

UFHC 60

Interviewee: Louis Russo

Interviewer: Nina Stoyan-Rosenzweig

Date: March 10, 2003

S: This is Nina Stoyan-Rosenzweig and I'm interviewing Dr. Louis S. Russo. It is March 10, 2003, and we are at the Mount Sinai School of Medicine. Let's start with asking you when and where you were born.

R: I was born in Westerly, Rhode Island, a small town in the southwestern corner of Rhode Island, in 1944.

S: Can you give me some background on your family and your family history?

R: My mom was born in Westerly; my dad was actually born in Poughkeepsie, New York. They are both of Italian descent. My dad ended up going back to Italy with his family at roughly the age of two, stayed in Italy until he was about fifteen, and then came back to the United States, by himself, actually. [He] spent some time in New York and then went to Westerly, where my parents met [and] got married. My mom actually never worked outside the home. My dad worked for the electric company in Westerly. I have a sister who is four years my senior. We lived in Westerly my entire childhood. My parents ended up leaving there when my dad retired.

S: Had your dad's parents immigrated from Italy?

R: Yes, but then, as I said, they went back. His dad became very ill when he was a child and he died, I think it was, right after they returned to Italy. Then he stayed with his mom in Italy and she never returned to the United States, but he did and one of his brothers did. They came over in the 1920s.

S: Where were other family members or where they on their own?

R: There was a sister of my father's mother that lived in Westerly, so he had some family here.

S: Growing up, at what point did you make a decision about being interested in medicine? Was that a decision that was conscious?

R: Yeah, I think it was actually very conscious and it came very early in my life. I remember it was probably in the eighth or ninth grade. Now, if you ask me why, I can't remember. Because, if you recall what was going on in the country then, it was right around the early part of the "Space Age," everybody was going into engineering and things like that, but I became interested in medicine. No one in my family has a medical background. I was just committed to that from then on.

I just never doubted that that's where I was heading.

S: It's not even something you would trace to say an influential figure in your life?

R: Well, eventually there was, yes, but at the early part, I would say no. I guess if I'm completely honest with myself. As I said, I grew up in a small town, and a small town in New England can be extraordinarily provincial. Obviously, as I said, I came from a background where my dad was really [a] first-generation [immigrant], so the physicians in a small town are very important people. I think probably some of that was the early influence. As I got into college, there was a physician in Jacksonville who became a very powerful influence in my life. [He] probably solidified my interest in medicine, but as I said, I had made the decision long before I met him.

S: Obviously, this is right around high school. What was your high school or school experience like?

R: It was terrific. I remember high school as being a wonderful experience. It was a small town. My graduating class was probably 120 [people]. I recall having very good teachers. It was the early days of, I don't even think they were called Advanced Placement courses then, but certainly remember taking college-level courses in high school and going to the University of Rhode Island on weekends and taking classes. I had a chemistry teacher in high school who was a powerful influence, as I recall. [She] would always be very encouraging to me. I had good friends in high school. Certainly, Westerly is not racially diverse. At that time, [it] had very few African Americans, but socially it was relatively diverse, from old New England families to first- and second-generation families and a lot of blue-collar workers. So, my friends covered a gamut from people who, nowadays I guess you don't use the word, but then, were the hoods of the community to other people who were the scions of society. I went to public school throughout my career and it was just a very good experience.

S: You went to [Johns] Hopkins [University] as an undergraduate, what made you choose Hopkins over anything close by?

R: It's interesting, because I did look at several of the New England Ivies [Ivy League universities], and I chose Hopkins because, even though the undergraduate is not the medical school, it still had a superb reputation if you were interested in going into medicine. So, it was some of that and I think it was also the idea of wanting to get away. If you grow up in New England, everything is very close geographically and yet very far away. It's amazing when you think about distances, there's so much separation. I remember when I decided to go to Hopkins, everyone, including myself, thought I was going to the Deep South. So, that was interesting in its own right. Hopkins was, I think, as is probably true

or at least was true back then, turned out to be a wonderful experience for me, but initially was a very rude awakening, as I went from being top of the heap to just being initially one of the bright kids surrounded by lots of other bright kids. It took a little while to get adjusted, but I had a very good experience at Hopkins.

S: I guess at the time was it still, as undergraduate institutional, male?

R: It was, although some of the upper-level courses did have women who were in graduate school. So, as an undergraduate, as you started to take some of the upper-level courses, there would be women in the classes, but the main campus was all men.

S: It's funny, I grew up in Philadelphia and I don't really think about Baltimore as being in the South, but I guess it was segregated. Was it still [segregated] when you arrived there?

R: I can't remember that. I remember it being different, but I can't remember [if it was segregated]. That's a very good question. I honestly don't remember confronting that. If you know Hopkins, Hopkins' undergraduate campus is in a very lovely area of Baltimore. I like to walk and so I used to walk down into the central part of the city. That was long before the central part of the city was any great shakes. I just don't remember a sense of segregation.

S: It probably wasn't an issue, at least for other people on the campus.

R: I'm trying to remember Hopkins itself, how diverse was it? I don't remember it being very diverse.

S: Well, probably even if it had desegregated at some point, it would take a while to have much of an effect on the population. Your major was pre-med, what sort of classes were you taking?

R: I started out with the idea that I wanted to go into biophysics and head toward research, so the first couple of years, I took the basic requirements for medical school, but then started to take the other requirements for biophysics majors. I'm trying to remember, I had an advisor and I can't remember his name. I remember our having a conversation one day. After that conversation, I decided, well, yes, I'm interested in research, but I really don't want to spend my life in a lab; I really do want to be a physician. After that, I decided, if that's the case, then what I want to be is the best person I can be. So I decided, okay, I'll take the minimum requirements to get into medical school and everything else I took were humanities courses. I was taking art and philosophy and those kinds of things. I think that was very good. It made my first year of medical school more difficult than I wanted it to be. Again, all of a sudden, you show up thinking

that you're pretty smart and everybody's already taken biochemistry and I certainly hadn't taken biochemistry. I had done pretty well in organic chemistry and thought I was safe, but that was another rude awakening.

S: A whole new ball-game. Did they have the Institute for the History of Medicine at Hopkins then?

R: I don't remember that.

S: Actually, on Saturday, I was at a conference on teaching history of medicine at medical schools at Hopkins. Anyway, you were basically pursuing more of a humanities degree.

