidents, I've said it to Marburger repeatedly, is that the Medical School ought to play a role in the education of undergraduates. That there is no way one can graduate an individual and say that this is an educated individual without some insights into modern biomedical science, one, but also interested in parts of medicine which indirectly now are in daily life decision making. One can't pick up a newspaper every day of the week in which there isn't some new cause of cancer or some new cure for this disease or that disease and educated people should be sophisticated enough to be able to evaluate this and I still think, I believe that, and I still think that we are searching for a role in liberal education.

**Dr. Hartzell:** It's a good point. Let me just take a look at this and see how far we've gone. Leadership on the campus

**Dr. Kushner:** Of course, I was always impressed with, and one of the reasons I was willing to come here, was that I always found Ed to be exciting and stimulating. I didn't always the man; I was in the fortunate position of having been senior to him at Bellevue so I was one of the people who could tell him with "no." It was strange that when I thought he was wrong or that this wouldn't work or something, so we had a very happy relationship and I've continued to have it ever since, even after he left in contact with him frequently, and it's been very gratifying. Arthur Upton I did not know, except by reputation, and I had served on one national committee with him before I came here but he's an extraordinary person, I've said at times that I think Arthur is probably the closest thing to a saint I've ever met, he's just so considerate and so thoughtful and so I have high regard for him. He is an outstanding scientist as well, meticulous and very well organized and very intense, so I foresaw nothing but a delightful association with him. When I got here, I must say, and as I continue to work here, one of the people who impressed me and who continues to impress me and who I thought was one of the *beau* ideals of the college president is John Toll; I was very appreciative of his support, I thought he was a determined and stubborn leader who knew what he wanted and understood quality, and I would hope to be counted among his real admirers. In 1974 I was offered the Malencroft Professorship of Pathology at Harvard and John was very disturbed and said, well, I don't what we could do to get you to stay here but I understand you live in Huntington and maybe we could give you an apartment at Sunwood. So he showed me the apartment he had formerly occupied there, and I said I don't think that would be quite an incentive, that's not what's going to keep me here it would be the fact that I run a large

pathology department, that isn't what's going to keep me here, it's the challenge on the part of this new place. And I decided to stay and I have not regretted for a minute, just as I have not regretted coming here from NYU. So, John was the president and he fulfilled all my expectations of one, of what one could expect from a president. Perhaps the fact that we were new in developing was helpful, there is always a tension that develops between a medical school and the president of the university. There is a wonderful president, at Indiana I think, Quen was his name, who once I heard say he never quite understood his medical school; then he realized it was just like his football team, he said there were a lot of strange people milling around, he said the alumni took an inordinate interest in it, he said a lot of money changed hands and they smelled the same. Well, I think college presidents very often have that kind of limited understanding of what medicine is in the university setting simply because there is such a importance that has to be given to its service role, apart from teaching and research, which goes in every department in the school in a university. The idea is that we can't decide that we're not going to give neurology this year, like we can decide we're not going to give Latin 23, and you can't wait for blood in the Blood Bank, the way you can wait for a shipment of textbooks to come in; it's a different sense, there's a sense of urgency and an involvement in and interest on the part of the people in the medical school on how every penny is spent, because it means so much ultimately to their patients. And that's hard for college presidents to understand, well, we didn't have that sense with Toll because he was part of the start-up of this business.

**Dr. Hartzell:** I've heard and, of course, witnessed to a certain extent, what was supposed to be friction between Johnny and Ed, primarily on the matter of relative responsibilities and what financing requirements came first as far as the limited pot that existed up in Albany. It seems to me that Johnny was doing what

he could and Ed was doing what he could and there were frustrations. not necessarily located here but up in Albany, how do you size that up?

**Dr. Kushner:** Well, the plans were for support, as I said, were generous. The problem early on in some of those years was that the budget was, the support was delayed in a sense. There were periods in which there was retrenchment involved and so.

**Dr. Hartzell:** Was this after Rockefeller?

**Dr. Kushner:** Yes, and now a college president looking at his university, looking at all his responsibilities wants to distribute resources to see ways he sees fit. The Vice President for Health Sciences sees this as a line item in a budget since the legislative intent was to give the money to him and he would naturally resent seeing it go somewhere else. On the other hand, when Ed became a university president, I dare say, he behaved in very much the same fashion. So, I was understanding of that; there was also the issue of the fact that we were overfinanced, in a sense, during our start-up period. We couldn't possibly fill all the positions at the rate that they were awarded us, and so that provided a pillow for some backup for what John Toll saw as university needs. As a matter of fact, there was we always felt a constant flow of about \$2 million in faculty support that the campus used while we were not using it. Unfortunately for John Marburger the bill came due in that we reached the point where we needed that money and we needed those jobs and that impacted on his ability to vet them for generalized campus needs. On the other hand we were also generating enormous sums of money from, the practice plan now generates about \$40 million a year.