R: Then what happened, and this goes back to the physician who was influential in my life. He had become a physician during World War II, and at that time it was an accelerated program that was made available for lots of individuals to have three years of college and then go away to medical school. Hopkins had its own program called the two-five program, where you spent two years in undergraduate school and five years in medical school. Obviously, the first year was sort of transition. I applied to the two-five program and did not get in. After talking with him about that, he said, there are some very good schools in the country who still offer admission after three years of college. So, I looked into that. NYU [New York University] was one of them, and I applied and I got in. It was good in a lot of ways; it was probably bad in others, because, as I said, I had really committed myself to becoming a better person with some of the humanities courses and that got cut a year short. It was good because I don't come from a wealthy family and it certainly saved real money. It was bad from the standpoint that, having that extra year of being a senior in college, I never experienced.

S: How were you funding your college [education]?

R: Well, I was fortunate to get a significant amount of scholarship support. The rest my dad funded. My parents were real believers in education, so while I worked during the summer time, they never expected me to work during college, so I didn't. When I went to medical school, again, I was fortunate to get some scholarship support. I guess by the time I was a third-year student I was doing some work. I was fortunate to get out of undergraduate and graduate school [with little debt]. I had some loans, but relatively minimal by 1960 standards.

S: I'm just interested in your saying [that you were] taking humanities courses to become a better person, what led you to think in those terms?

R: Being a physician, especially if you're going to practice, is all about human

relationships. Being able to understand how individuals think as individuals, but, to some degree, how societies think as societies. The ties that bind us together [and] the things that have separated us over the years, I think, are very important parts of being a good individual, a good member of society, and I think it's very helpful as a physician to have that perspective, that non-scientific perspective. There's a whole lot more gray out there than we can start to believe exists if [you stop thinking] everything is data-driven.

S: I certainly agree with you. I'm curious in part because I'm just thinking about medical- school curriculum, how to make physicians perhaps more humane, but also I'm involved in creating the Narrative Medicine Program at Florida. One of the people who is going to be speaking is an English professor emeritus, who is going to talk about how to read literature in order to become a better person. From his experience, all his colleagues read lots of literature, but aren't necessarily humane or good people. From your perspective, how did that inform your practice, or how did that set you up going into medical school? Was there some way that you were aware of it really making a difference, even say, in relation to your fellow medical students?

R: That's sort of asking, how do you define yourself? What has made you what you are, and are you somehow different? I don't know how to answer that.

S: It's hard, you can't see the experiment to see what you would be like otherwise. Let me just ask, maybe in another way, you said that when you started medical school, you felt like you were at a disadvantage in your science background...

R: Actually, no. Let me clarify that.

S: Okay.

R: No, I thought that the background I had gotten in my high school was very, very good, and it turned out to be the case. It's just that when I showed up at Hopkins and all of the sudden I'm surrounded by...

S: ...other smart kids.

R: Yeah, very bright kids. My high school, as I said, had 120 kids in the graduating class. Probably no more than 30 to 40 percent went to college, the rest were going into some trade. There's nothing wrong with that, but I'm trying to give you the idea of the competition. So, I graduated number-one in my high school class. I was a pretty smart kid, but that's the competition. Now, the other kids that went to college were pretty bright. They went to the Ivies and the "seven sisters" [term for a group of elite women's colleges], and good, good, good schools, but you show up at Hopkins' classes [with] 350 [students]. The vast

- majority of that class were made up of kids like me.
- S: Who were first in their class in high school.
- R: Right, and many of them had gone to very, very private-prep schools. Public education, back then, I think was very good. I think it was better than it may be now, except at some of the real high-end public magnet kind of schools. There was a difference. There just was a difference. I thought I was a pretty good writer, but there were better writers. [laughing] So, you could just go down the line. What I found very quickly, though, is what had been successful for me in high school worked at Hopkins, too. I did quite well, but that first, whatever it was, five or six weeks where you're getting settled in, [was difficult for me]. Even in the first year, I took some strange courses that didn't look like any science or math that I had ever seen before.
- S: So, what about medical school then?
- R: Medical school, I think, was different in that, again, I had done well at Hopkins, all across the board, but certainly in all my science courses. Biochemistry, far and away, for me, was a real challenge in medical school, because it just was much different than I expected it to be, having had a fairly good background in organic chemistry. As I said, the vast majority of kids in my class had already had biochemistry, so they were pretty facile and I was really struggling. So, you take that coupled with just the bombardment of information that you get in the first year of medical school, in all your courses, and it was an interesting first semester.
- S: Were most of your colleagues or peers science majors, or had they also taken a lot of humanities?
- R: The vast majority of the people who were my close friends at NYU had been science majors. I've got to believe, simply because I knew some of the people but didn't know them well, that some of them had taken similar patterns to mine. [I think this because of,] to some degree, the kind of people they were, where they ended up. I don't think it's completely unusual, especially nowadays. I think more and more kids are understanding, and more schools are understanding, the importance of a broad and diverse background. Hopkins itself was extraordinarily competitive; I don't know if it still is. Compared to some of the war-stories I would hear from some of my friends who went to other schools, Hopkins was just extraordinarily competitive. Everything was marked on a curve, so you were constantly in competition with the people beside you. One of the wonderful things about going to medical school is, essentially from day one, they said, look, you got in here because you're good and you're all going to get out of here, unless you choose not to. So, you had all of these kids who had come from very competitive backgrounds, who had been

high-achievers, and they had to suddenly adjust to the idea that you didn't have to compete, you were here really to learn, just for the joy of learning. I'm not saying that we all could do that easily, but it was consistently felt that we would all graduate. It was a different environment. It was still a little cut-throat at NYC, but not compared to some of the other schools in the city where, even in medical school, some of the classes were [saying,] you're not going to be here next year.

S: So then, NYU was different in some ways. What about the curriculum [at NYU], is that fairly standard?

R: I think the curriculum back then was very standard. I don't know that as a certainty, but I think almost every school in the mid-1960s, which is when I went to school, had the same basic curriculum in the first couple years. NYU, I think, but I'm not one hundred percent sure, was relatively progressive, because they had a class in the very first year that linked first-year students to faculty. You would go on wards with them, not really to interact with patients primarily, but to take what you were learning in biochemistry and anatomy and physiology and see how it actually applied. So, almost from day one, that started to happen. More and more and more schools now do that, but back then, that was one of the good things about NYU.

S: I think of it as being progressive, the fact that they were discouraging competition and really being supportive, so it must have been, in some way, [that] they had a different vision of the medical school and the curriculum than other institutions.

R: I can only presume that that's the case.

S: Basically, then, you did two years of classroom work. Did they have you doing any research?

R: It wasn't required. You could link up with professor, and some of them offered various opportunities. I'm trying to remember, it must have been my second year, I did some research on radiation effects on tissue. To be honest, as I think back on it, it wasn't an area that I was deeply interested in, but I did want to get into lab work and see what that was like. I did a little in my second semester on campus and then NYU had a place in Sterling Forest, which is probably forty miles outside the city, a very lovely place. They had, maybe, opportunities for six or seven students in the summer. Some of the faculty would go and then they would have visiting professors coming on a weekly basis. As I think back on it now, the names of people that came were incredible. You would work with them in the lab, but you would eat with them [too].

S: Like who?

R: I remember Hillary Kaprowski, who is a very, very famous scientist in the field of, well, early virology and then certainly the early work on genetics. There was another man whose name, I think, is Kaplan, who was at Stanford and he was a radiation oncologist, but he was the chair at Stanford; he came. The whole gist of the summer was, you did a project and you had to write it up and present it at the end, so it was a very good experience. In college, I had done a project with one of my organic professors. Hopkins had something that I was very happy about. In your second semester of organic [chemistry], if you had done well, you were offered the opportunity of not having to go to standard organic lab, but to work with one of the professors. So, I got a chance to do that. So, those were really my two main opportunities to spend time in a lab learning lab techniques. One, the organic had nothing to do with animals, [and] the radiation work did have some animals involved. I thoroughly enjoyed those, but, as I got further on in school, I really was convinced that I wanted to be directly involved in patient-care. That was an important part to how I saw myself. Interestingly, the man who I met when I was in high school, that I said was a real mentor, was a pathologist. He was a real Renaissance man. So, for a long, long time I wanted to be a pathologist. What convinced me that I shouldn't be a pathologist was not just this idea that I wanted to be directly involved with patients. I learned when I went to college that I was color-blind, and, while there are ways around it, it's tough to be a pathologist and be color-blind. So, I started to look at other fields. NYU had a terrific neuro-anatomy and, actually, it was neuro-science course. It was one of the early, integrated kind-of neuro-science courses where neuro-anatomy [and] neuro-physiology all got put together. I took that my first year, and, as I went on, I decided that neurology really was something that was very fascinating. I've always enjoyed the deductive-reasoning part of medicine. Clearly, neurology is much more of a field that's dependent on that than any other part of medicine. Now, with all new imaging, it's less so. I think that's potentially a detriment to the specialty, and for that matter, to our fellow man. The classic neurologic teaching is, you don't need lab tests, you can pretty much make the diagnosis just using the hands and eyes. As we learn more and more about some of the diseases, that isn't really true, now we understand the molecular biology, and so you do need some of those [imaging], but, as far as the basic concepts of disease that affect the nervous system, that really is true. I fell in love with neurology and was happy to spend many, many years doing it.

S: What about in your third year, what hospital where you in?

R: Bellevue was the main hospital associated with NYU, so that's where virtually all the work in the third year is done. I think it's still done [there]. NYU has an associated private hospital, and I recall doing some of my pediatric electives, not basic pediatrics, at the other hospital.

S: You did for your internship, though, straight medicine?

R: Yes.

S: Did you have a choice for a neurology track?

R: No, at that time, to go into neurology, you had to have at least one year of medical training. That changed for a while, although I think it's now changed back. In the late 1960s, it was still possibly to take a rotating internship where you did some medicine. It was like the glorified fourth-year of medicine. I didn't want to do that, because I knew [there] were certain things I just didn't want to do anymore. So, I took the straight-medicine internship.

S: You finished your M.D. in 1969?

R: Right.

S: And your internship was in Mayo [the Mayo Clinic].

R: Right.

S: That was from when to when?

R: It was from July of 1969 through June of 1970. I actually went to Mayo with the idea that I might do my neurology at Mayo. Mayo had a very good neurology program. Rochester, Minnesota, is a shocking change from New York City. [laughing.] The Mayo Clinic, frankly, philosophically is very different from a northeastern-university-based academic program. I'm not saying it's better or worse, it's just different. My sensibilities and my approach were just too geared to northeastern academics. Frankly, my personal interests, having been someone who got interested in the arts, were just never going to be met in Rochester, Minnesota. I was fortunate to get a residency back here at Mount Sinai. I actually did my residency here. At that point, Mount Sinai had an incredible reputation in neurology. So, that was also very good.

S: In terms of your internship, were you paid?

R: Yes, as I recall, it was at a point where interns were getting paid a reasonable amount of money. I think it was somewhere in the \$4,000 to \$5,000 a year range. I'm almost positive it was around there, maybe \$5,000 or something.

S: Which was probably not bad for the time.

- R: No, and my wife was working. My wife is a speech pathologist, so we felt fairly wealthy.
- S: When did you get married?
- R: The end of my third year of medical school.
- S: Was she in school at the time as well?
- R: She had just finished her master's and we got married, I think, a month later. So, she was able to support me. [laughing.] I'm sure, looking back at that, now that I'm a father and have a married daughter, I'm sure it had to be a real challenge for her dad. When we got married, I was in school, I had no source of income. When we got engaged, she was in school.
- S: Neither of you had a source of income.
- R: Right, and when we got married, she was clearly moving to New York, we had no place to live, she had no job, and I had another year of school, but he had faith and allowed it to happen and it fortunately worked out great.
- S: Where did you meet her then? Was that in Baltimore?
- R: Yeah, I actually met her at a mixer. I met her at a mixer at a school I had never gone to before, I had sort of assiduously avoided, and I walked in and saw her and it was one of those crazy things. I saw this girl across the room and really just got...
- S: That was it.
- R: Yeah, it was, it really was.
- S: What about for her?
- R: It took a while. [laughing.] I'm a very persistent person.
- S: She came around?
- R: Right.
- S: Let me just ask you, then, about children: How many and when where they born?
- R: We had two children, a girl who was born here at Mount Sinai on the day that I finished. So, she was born on the worst day of the year, July 1st. If you know