**Dr. Hartzell:** You say the practice plan?

**Dr. Kushner:** The clinical practice plan, clinical income retained there. On the other hand the hospital costs about, it must cost about \$150 million, I would



guess, it was about \$120 when I left the deanship, it must be somewhere around \$150 million a year and that

**Dr. Hartzell:** In costs, operating costs?

**Dr. Kushner:** Yes, that is not made up by income so the State subsidizes and keeps squeezing on that. I think that Jack Marburger, for instance, has had much greater problems financially than we did early on. When I started as the Dean it was the ideal time to be a dean. Chairmen would come into my office and say I need another Assistant Professor; I would say, fine, hire him. As I looked at my table of organization, we had that, we were planning for that job, we had the finances for it. Someone would come in and say, well, we need an electron microscope, and I would say, do you really need it, yes, what are you going to do with it and so forth, buy it. We had \$16 million in equipment funds. So now I think the problem now is that if there's within the university, if there's competition for funds, one of the techniques of leadership is in universities, particularly in faculty, is to make the decision but give people the sense they are taking part in the planning process and they understand what the needs are. I was insistent when we were, for instance, in the distribution of overhead income that was returned to us, we began to develop a very large piece of the research activities of the campus were located in ..... so we had on of the largest ..... and I had no problem deciding immediately that we would be happy to see part of our money diverted to social sciences, to the arts which always lag behind in that kind of availability of funds for research because we wanted to be part of a university. If we wanted to operate alone, then we didn't belong in a university. I said if we started and insisted that money go to ....., the syndrome, I said, 'good-bye the Greek,' you can't support a university. You can't support those kinds of disciplines unless everybody in the university joins in, contribute in a sense. But

what I liked about it early on is that we were asked about it, consulted. As a matter of fact one of the people I appreciated for that reason and continue to appreciate was Sidney Gelber's role as the Academic Vice President in those years. He was extraordinarily supportive and gave us a real sense of being part of the university.

**Dr. Hartzell:** He had good training at Columbia and he also had his musical interests, which carried over. You've been talking also about 9. Let me ask you about a couple of people who are no longer here: one was Elliott and another one was the chap who went to North Shore Jewish, I've forgotten his name, as the administrator, he was administrator here, I think, before Elliott.

**Dr. Kushner:** I know who you mean, no, he didn't go to North Shore, he went to Long Island Jewish, but he, he became, Peter Rogatz. Peter left for very good reason from his point of view. He didn't see the hospital as coming along fast enough for him. As a matter of fact when he came back to visit and he saw this thing going up and when it was opened finally, he said, "my God, they really built it." Because we had periods of time where it wasn't clear they were going to build this hospital. It went up, it went down. Ed came back from Albany and would say, well, we're going to do a 200-bed hospital; and I'd say, nonsense, you may as well not do anything. When they opened the new Nassau County Medical Center, which is a beautiful building, it's a 'Cadillac' of a facility, and we weren't sure we were going to get a hospital here, I went to the administrators there and I said, suppose the State would offer to buy this building for you for \$1 and take over the mortgage, because they were in debt \$80 million, they said, fine. I came back and some of the people who I had contacted said they were going to talk to Margiotta. I came back here and talked to Oaks and to Toll. They thought I was out of my mind that the State take over a County hospital with all its problems and so forth, but there was talk about using North Shore and Northport VA as the university

hospital. It wasn't clear we were going to get a university hospital. So Peter felt that he just wasn't going to hang around for that. He was at a critical stage in his career. He had been the director of LI Jewish before he came and then he went from here, I guess he went to Blue Cross as the administrator there, and then he now is a private consultant for hospital matters. Now, so that was why he left, as a matter of fact, I used to call him regularly every day, call his office just to hear his secretary answer "the University Hospital;" there was no University Hospital, but it was the office for the University Hospital; but it was so pleasing for me to hear the University Hospital.

**Dr. Hartzell:** What about Elliott?

**Dr. Kushner:** Now, Mike was a good friend of mine, and I never quite understood what the whole fuss about his involvement with Russo had to do with whether they were behaving properly in doing outside consulting work, and there were rules that governed this and I thought they were operating within the rules. I think that I did not see the need for him to leave. I went and made a strong plea to Jack that he be permitted to stay; I think Jack felt otherwise and I was instrumental, as a matter of fact, in getting him a place at NYU when he left here, so as a mark of my confidence in him, I thought he was a good administrator and I still feel that way. He is now at St. Luke's, but I think it was unfortunate that we lost him because he set up a lot of the systems that we're operating, and it would have been nice for him to see them come to fruition.

**Dr. Hartzell:** I think you've done 10, you want to try 12 a little bit, how have the expectations with which you came worked out personally for you?