anything about medical education, July 1st is the day that all the new house-staff begin in all the hospitals around the country. So, my wife delivered on the day where it's chaos in any teaching hospital. Anyway, so my daughter will be thirty this year, in July. She's a lawyer and is a graduate of University of Florida Law School. My son was born five years later, so he'll be twenty-five this year. He is working here in the city for American Express. Neither of them had any interest in medicine. I neither encouraged them nor discouraged. Had they decided they wanted to go into medicine, I would have been very supportive, but both my wife and I just wanted them to be happy, good people and whatever they decided to do was fine. I think they both found good niches for themselves. Interestingly, they, on their own, both chose to go to small New England liberal-arts schools, as opposed to going to a trade school, if you will. Even though I don't remember talking that way, I'm sure I must have. I must have inculcated the idea that what you really wanted to be in life was a good person first and then you could figure out how to make money.

S: Where did they go?

R: She went to Bates [College, Maine] and he went to Bowdoin [College, Maine]. So, they both went as far away on the East Coast as they could possibly go. [laughing]

S: As far north.

R: Right. Actually, it was funny that they did that, because we're really a very close family. I'm sure to some degree our son went to a Maine school because we visited. Of course, when you visit Maine, it's quite glorious.

S: It's summer? [laughing]

R: Yeah, it's the part of the year that kids don't see when they're looking at the Maine schools that. They really did chose the schools, and they're very different personality schools, even though they're only about twenty miles away from each other. I think the personality fit was very good for each of them.

S: I'm just going to go back to your residency. This was in neurology at Mount Sinai from 1970 to 1973. Can you describe that experience?

R: That was, I would say, a very intense experience. The chair of the department at that time was a man by the name of Morris Bender, who is unfortunately no longer alive, but he is truly one of the giants of the field of neurology. [He was] a real iconoclast. If you listen to him literally, you could probably be a very bad neurologist, unfortunately, because he constantly challenged the literature, he constantly bad-mouthed the literature, and he constantly prodded us to learn

from our own experience. That's what I mean [when I say,] if you took him literally, [you wouldn't do well]. You would say, well, fine, I'm never going to read anything, I'm just going to learn. Well, you can't do that. What he was really saying is, yeah, you need to know all that stuff, but take it with a grain of salt. So, that was one of the basic, important principles that I learned from Morris Bender. The other [thing I learned] is something that was very common at Mount Sinai. Mount Sinai can be a pretty harsh environment, in the sense that lots of people are very, very challenging here. It doesn't suffer fools at all. It doesn't matter what your status is. So, Morris Bender encouraged his residents to be just as challenging to the faculty as the faculty would be to the residents. It was a very different kind of environment.

[End side A1]

S: So, challenging environment....

R: Right, and then the other is that, at that point in time, I think Mount Sinai may have had the largest neurology service in the country, certainly in New York. It was just a huge service, so he had lots of patients to take care of, with lots of different diseases. It was a very good environment. If you were interested in clinical neurology, there were better places in the country, certainly even in the city, if you were interested in a research track. Morris Bender, himself, did tremendous clinic research, but as far as bench research, Mount Sinai had a handful of decent researchers at that level, but a tremendous number of excellent clinicians and incredible clinical research that was done in a number of sub-areas, specialty areas of neurology.

S: You were talking earlier about why you chose neurology, and the way you characterized it really showed an interest and you really had to deal with the patient, you really had to deal with the patient, you had to observe the patient, and really focus on that individual as opposed to being able to order tests and wait for the results.

R: Right.

S: Could you just go a little bit further in talking about the practice?

R: Yeah, my approach to a patient was always to walk into the room, and literally, I would begin by saying, tell me your story; don't tell me what other doctors have told you. You can fit that in, but what I really want you to do is just sort of tell me your story. By doing that, I think to some degree, it made people a bit more comfortable. It made them understand that I was actually interested, that I didn't want to just sit there and fire questions at them. The minute you start firing questions at people, then you're directing their history. You're really creating the

history that you think [happened], because, as the person is talking to you, you of course are processing the information and you are going in a direction. If you immediately start to ask questions, what I found in my career is that I could mislead myself. So, I really held back. I got to the point where I could get to where I needed to go. I mean, you can't sit there forever. You do have to be efficient, but I could sit back for maybe five minutes, maybe ten minutes sometimes, with a real complex story, and not intervene. It would open a door that no one else had even seen before. The important thing when you are doing secondary referral work, in other words, if I'm not the primary neurologist, I'm the person the patient sees because they've seen other neurologists and they still don't have the answer. It's important to be able to see things that weren't there, either weren't there before, or just were there but were never recognized. So, I found that that was a way of doing things. Then, secondarily, it's very important that you're able to do a very good examination. Because of my experience at Mount Sinai, where I had to take care of hundreds and hundreds of people, I was very comfortable and very facile with that. So, you put those two things together and it really did lay the groundwork for being able to be a very good diagnostician. Although this will jump ahead, when I was teaching, I would try to encourage the students and the residents to take exactly the same approach, one, because I knew it worked, and two, because as years went on, there was much more technology available and it was very easy to fall into the trap of saying, I did this test, it shows this problem. Not invariably, but not uncommonly, the test would in fact show something that had nothing to do with what the patient was complaining about. So, teaching that to young physicians, I think, is an important lesson. Just because the technology is available doesn't mean it's always right.

S: Or even irrelevant perhaps.

R: Sure, right. There's the other whole part of it, which is, technology is very expensive. If you don't even have a clue as to where...one of the things that you learn in neurology early on is to localize the lesion. What part of the nervous system is not working? If you can't do that, then you can say, well, I'll just order these tests. Well, that's extraordinarily cost-inefficient and, not uncommonly, that still happens today. Taking nothing away from internists and other general medical physicians who don't have a strong neurologic background, it's very easy to fall into the trap of saying, well, I think there's something going on, so I'll give an MRI of the head or the MRI of the spine. The problem may be in the peripheral nervous system. Well, you can get MRIs of the head and spine from here until whenever and you'll never diagnose the problem. It was that kind of dependence on your brain to be able to make the diagnosis that I still find fascinating about neurology. It's a detective game, really, that's what it is. I always found it intellectually challenging.

- S: Well, I'm going to go back into an area that interests me and it's going back into the humanities and also incorporating that idea of narrative medicine in taking patient histories, that if you're familiar with narrative structure and literature, then you can become more adept at patient histories. In your arts courses, did you do much literature, much reading?
- R: I did some. I didn't do as much as I would have, had I stayed another year. I think I only took one upper-level English course, everything else I took was sort of the basic European, basic English, basic American literature. I've always enjoyed reading. As a kid, I worked in the library, so I had access to the stacks, and I've read all my life, and I still do. I love English literature. Probably nothing later than maybe early- to mid-twentieth century, I'm not a big [fan]. I like the nineteenth century much better.
- S: Do you read much detective literature?
- R: Not as an adult; I did as a child and as a teenager. Of course, I mean talking about deduction and everything, I loved Sherlock Holmes and read all of those over and over again. I liked some of the English mysteries, but I hardly ever read a mystery now.
- S: I want to go back to talking about imaging, but let's move a little forward in time before we get to that. You finished your residency in 1973. What was your professional position after that?
- R: That was an interesting time in our lives because, as I said, our daughter was born on the day I finished, or actually the day after. We had spent probably the six months before that, we being my wife and I, debating what we were going to do. I had wanted to stay in the New York area and go into academics right then. It was obvious that, raising a family, that was not going to be something that was going to work out. At that point in the country, there was a program called the Barry Program. It was a program that was an alternative to being in the Armed Services and it was tied to NIH [National Institute of Health]. There was a terrific program that dealt with neuro-muscular disease, it was [headed by] a man by the name of King Engel at NIH. He's on the West Coast now. I tried to get into that desperately, because my interest is neuro-muscular disease and I spent a good deal of my last year of neurology training doing neuro-muscular stuff. I went to Washington, I met with people trying to get into the program, [but] it was over-subscribed and I couldn't get in. So, that bothered me. I thought for a while of going to take a fellowship. I went back to Mayo, because Mayo had a very good neuro-muscular program. I went back to Hopkins and actually was offered positions at both places. I think, probably going back to my background of not coming from money, of being concerned, of facing the reality of being a parent and the responsibilities that go along with that; I said, I'm just

going to go into practice. So, we left the city and moved to Jacksonville and I went into practice for three or four years. It was obvious to me almost from the outset that that was a huge mistake. I do like to work with patients, but being in practice without an academic tie is very different from being a member of the clinical faculty of a school. So, I did that for a couple of years and my wife, who was very supportive, said, this is crazy, you really don't want to do this. I thought about going back into training to buff up my credentials, because it's tough to go back once you're out. Then, fortunately what happened was, what was then University Hospital in Jacksonville decided it was going to start a neurology department. University Hospital was tied to the University of Florida through a construct called JHEP. Long story short, I was asked to start that department. So, I didn't have to leave Jacksonville and I didn't really have to uproot things. No, it wasn't really going back into high-end academics, but it allowed me to open a door and I was very grateful for that.

S: How did you end up in Jacksonville?

R: We ended up in Jacksonville because I had grown up very close to the water, the ocean, my wife had spent lots of time, she grew up in the Washington [D.C.] area, but, in the summertime, her family would go to the Jersey shore, so we both loved the ocean. We started looking, frankly, very late in the year. If you go back to what I said, I had spent a good part of my last year in training working on the idea I was going to stay in academics, so it was about February or March when it hit me, I'm not staying in academics, I've got to find a job. Come July, my wife will not be able to work, because our daughter is going to be born. Back then, there was day-care, but certainly the thought would have been antithetical to my thinking that my wife would have given birth to a child and then, a week later or two weeks later or a month later, go back to work. So, it was I [who] needed a job. We started looking and I just sent letters out to any group practice I could find on the East Coast. There was a group practice in Jacksonville called the Riverside Clinic. They wrote back to me and said they really weren't recruiting, but they used two neurologists and they knew they were looking for a third person, and that's how it happened. Jacksonville was a real challenge for us, in the sense [of,] going from New York City to Jacksonville was a big, big change. Jacksonville in the early 1970s was different from what Jacksonville is today. Jacksonville today still has some things that need to improve. It was the Deep South. If you remember when I thought I was going to the Deep South when I went to Baltimore, well, Jacksonville is not Florida, it is south Georgia. It turned out to be a very good place for us. It was a wonderful place to raise our family. We made good friends. As it turns out, I convinced one of my friends that I went to medical school with to move to Jacksonville and it turned out to be a great decision for me. He's still there, so maybe to some degree [it was] better for him than for me. I had no regrets about having done what I did, but that's how we got there.

S: You practiced for four years. You were also consulting for the Vocational Rehab Services?

R: Vocational Rehab, I think, still exists, it may be called by a different name, but because of the nature of my specialty, neurology, neuro-muscular disease, lots of patients who applied to that program had various disabilities related to that. The whole purpose there is to decide if these people [can be rehabilitated]. [I would determine] what can they do [and] what can't they do. That was some of the time spent.

S: I guess for a fair portion of 1973 to 1977, when you were in practice, you were associated with the University of Florida in Gainesville?

R: Right, well, through JHEP. JHEP, as I said, was a construct that started, I believe, either concurrent with the [University of Florida] College of Medicine or predated it. It was initially a consortium of Jacksonville hospitals to sponsor graduate medical education programs. The history of medicine in the state of Florida is Jacksonville, and actually the predecessor of University Hospital, I guess it was Duval County Hospital at that time, was really the first hospital in the state of Florida to offer an form of medical education. So, Jacksonville had been involved in graduate medical education before the University of Florida College of Medicine ever existed. I don't understand all the politics that went into the decision, I've heard all sorts of stories, but I don't know which ones are true about the decision to place the medical school in Gainesville as opposed to Jacksonville. There were a handful of reasonably good graduate medical education accredited programs in Jacksonville. Somewhere along the line, and I think this was directly tied to the College, it was decided that the director of JHEP would carry the title of an assistant vice-president of the Health Science Center in Gainesville. JHEP itself, rather than just being a construct of local hospitals in Jacksonville, would transition to be a construct of the Health Science Center. That all happened, I guess, in the mid- to late 1970s and early 1980s. So, as a practicing doctor in Jacksonville, as I said, University Hospital had no neurology. I was also at that time, one of the few neurologists, in Jacksonville. [I was] probably one of the few to do electromyograms, which is the study that's done to help diagnose nerve and muscle disease. There was a neurosurgeon at the University Hospital at that time who got to know me and started asking me to help him with some of his cases. So, I started to get involved that way and I remember certainly giving some lectures there, and so, even while I was in practice, I was trying to keep some tie to academia.