**Dr. Kushner:** Well, I came with the idea of being Chairman of the Department of Pathology and indeed when Ed realized after two years, after the school had been open for two years, that he couldn't carry all the positions that he

was operating in, which were Vice President for Health Sciences, Dean of the School of Medicine, Professor and Chairman of the Department of Medicine, and began to apportion those responsibilities, he came to me and said, “You be the Dean.” And I said, “I don’t want to be the Dean, I’m happy being the Chairman of the Department of Pathology, I have a good little department, it’s going to get larger and we have some great people that I’ve been happy to see come here.” And he said, “No, no, you be the Dean.” It was sort of totally thrust upon me. That may be a good way to become the Dean, when you don’t want the job. I think perhaps that’s the only way to be the Dean of Medicine. I continued on for 15 years after that, so I guess I must have found it satisfying. But it was sort of amusing when I had my first faculty meeting, I said to them, “Okay, I’m the Dean, what can I do for you?” Because I saw the Dean as a kind of ‘sore-picker.’ And a Professor of Physiology said, “Get the goddamned dog out of the classroom.” I said, “What, is that what the Dean is supposed to do?” Well, the first year class, the first class that we took, had a dog that they adopted, a pet dog that came to class with them. And he was annoyed by. A Professor of Anatomy, however, Maynard Dewey, said, “Wait a minute now, I lecture by walking back and forth on the podium. I tripped over that dog three times today and I turned to the dog and said ‘would you please go to the back of the room;’ and the dog got up and went to the back of the room. He said, “Don’t throw him out, he’s the only one that’s listening to me.” Well, the first class, one of the reasons that I think that Ed came to the conclusion that somebody else ought to be the Dean right away was that they were an extraordinary group, and that’s true of starting classes in any new medical school. I found subsequently that that was true in all the new schools that started because

**Dr. Hartzell:**       What was true?

**Dr. Kushner:** That they were unusual for a medical school class, the students were, because at that time getting into medical school was intensely competitive and so students that were accepted in this school and in other schools often had multiple acceptance because they were so outstanding. But, then, you say to yourself, what kind of student then elects to come to a brand new school without clinical facilities when they have gotten into three other schools that have an established track record that they know can turn out physicians. Well, they were obviously students who felt that they knew how to educate a physician, and they were coming here to tell us how they should be educated. And so it was a tough job dealing with them, and they were constantly in Pellegrino's office and he had enough of that. When he said, "you be the Dean," he meant you deal with the students in addition to recruiting the rest of the faculty.

**Dr. Hartzell:** How did you handle it?

**Dr. Kushner:** Well, I think I had more time to be a kind of father image. Ed was busy running around and negotiating with Albany and with the Legislature and with the administration, and he had

**Dr. Hartzell:** He was the only person who ever addressed the Legislature from this campus.

**Dr. Kushner:** I don't know. We appeared before Legislative committees but not before the Legislature. And Ed, so that the sense I was able to give the students that I was personally involved in this enterprise with them. For instance, we had no way of exposing them to autopsies when we were teaching pathology when they got to the second year. I would take groups of them, ten of them, in a station wagon and drive them to the Medical Examiners office in Hauppauge, demonstrate a case to them, get back in the station wagon with them, and drive back here. They, I think, appreciated that in the sense of involvement. And also,

then, I was also in closer contact perhaps than he could be with their other instructors in other disciplines, in biochemistry, in physiology, and could transmit their insecurities and their concerns, their expectations of what instruction should be like so that, not that they were correct, but that they had this sense of inchoate longing for participation in design. This group had come to maturity in the 60's. So that was a happy part of the experience. I used to receive, I have a collection of petitions from all kinds of problems, incredible, like one year the girls in the class decided that they should be subjects for learning teaching how a vaginal examination is done. I said, "My God, whatever for?" They said we want the men in the class to understand that there is a person around this apparatus and how they relate to it, to the person is an important part of teaching. And then at the end of the year they sent me a letter saying what a gratifying experience this was. That didn't last terribly long but it was that kind of thing; or they didn't like the way this thing was taught or that was taught. Meanwhile, we had the opportunity to recruit a faculty and that was great. So, the expectations when I came were not to be the Dean, they were to be the Chairman of Pathology; fortunately, I had a number of talented people that came here with me. There was a skeleton crew that came from NYU, like Fred Miller and Bernie Lane and Aaron Janoff and Mildred Phillips, Phil Cane; those all had been with me, spent some time with me at NYU. Leon Sokoloff, who had been a colleague, classmate and colleague, up until 1952 when he went to the NIH and then came back here to join us, and that was a great play, so we really had a very talented core group in pathology and they were perfectly able to carry on without me when I became Dean. I had no, my concept of what a Dean did was largely drawn from two things; one was that a dean had some ceremonial responsibilities, the other think, however, was that in the period of time I had been at NYU, which was a long time, in a fairly responsible position, I had

served on most of the operating committees of the Medical School -- I had been on the Curriculum Committee, I had chaired a Student Aid Committee, I had been on the Admissions Committee -- those committees which are the way in which a faculty really takes part in the governance of a school and on advisory committees, I had had that kind of experience. Now that I look back on it, that perhaps was the most valuable training I had for a deanship, not being chairman of the department, not necessarily teaching myself, but having, in addition that, having functioned as a faculty representative to the administration so I had an idea about what I would require in the way of support from the administration. And I think we had a kind of happy Dean's office; it was a very good time for the School.