S: Maybe if you could be a little bit more specific about the draw of academic medicine as opposed to practicing.

R: Yeah, that's very easy. What I found in practice, even though I was with a

couple of other neurologists, so you could say you have colleagues you can exchange ideas [with], in private-practice, you are simply never challenged. I'm not saying the patients can't be challenging, the diagnosis can't be challenging, but you're never challenged as to, are you right or wrong, are you doing the best that you can do, because no one's looking over your shoulder or learning from you [and] asking questions. So, I found that, after a couple years I was, no matter how hard I tried to have this inner drive to remain compulsive, it was hard to do. In private-practice, the other thing that is true is the majority of the cases that you are seeing are relatively simple. Every once in a while, someone walks in and your level of anxiety goes up, because you know you don't know what's going on, but for the most part it's relatively basic stuff, so that makes you even more complacent. It's as if someone came in and you sort of played the tape and you'd say the words and they'd nod their heads and everybody would be happy. The other thing that I found very frightening [was,] I just stopped reading. I'm here in a profession and you're supposed to just have life-long learning...When I say, stop, I mean, I cut back on it; I just didn't pay much attention. It was destructive. I just found, for me, I'm not saying for everybody, there's some wonderful physicians who are in practice [and] have nothing to do with academics, but for me it was just an environment that didn't work. So, what pulled me back into academics are the converse of everything I just said. I had some great interchanges with medical students who would ask a question you just would never think of asking, because you look at things in a completely different way when you're ten or fifteen years into your career. All of a sudden, this kid is asking a question, which is a good question, and it makes you think. On a day-to-day basis, having experiences with residents. And then the opposite, of teaching them how to think. [This is] back to what we talked about listening to patients, not having as your first step, when you go in to do a consult, reading through the chart. If you read through the chart, you go in with a bias. This is what everyone else thinks. If everybody else knew what was going on, they wouldn't be calling you. As a sub-specialist, you have to remember that you're always being called because someone needs help, because they don't know what's going on. Just that kind of imparting either new knowledge or just imparting ideas on how to be a better physician. The other part was, because of the nature of the practice, being confronted much more with unanswered questions and having the ability, and I guess this doesn't necessarily change simply because you're in academics versus private-practice, I guess if you have the ability, but in academics, there's the expectation that you will not only ask those unanswered questions, but answer them. I like that. So, getting back to the idea of writing was another thing that was good. That's what got me back into academics.

S: You were publishing to a certain extent in that early period.

R: Very little, a couple of papers actually came out. One was the result of

something that I started here at Mount Sinai but finished up when I was in practice. That happened probably in the mid-1970s, and then, after that, it was just obvious that it wasn't going to happen. The whole reward-system in private-practice is different; you're in a small business and your partners want you to work hard and bring more money in. There's nothing wrong with that, I mean, there really isn't. That, in many ways, is one of the things that has made American medicine great, the small-business kind of approach to medical care. It just wasn't my approach to medical care. I just wasn't a good partner to my partners. We got along fine, [but] I was on a different page, so it was probably good for all of us when I [left].

S: So then, when you became chair, or when you were creating the department of neurology, you did that full-time.

R: Yes.

S: That also put you into the administrative realms.

R: Right, and to be honest, at that point I was a kid. I shouldn't have been put into that position, both from my own career, as well as probably for the good of the institution. I would have been better off, and the institution would have been better off, had there been a more senior person to mentor me, but it was too good of an opportunity from my standpoint [to turn it down]. I didn't have to uproot my family. Certainly, as you do in academics, we took a substantial decrease in compensation, but being able to do that without uprooting my family was a good thing. I spent a lot of time learning how to be an administrator. As is always the case in academics, as well as any kind of organized medical-system, there were some good people around and then there were some not-so-good people around. I'm sure I learned from both, actually. [laughing]

S: What sort of money did you have to create a department?

R: Well, some of it was based on what I could generate, and that's true in medicine even today. A lot of what pays the bills in medical schools today is the clinical practice of medicine done by faculty. Even in places like Gainesville and here, over fifty percent of the bills are probably paid from clinical-practice receipts. When I left the Jacksonville campus, when I left [it] was probably 70 percent, when I started it was probably 95 percent. So, in Jacksonville, when I started, there was no money. It was a city hospital very under-funded by the city. Although it had this tie to the health science center, there was no direct state appropriation that came to Jacksonville to support the academic programs. For that matter, there was no direct flow of money from Gainesville to Jacksonville, except for some relatively trivial dollars. I think the position of the assistant

vice-president is paid for, and then as the tide grew and programs in the College of Nursing and Pharmacy came into being, I think some more dollars started to flow, but still relatively insignificant. So, we came down to what I could convince the administrators of the hospital was in their best interest that matched with what needed to be done to grow a program in neurology.

The other influence in Jacksonville at that time was, and it's still there, was the Nemours Foundation [DuPont]. The relationship between the University of Florida and the Nemours Foundation has been checkered, let's say that. The Nemours Foundation has access to, it's not an exaggeration, untold wealth. I mean, it really does. They're primarily related to pediatric programs. Their primary presence is in Jacksonville, not in Gainesville, so we spent a good deal of time trying to build a tie to them, because one part of neurology is pediatric neurology. As a not-too-naive young administrator, I realized they had some money and that would be one way of my being able to at least cover some of the basics. So, we worked out something with them for pediatric neurology that worked for a while. It eventually all blew up and Nemours went their own way. I was gradually able to hire a couple of other people. The largest, before I got into the role of being dean on the Jacksonville campus, I guess neurology had gotten to the point of being maybe five people. So, one of the things I'm actually most proud of, although I'm sure it takes some hits after becoming dean there, I really fostered the growth of neurology. [I did this,] not because I'm a neurologist because, frankly, neurology is one of those growth areas. It's a very important area, both financially as well as academically, and we were able to bring in a good person and enabled him to build the department. I think, when I left, there were about eleven people there.

S: What were expectations of faculty?

R: On the Jacksonville campus, specifically? [Their expectations were] to be good clinicians, good teachers, and to contribute in some scholarly way, but certainly there was no expectation, nor were there any resources, for basic science research. Frankly, [there was] very little in the way of real resources for credible clinical research. So, the people who succeeded in Jacksonville early on did a lot of it on their own. Now I think that's true anywhere, even if you're in one of the meccas. Science is the kind of thing that is done to some degree on your own. Although, I think the difference is the environment. When you're in the Gainesville campus or here, compared to Jacksonville, the environment does have a different set of expectations. There is a bit more in the way of resources available to help meet those expectations, so you're not as completely dependant on the clinical dollar to pay the bills. You have colleagues around who are helping to both ask the important questions and the unanswered questions, whereas in Jacksonville, it wasn't at all uncommon for people to be the only one of, in certain areas. For them to have enough time, even if they had all the

interests and intellectual ability and background to be able to do the things anybody could do in another institution, it was harder in the early years on the Jacksonville campus. I think it's changed now, both from the standpoint of expectation, as well as the support that's available, but it still is not what it is in Gainesville. I think what's happened is, as the pressure is on all academic institutions have changed, the traditional academic centers have been forced to become more clinically productive. What happened in Jacksonville, fortunately, we were so clinically productive that we were able to grow the rest of the academic mission. Interestingly, because of that, the two campuses came close together, because we were approaching, in different directions, but we were headed to the same point.

S: I could ask then, at the beginning, what were the relations like between Gainesville and Jacksonville?

R: It was completely on an individual basis. There were some chairs in Gainesville who I believe knew the people running the programs in Jacksonville, respected them at least on some level, and – I wouldn't say necessarily early on treated them as a full part of the department, but certainly there wasn't any hostility. There were other chairs who, frankly, thought that Jacksonville just should never be part of the university, that it was a blight on the reputation, and really did have hostile feelings toward the faculty in Jacksonville. There was, for way too long, no real institutional commitment, not just financially but spiritually. So, everything was left up to what can be done at an individual level, and that never works. Yes, you can build strong ties at an individual level, but everyone approaches those discussions differently when everyone is told that the institution has the expectation that the two campuses are in fact part of a whole. That just, until very recently, was never part of the discussion. It was, Jacksonville sort of exists.

S: Certainly, if it's just on an individual basis, when an individual leaves, you don't have the same relationship at all.

R: Right.

S: Who was the chair at Gainesville in the late 1970s?

R: In neurology?

S: [Yes.]

R: Mel Grier. Mel and I actually, I think we got off to a stormy start. I can tell you the story if you want.

S: Sure.

R: As I said, I was young and naive. To become a chair on the Jacksonville campus, you did have to interview on the Gainesville campus. I guess, conceivably, the Gainesville campus could have vetoed, [but] I don't recall that actually ever happening. I went down and met Mel and met some of the other senior faculty, actually all of whom are still there. Mel just retired, as you probably know. They were all very cordial. I returned to Jacksonville and started my new life. As I said, I have a background in neuro-muscular disease. The National Muscular Dystrophy Association [MDA] ran a clinic in Jacksonville, you know, one of Jerry's [Lewis] Kids Clinics. Well, for years, it had been run by one of the faculty on the Gainesville campus. It worked reasonably well, but it did work as well as MDA wanted it, and they approached me. I'm saying, God, this is wonderful, I'm part of the National Muscular Dystrophy, it's in my field, so I said yes without talking to Mel. Well, there was money involved. So, Mel was not happy when he heard from MDA that they had switched the clinic leadership from one of the Gainesville faculty to me. It took a while to smooth that over, but we did. Frankly, after that, I think we had a very good relationship. I did my best to go to Gainesville at least once a month, go to grand rounds, be part of the program. Mel was supportive in the sense [that,] when I had a problem I could call him, I could talk to him, and he would even help fight the battle in some cases. Then, as time went on, Mel was instrumental about getting me promoted and encouraging me. I think we had a good relationship. Could it have been better? Yeah, because I would have loved to have set up a rotation of his residents onto our campus. I think it frankly would have been good for the residents. In fact, eventually I had a handful of residents who did come and take a liking to this whole thing, because I had a background that they didn't have. I think the other thing is, we did a very good job with the medical students. When the medical students came over, they always had a very, very good medical experience. From my perspective, it was about as good a relationship that had existed between Gainesville and Jacksonville chairs as any department. I think the relationship is still good now. Ed Vallenstien is the chair and the man I brought in, Allen Berger, I think came along fine.

S: What sort of student contact did you have, if you could expand on that?

R: Bob Watson became the senior associate dean for education when Allen Neims was [Dean].

S: [In the] early 1990s

R: Right, and I believe it was then that the medical-student rotations really became part of the core curriculum. Up until then medical students could take electives in Jacksonville, which, for the most part, the third-year course clerkships were not

taking it in Jacksonville. Bob was instrumental in changing that, to some degree, because he's also a neurologist and he and I had known each other for years. I think he started to realize the importance and the complementarity that Jacksonville could bring to the educational program. He started the rotations on a regular basis. We would get two students at a time in neurology. I think in total there probably were maybe thirty students at a time, but 20 to 25 percent of the class would come. Third-year clerkships are like all clerkships, they are apprenticeships. The students work hand-in-hand with the faculty and the residents and interview and examine patients. It was a daily contact between me and the students. At that time, I was intimately involved in running the clinical operation in neurology.

S: So, then, prior to the early 1990s, you didn't have a lot of student contact.

R: No, the teaching I did was all at a resident level, as I said, with maybe the rare exception. Well, as I think back, maybe it wasn't that rare. I remember having a pretty good stream of fourth-year students come for electives. That was probably in the mid-1980s. Somehow or another the word got out...

[End side A2]

S: ...a chance to get out of Gainesville.

R: Right, and to be closer to the beach. I actually do remember having a reasonable number of fourth-year elective students early on, and then much more consistently. The majority of the training was to house-staff.

S: Since we're still in the early period, I'm going to just ask you about your clinical research and your publications, starting up again in the late 1970s.