**Dr. Hartzell:** The chronology of that was, let me have it again.

**Dr. Kushner:** I came here in 1970 as Chairman of the Department of Pathology, in 1972 I took over as the Dean, and I was Dean and Chairman of the Department of Pathology two years, but it was clear that the responsibilities in Pathology were being carried by the people who were over here so that in 1974, I think Fred Miller became officially Chairman of the Department of Pathology, and I continued as Dean until 1987. Well, I say I had no real expectations of Dean, but it was, I would say, 15 years of very satisfying experience for me. There were bad days, of course, we thought everything was going wrong or the faculty was unhappy but overall, I would say, I found it most fulfilling and satisfying, have a real sense of almost paternal sense

**Dr. Hartzell:** Personal fulfillment?

**Dr. Kushner:** Exactly. I might say, just as an example, because I didn't agonize a bit over the decision as to whether to go to Harvard, and I had some good friends up there too, and it's a good school, they tell me.

**Dr. Hartzell:** How has Howard Oaks worked out?

**Dr. Kushner:** Howard and I have had an interesting relationship. When it was clear that Ed was leaving and we had to pick a successor to him, I thought Howard would do extraordinarily well because he had been here from early on, one of the earliest people who understood the workings of the School, the workings of the Albany hierarchy, got on well with the administration here. Medical School deans very often resent Academic Vice Presidents and I told this to Howard. I said, “Howard, now looking back over the time we’ve spent together, I want you to know that the relationship between a Vice President for Health Sciences and the Medical School Dean’s office is not a happy one because they see themselves as competing, in a sense, for direction of the Medical School. And in principle I would continue to be opposed to having to report to a Vice President for Health Sciences rather directly to the President. Actually, in terms of our relationship there has been absolutely no problem, and I think Howard has never tried to tell me how to run the Medical School, he did not, and concerned himself with the kinds of things that, I think, would have distracted me if I had to worry about them, or I had to engage the individuals involved. So we have had a very happy relationship, both on the professional and on the personal level.

**Dr. Hartzell:** Basic understanding?

**Dr. Kushner:** Pleasant affair, it’s been more than that, it’s been a real collaborative effort. I believe, for instance, that the Dean of Medicine should be the Vice President for Health Sciences, but I didn’t feel I had to be that with Howard there. So he did a lot of the onerous management of things like Social Welfare and Allied Health, Dentistry and whatnot, that I would not have enjoyed and would have had to assign to other people to do if I had had both positions. On the other hand, what I did for him was give him a peaceful and happy medical school, growing over 15 years, which may become harder and harder to do as this



becomes more and more settled. So we had a good relationship and we continue to have.

**Dr. Hartzell:** Let me just, I want to go to the other side I think on this, all right, go ahead.

**Dr. Kushner:** I had an idea that I would like to do something like what you are doing and I, sometime ago, and I got this very elegant book that I bought, and then I wrote some, it says, "I am completing my fourteenth year at Stony Brook. I have always meant to keep some sort of record of the events that attended the founding of this School of Medicine. Fourteen years have gone by and now it's all in my head, distorted I am sure by the passage of time but perhaps less distorted by the passions of each moment. What I can recall will be recorded, together with an ongoing account. I shall try to mix reminiscences with records." Now, I never did that, but I started here by saying "I start then on Thursday, April 12, 1984. I shall not be as precise about date and time for most of what I have to say but this special day is the termination of the fifth accreditation of the School by the LCME."

**Dr. Hartzell:** LCME?

**Dr. Kushner:** The Liaison Committee on Medical Education, liaison between the AAMC -- American Association of Medical Colleges -- and the AMA. "It's the fifth one in which I have taken part. I shall have something to say about the preceding ones, but let me stay with this one for the present. I am writing this at 8 o'clock in the morning and in half an hour we shall have the accrediting team's evaluation of our program. I have some trepidation, but it is not accompanied by the real anxiety that attended our previous accreditation. I believe firmly, perhaps blindly, by my own conceits that we have a real success story here. Will the visitors perceive this School in the same light, or will they feel we have not done enough with our opportunity, or will they accept what we have done, even offer

approval but continue to limit that approval with certain contingencies, hoping by this tactic to be helpful to us in continuing to pressure the State to completing the assignment of support similar to the hospital. I hope they won't adopt this tactic, I believe in the State's ultimate commitment to our full development. I think what we need now is a real triumph. Well, we'll see, I shall follow this with notes on their exit interview remarks." Well, I never did any more with this. I might say, by the way, that they were very enthusiastic. The accreditors finally, they saw this, not simply as a good medical school, but as potentially a great medical school, and they were very complimentary about the role of the Dean's Office. But I never carried on with the kind of thing, as I say, that you are doing, my sense of what went on at the School, and I don't think I'll ever take hours and hours to.

**Dr. Hartzell:** Well, I'll tell you what I'd like to suggest then. Jerry has one secretary in his office, who is, among other things, transcribing these tapes, the work goes slowly but I think I'd like to have her transcribe what we have and send you a copy and you take it from there, as you hoped, in doing what you'd like to do.

**Dr. Kushner:** That'd be fine. I hope I can get to it; I am going to retire, I guess, I will be 70, but I hope to maintain an office and right now I am getting a great deal of delight out of running the autopsy service, which I do and doing surgical conferences and teaching still. But I would guess I will turn the autopsy service over to one of the younger men.

**Dr. Hartzell:** One of my memories, I started at Wesleyan as a pre-medical student. One of my memories was being invited by a family friend, Clarence Gamble, one of the three Gamble brothers of Proctor and Gamble, who was at Harvard Medical. He invited me, I was in Newton, and while I was in high school

and went to MGH and sat in on one of the autopsies. Watched this chap smoking a tremendous cigar going through one of the autopsies. Made quite an impression on me.

**Dr. Kushner:** Who was it, do you remember? Was it Tracy Mallory? He was a cigarette smoker, I think, not cigars.

**Dr. Hartzell:** It was a long time back.

**Dr. Kushner:** Well, he was a long time back.

**Dr. Hartzell:** This was in the teens.

**Dr. Kushner:** His father was there before him, Frank Mallory, and they named the Mallory Institute at Boston City after him.

**Dr. Hartzell:** It could well have been.

**Dr. Kushner:** Were you intrigued by it?

**Dr. Hartzell:** I was intrigued. I ran into the sciences, and while I didn't do badly, they didn't grab me and I became more and more interested in history and finally majored in history, did honors work in history.

**Dr. Kushner:** See, my father, and that's his diploma, graduated from City College in 1911 and then had intended to go to medical school, was accepted at Cornell, which was in those days at 28th Street. And the first day he went to medical school, he walked into the anatomy lab where they were dissecting, looked around, walked right out and registered in law school.

**Dr. Hartzell:** Let me finish. You should go ahead with what you want to do.

**Dr. Kushner:** Well, that has nothing to do with it, there are probably more things I can tell you that would be of interest to you in terms of the early faculty and I would like to do it, but I'm afraid not now.

**Dr. Hartzell:** All right, okay, you have something else to do.

**Dr. Kuschner:** If we can make another appointment, perhaps. I think some of the people who came on early and who helped build this place certainly deserve being recorded and I would like to do that.

**Dr. Hartzell:** I would like to, Ed suggested that I try to find Knudson.

**Dr. Kuschner:** Ed Pellegrino.

**Dr. Hartzell:** Yeah.

**Dr. Kuschner:** Good, cause he had a lot to do with the design, I think. I don't know what his sense of; one of the important evolutionary things here was the disappearance of the School of Basic Sciences.

**Dr. Hartzell:** Disappearance?

**Dr. Kuschner:** Yeah, cause after a while we merged it with the School of Medicine and now it is that. It's important in part because of, well, there were differences that developed about the whole future of life sciences generally and still unresolved here at Stony Brook, which will have to come to some resolution. There were facets of this which I had found particularly intriguing because I was perhaps a little naive in my dealing with the campus, the rest of the campus.

**Dr. Hartzell:** Let's take that up some other time.

**Dr. Kuschner:** All right.

**Dr. Hartzell:** Let me get it down then on the calendar.

**Dr. Kuschner:** Talking about the organization of life sciences. I'll say a few words about that and then go on to Brookhaven. I think Clark Kerr some years ago pointed out that higher education in the United States had gone through several periods in which the university really met the needs of the country as they developed and changed so that there was a period of time when the land-grant schools were expanding and providing aid to agriculture and educating farmers and then as the population grew there was a great need for teachers and so universities

and colleges turned their attention to what ordinarily was the province of normal school and turned out lots of teachers. We went through a period where the natural sciences were preeminent because of the needs of industry -- chemistry and physics. And he was saying this in 1970 and he saw this as the next few decades as being the era of health services as being a major societal need and that the universities would turn toward them. Now, as a State school and as a bellwether for education in the State, I think that Stony Brook was preeminently in a position to provide that kind of higher education and, as a matter of fact, I suspect that's what Ed Pellegrino had in mind when he would talk about a university of the health sciences. Well, of course, this wasn't entirely acceptable to the more classically minded people on the campus. And it wasn't that we wanted to destroy liberal education, on the contrary, I think that health sciences require preeminently basic education in the liberal arts, but we saw that the funding and the appeal of the university would, in part, maybe in large part, be dependent upon how we were perceived by the people in the Legislature fulfilling certain society needs, and that these were so very much in the way of provision of health care. The expectations of the population of people had grown in regard to what they wanted from their health caretakers. That portion of the national product which was going into health sciences was increasing. People were living longer, and they wanted to live longer younger. We thought we had something very special to offer, and that this coupled with the acknowledgment of the requirement perhaps more than in any other groups of professions for a liberal arts background was what offered us the opportunity to join with certain parts of the University in a tighter kind of organizational pattern.

**Dr. Hartzell:**       What kind of thing?

**Dr. Kushner:** I felt then, and I feel now, perhaps that there is so much in common between all life sciences but we don't talk about human biology now, we talk about molecular biology, encompasses everything from one-cell plants to even from viruses to dinosaurs to humans, and that the methods that are used in research in biomedical science now are the methods that are used in organic chemistry and biochemistry and in all of the fields that concern themselves with living things. It seemed like a waste of resources to have the old organization into undergraduate and graduate biology departments and then medical school departments, and I still feel that way, even though I perceive that we make the campus nervous by seeming to be expansile, perhaps, in our wishes to control everything. When I spoke of some of these ideas and I heard some of the sociologists here, well, that's a new power base that's developing. I said, I don't even know what you're talking about; I never thought in terms of power bases, I just thought in terms of educational missions, how they overlapped and how they could be added to. Well, I think that remains to be worked out. It may in part be dependent upon a striking reorganization in medical education. It seems to us now that there is very little difference between the kinds of talents that we hire biochemistry departments and pharmacology departments and microbiology departments, even in anatomy departments or cell biology departments. They all do the same thing, use the same techniques, address the same problems and just to duplicate departments and yet call them different disciplines is a sort of kind of adoration of the past, which has little meaning. Indeed, most departments of physiology don't teach classical organ physiology anymore, it is taught by the clinicians. The physiologists are more interested in membrane channels and potentials than they are in renal filtration rates or cardiac output, yet somebody has to teach that and the pharmacologists aren't really interested in *materia medica* anymore, they are interested again in cell

xenobiotic interaction but not in therapeutics, how you dosage a sick patient. So, we have to rearrange our thinking in that regard but this too is part of the particular appeal of Stony Brook in that I felt that we were less tied to the old disciplines and what had been done before and we always did it, you know, we can't do it any other way cause we've always done it this way. And I still have hopes that that kind of reorganization can come about. I must say, thinking back I was startled at the extent of the opposition I ran into when I tried to combine neurobiology with physiology; however, some of the faculty were prepared to accept it, indeed were very enthusiastic about it, others were very concerned about loss of identity. I requires a kind of academic leadership, I think, that sometimes has to mandate those changes without being too sensitive to the faculties concerns about

**Dr. Hartzell:** Self interest?

**Dr. Kushner:** Well, self interest and security and their own perception of their own place and all those things which relate to individual fates and not the fate of the institution.

**Dr. Hartzell:** Did you know Mel Simpson?

**Dr. Kushner:** Oh, yes.

**Dr. Hartzell:** Does his work dovetail in any way with what you people are doing?

**Dr. Kushner:** Yes, Mel is a classical biochemist and I think would be very insistent that biochemsitry is a very specific discipline that calls for its own way of life, almost. I don't know how Mel would feel now looking ahead to how biochemistry was going to develop. Biochemistry has triumphed, biochemists don't have to worry, they have taken over, everybody is a biochemist now. And Mel's particular interest which, as I recall, is in mitochondrial DNA, is the same thing that they are interested in five other departments. The problem for us is that

this biomedical sciences made such advances, there has been such an explosion of information, that we are now really in a quandary about how much we expect the physician to know and how do we make the separation now between the body of knowledge which we expect from a graduate student in biochemistry and what we expect in a physician. When I was a student in my biochemistry course, we didn't have to learn metabolic cycles, the Krebs cycle had not been discovered, and there was a string called an Emden-Meyerhoff pathway, which was one small abbreviated pathway. One of the basic compounds in metabolism, glucose exoprostrate -- the emdemestrin -- had only been described three years or four years before I started biochemistry. When we were told not to read anything about amino acids and proteins, because that was the most important part of medicine and they were going to lecture to us in great detail about that, but things like purines and pyrimidines, which had something to do with gout, perhaps, we had better read that, because they wouldn't be able to get around it. Now it turns out, of course, that nucleic acid is the keystone of everything we think about now and that's all purine and pyrimidine. So that was how our teachers gave us the wrong ....., but we make those commitments. I was taught syphilis three weeks in pathology, three weeks in medicine, three weeks in neurology, three weeks in psychiatry, three weeks in dermatology; syphilis, I knew all about syphilis, coming out of my ears. These kids aren't going to see a case of tertiary syphilis. It disappeared. We used to see them walking up and down First Avenue all the time. It was a big clinical problem, now I trust that AIDS will disappear in the same way, although I don't think they spend as much time with that disease as we did with syphilis. So there, in the early days, as a new school, we said to ourselves, "What shall we teach?" And, of course, we found ourselves thrown back on, "we'll teach



what we know.” And that’s always dangerous because then you, but the students are good, they stimulate you to look beyond last year’s lecture and

**Dr. Hartzell:** You’re getting good graduate students? Or you’re talking undergraduates?

**Dr. Kushner:** I’m talking about undergraduate medical students. And there are these unused opportunities that we have here that I was particularly anxious to keep, have a record of, so that someone might someday look back and say, yeah, maybe that’s what they should have been doing and maybe we’ll go ahead and do it. And that is, here we are between two great laboratories -- one in biomedical sciences in Cold Spring Harbor, and the other in natural sciences at Brookhaven -- with extraordinary capabilities, just Brookhaven alone in terms of analytic capability, in terms of modalities for treatment, is unexcelled. They have a very good biology department. Medicine is uncertain because the support has been uncertain. The old Atomic Energy Commission didn’t quite know what to do with this responsibility for biomedical research in that area; they knew they ought to be doing something in radiobiology and in the peaceful use of the atom. But they were always run by physicists, and they had no real sense that there were great things that could be done in a national laboratory with the mission of a national laboratory, that is, big science that the universities couldn’t afford. And I think that they faltered always, it was the Department of Energy, when it finally took over, has not had an outstanding record in the understanding and continuing support of biomedical research. The hospital is 44 beds there, closed down now, mothballed. And 44 beds would make an incredible clinical research center; the only place that would be larger than that would be the NIH clinical center in Bethesda. The hospital of the Rockefeller University has 33 beds, and we haven’t been able to commit to it yet in the human resources that would be needed to set

that up nor have we had any promise of support from the Department of Energy. Now we are trying to, in the early days it did great things, Brookhaven did, and it was because they had no limits on what approaches could be.

**Dr. Hartzell:** Farr was the first one.

**Dr. Kushner:** Yes, and Farr and Victor Barne at that time were the ones who introduced the use of radioactive thymidine as a tracer. Gene Cronkite made signal contributions there, Katsias discovery of L-dopa for treatment of Parkinsonism, and Ludall who knew all about hypertension and established the fact that there were genetic bases for hypertension but that there were also environmental factors like salt intake that affected it. Those were days. But then they were exploiting Brookhaven at a time when the universities immediately after the war had no money and no laboratory facilities, and as the universities acquired these, being out of the medical mainstream, it seemed discouraged their recruitment of younger people, and there has been no continuity so the department has deteriorated.

**Dr. Hartzell:** Who is head now?

**Dr. Kushner:** Head of medicine now is Chanana, Harjan Chanana, who is an Indian surgeon who came to work with Cronkite and has been there as long as anybody I guess now.

**Dr. Hartzell:** Is there any contact between Stony Brook and Brookhaven?

**Dr. Kushner:** There is considerable contact, I am Chairman of the Board of Trustees of the Associated Universities.

**Dr. Hartzell:** Board of Trustees of the Medical Center?

**Dr. Kushner:** No, the whole.

**Dr. Hartzell:** The whole thing, is that right. In other words, Stony Brook is now in there now with the other nine universities?

**Dr. Kushner:** Well, when John Marburger and Jerry Schubel say, “we want to be one of the universities.” Now, you can’t be a founding university, because the place is founded, but the other universities have no statutory responsibility for that place, it’s a private corporation there, they provided initially two individuals from each of those universities. Now, it’s broken down and there are more Trustees-at-Large, and they’ll be satisfied with one Trustee from each of the founding universities, so to speak. But, when I say to Bob Hughes, who is the Executive President, how much more can they be in than having you here as Chairman of the Board of Trustees. Well, I think the administration here would like to see something written down.

**Dr. Hartzell:** How long have you been Chairman?

**Dr. Kushner:** I’m in my second year now; I’ve been on the Board of Trustees since 1980, I think, or before ‘78 something like that.

**Dr. Hartzell:** I think it’s a logical move that there should be some administrative connection between the two institutions.

**Dr. Kushner:** I’m sure that when I step down they will be only too happy to have some continuing; of course, Stony Brook is the major user of the physics facility. And we are establishing closer contacts now; we are setting up a unit for radiation therapy there. They are building us a building; we are providing the professional staffing of it and the machine, the linear accelerator that will be used for treatment there. Buy they also have other opportunities for us, they have proton beams that we can use and they have this national synchrotron light source, which is incredible facility too for both diagnosis and therapy.

**Dr. Hartzell:** Really, for diagnosis, as well as therapy?

**Dr. Kushner:** Well, the diagnosis is very unique. For instance, this is a very power x-ray source they have in the synchrotron light source, and also they can tune

the x-ray to various wave lengths. Right now to visualize coronary arteries, you have to go right in and put a catheter in the coronary artery; it's an invasive procedure. You don't have to do that to the cerebral arteries because you can immobilize the head and take an x-ray with a standard x-ray machine, but the heart is beating this way. And you need very good contrast, you need to be able to stop the motion, so to speak, so you need this powerful x-ray source that they have. You give an intravenous injection then and you get enough contrast and you get enough, in fact the x-ray is powerful enough while you're taking a picture, it's a lot of light so you can stop the motion; that's the kind of diagnostic capability are fantastic. So that looks exciting. I took the new Dean, Jordan Cohen, through there; he was very excited about what he saw. He said, "Gee, it's like F. A. O. Schwarz for adults." All these beautiful toys, neutron activation, neutron capture, neutron activation all by counting, neutron capture where we are still working on new ways of treating brain tumors with neutrons.

**Dr. Hartzell:** No longer boron?

**Dr. Kushner:** Well, it's still boron compounds, but new compounds hopefully that will improve the therapeutic ratio. So, Brookhaven, I think, would be important to nurture that and to enlarge it. I would hope that we could do that within the next few years. Cold Spring Harbor is another opportunity. We always have someone on the Board of Trustees there. Now, I think, the current representative is Sid Strickland from the Department of Pharmacology, who is a very good fellow, they think very highly of him. And we take part in the summer courses, and we have ever since Joe -- I can't think, our first professor of microbiology, well, anyway. He was followed by Arnie Levine, who was on the Board of Trustees; he left for Princeton. Strickland became our representative.

But that has sort of limited interest now with the taking part in the human genome project, which Watson is the head of.

**Dr. Hartzell:** What does that mean, human genome?

**Dr. Kushner:** It means eventually working out the sequence of basis of these particular chemical compounds in the hundred thousand genes that carry all the characteristics of humans that make you different from me and you the same as me in some part. And understanding how these certain arrangements will predispose us to disease and others will protect against disease.

**Dr. Hartzell:** Do chromosomes have the same number of genes?

**Dr. Kushner:** No, there are different numbers and the chromosomes are of different size and the numbers of genes are different, but the total mass, the whole human genome means all the chromosomes, not only determining what sequence of their basis are but which chromosome they are located on and which ones are next to one another. That will be an important descriptor of disease. Now, the argument as to whether we need all that now at a cost of four or five billion dollars is what's plaguing people, I guess. So, I think that's all going to be very exciting and I feel almost like Moses. I can't cross over into the promised land. But it's going to be a while.

**Dr. Hartzell:** I've been interested in the physical basis of intellectual characteristics ever since I was first a dean and having to deal with people in the different disciplines, because it was a matter of amazement and something to be understood, if possible, why it is that certain people and sometimes generation after generation of the same family, like let's say the Goldhabers, are willing to focus on a certain set of problems, a certain particular discipline all their life and why it is that some of those minds are closed to some disciplines, such as the humanists talking about mathematics, or some individuals in the sciences talking about their

lack of interest in the structure of society or in politics or whatever. I am sure there is a genetic base to whatever it is that the environment influences.

**Dr. Kushner:** I think that's true. I think there never was, even though we know specific causes of disease, like the tubercle bacillus which causes tuberculosis, still there are people who get it and people who don't get it; they are exposed with the same exposure, the same, there are certainly genetic differences that determine that, but whether we will understand them all in that detail is another question. In 1953, April of 1953, was the date on which Watson and Crick hypothesis for the structure of the gene came out and there was a great deal of excitement in medicine. We learned about it when our people came back from Woods Hole that summer and explained the double helix to us; and there were no limits to what we were going to be able to do now that we had this chemical understanding. And I was in the elevator with a group of student, and I remember this as though it were yesterday, we were riding up and I was explaining to this to students with great enthusiasm because I saw this as this this tremendous advance, leap ahead, and in the elevator with us was Otto Lurey -- Otto Lurey was the old Professor of Pharmacology and Nobel prize winner -- and as I lectured to the students, we got up to about the fourth floor, he turned around to me and he said, "Kuschner, you'll never explain the Budapest String Quartet on the basis of DNA." And everybody laughed of course; and then I thought to myself, you know, maybe he's wrong, maybe some day we will be able to explain the Budapest String Quartet in terms of their genes; but I am sure it will only be part of the explanation and what's turned on and what's turned off. It's very much a matter of upbringing and the environment. But that's all part of the excitement. Now, I think we are, my concern is that we get into these things and we get all excited about it and we find ourselves dealing with description at another level, maybe it's a little closer to

the ultimate truth, maybe not, maybe we're never going to explain certain things. Goodness, how do you explain goodness in terms of DNA. Well, is there a gene for goodness and badness, I don't know.

**Dr. Hartzell:** That's difficult, and if you think in terms of the structure of the human individual, I'm interested right now in the structure of the valuer, man the valuer, not only on the basis of what he feels or knows about his physical needs, not only on the basis of what he has in the way of intellectual interests or the rational side of the mind, but I am interested in the genetic basis, I'm interested in the question as to how far down into the core of the individual, which we call either the self or the soul or the spirit or the psyche or the ego, genetics actually goes in its influence. I am convinced that there are some people who are much more sensitive emotionally, or much more sensitive to beauty, or much more curious and in some ways in tune with the infinite or whatever is behind the universe than others. I am sure there are some, and I've run into them, those questions don't interest them at all, they are agnostics, and if they are aggressive, they are atheists. The mind is closed. The same thing for music; some people are almost infinitely open to music of all kinds, other people like me can't stand certain kinds of modern music, it's almost as if I'm just not made that way.

**Dr. Kushner:** Well, that's part of the promise of working out the human genome will be the linkages that can be made; is it possible that the kinds of characteristics you are describing will be reflected in the organization of one's genetic substance. I don't know, I don't think it's ever going to be a problem for us in our time, someone else will have to do that. But

**Dr. Hartzell:** Well, you think then there's a real frontier in the genetic composition of humans, not only physical, but mental and possibly psychological?

**Dr. Kushner:** Oh, yes, I don't think there is any doubt about that.

**Dr. Hartzell:** Yes, it's a real frontier.

**Dr. Kushner:** Yes, and it may take a superior race to fully understand this, nothing that says that we are the best that can be. But we are all we have now and I think it's always seemed to me that watching the fact that you with your long association at this place have remained in contact with it, attended its functions, played a role in the place, is the thing that makes this different from any other kind of business, so to speak, it has a kind of, demands a kind of loyalty which people who are retired in other fields do not feel. Of course, I may be projecting myself in the sense that I am going to be 70 in August and probably will play a lesser and lesser role and yet I am sure I will take a major interest always in how this place progresses, how it carries on. And I would hope that the kinds of individuals that we'll attract may not be the kinds that Ed and I always envisaged but I hope that they will be very sensitive and caring people.

**Dr. Hartzell:** I hope so, too. I've got to go and pick up a dolly downstairs at the bottom of the [tape ends]