R: In the late 1970s, I think, I was really just getting back into dabbling. It was getting confronted by these questions that came up and trying to answer them from a clinical standpoint, clinical questions. I haven't gone back and looked, but my recollection is the papers I wrote covered a gamut that related to epilepsy as well as to stroke[s]. [They] were all based on the day-to-day experience, seeing things that I knew hadn't been addressed in the literature, and then going back and learning from your own experience. So, taking all that information, collating it, and doing retrospective analysis, that's what I did early on. Somewhere in the course of that, I started to spend more time directly in my sub-specialty area, muscular. Early on, the other thing that was happening was I was either the only adult neurologist or one of two adult neurologists. So, I was spending lots of time just being a general neurologist. It wasn't until later that I was able to spend most of my time being primarily a neuro-muscular neurologist. So, later on, more of my papers were linked to neuro-muscular disease. It was

an interesting period, and I can't remember exactly when it happened, where my interest in music got linked to my interest in neurology. As it turns out, there's more written now, but back then, there was not a whole lot known about how the brain actually processes music. Music has been part of my life forever. Even though I'm not a behavioral neurologist, going back to my friend on the Gainesville campus, Ken Heilman, a giant in behavioral neurology; I would talk to him and Ken's a very bright man, so he knew the basic literature that had been written on music perception in the brain, but didn't know a whole lot more. I started reading about it and realized there wasn't a whole lot. There was a gadget that was developed, back in the early 1980s, that was the poor man's PET scan. It was a computer assisted EEG (electrono encephalogram) Using that, you could measure changes in brain electrical activity and map it so that you could see how various parts of the brain were either being activated or deactivated, so it was sort of a poor man's PET scan. We acquired one of those on the Jacksonville campus and the main person who was using it was using it for other purposes, but it hit me that it was a reasonable tool. So, I started to work with it because of my background in music. I had a number of friends that were professional musicians and I started to work with them and did a number of studies on professional musicians and people with no musical training. It was great fun. It was really just one of those areas that I liked because it really did put things together. Interestingly, we found things that now have been verified using PET scan and functional MRI. So, I was very happy with that work.

S: What sort of things [did you find]?

R: Music is very complex, because it has both harmony and chord structure, but it also has a time element and a rhythm element. There are things that have been written suggesting that different parts of the brain are probably related to those. I think the common lay impression is that music and artistic things are more right hemisphere [of the brain]. Well, as it turns out, music in the naive is more right hemisphere. As you go through training, the left tends to play more and more of a role, assuming the person is right-hand dominant. As you go even further and really become accomplished, it becomes bi-hemisphere. We were able to show that progression.

S: Would it be different in terms of composing versus playing?

R: Yes, and there are differences between listening, whether playing or vocalizing, and then composing. Although there isn't as much of a difference between composing and playing as there is between listening and doing something. Listening is active, if you are trained, listening is active, not a passive thing. So, that was my incursion into behavioral neurology. It was fun, but my real time was spent more and more on the patients in the muscular dystrophy clinic and doing the EMGs, and so, as time went on, more of the work I did related to those

areas. I got involved in some clinical trial work looking at amyotrophic lateral sclerosis, Lou Gehrig's disease, and some attempts at new drug development. Unfortunately, nothing has really panned out very [well] for that kind of disease. There's one drug that made a little difference. Then, what happened is, I got much more involved in administration. That sort of took me out of the day-to-day practice of medicine. For the last almost ten years at Florida, the only thing I did from a research standpoint related to my interest in EMG, but I got involved with one of our neurosurgeons who does a specific kind of surgery for people torticollis. Torticollis is people with wry neck; people who walk around with their head twisted to one side. It's a form of focal dystonia. Interestingly, there was not a whole lot written about the electrophysiology of torticollis. We got involved in that, so the little time I had to anything other than administration [was spent] working on papers that relate to that.

S: Let me ask you about your background in music.

R: I had played an instrument since I was, I guess, in the fourth grade. I played trumpet most of my life. If you're a trumpet player, when you get into high school, you start playing all sorts of other wind instruments or brass instruments. [You play an instrument] depending on what the need of the institution was, but for the most part, I played trumpet and was reasonably accomplished, which you'll find if you spend time talking to doctors. Lots of us have music in our life. Many of my friends in high school ended up going to music schools and conservatories, and I debated that. I'm sure my parents were going crazy, but I guess what must have happened, if I give myself credit, is that I realized I was good, but I wasn't great. So, I didn't go to music school. During college, I didn't play in college, although in the summertimes in college I did play, and made money playing weddings and things like that. I went to medical school; I stopped playing, and I really didn't pick up my horn again until it was probably the mid-1980s. It was fifteen or twenty years. My wife got me back into it.

I was going through, I would [not] say mid-life crisis, but I was going through a tough time in my career. She thought it might be something to get me involved again. She actually bought me a trumpet, because my old horn had not been touched in so long that it essentially locked up. To get it refurbished would have been outrageously expensive, so she just bought me a relatively inexpensive horn. I started taking lessons from the principal trumpet player in the Jacksonville Symphony, that's how I developed this tie to the professional musicians. I took lessons for a few years and then I [joined] a group called the First Coast Wind Ensemble [that was] formed. [We were] a terrific group, for the most part made up of high school and college music teachers and a few people like me. I played with them until we left. It was a wind ensemble and plays all the classical wind ensemble literature from the seventeenth century to the twenty-first century. I just loved it, because it was a superb group. We would

get together and we would play three or four concerts a year. We would get together for about five weeks before each concert, but it was the kind of group where you could sit down and everybody would sight-read really well and would put a very credible concert together. We made a couple of CDs. There was a national convention, actually, in Gainesville, maybe five years ago, we played there. I was fortunate to be the president of the group, so that was nice. Then, the other group I played in was a brass quintet, which – brass quintet playing is very different from a wind ensemble group. It's a chamber group, so you're either soloing or you're in a very tight ensemble, and that was a great challenge, but also great fun. One thing that's happened since I've moved back here is, I'm no longer playing. I've given up my music again, because this job is pretty challenging in itself. The nice thing about being back here, even though I love the Jacksonville Symphony, I think for the town we have a very high-quality orchestra back in Jacksonville, but it's wonderful to be here and be able to...

S: attend concerts...

R: Yeah, but I would really like to figure out some way of getting back into playing.

S: It struck me that a lot of music involves mathematical patterns.

R: Absolutely, there's a huge tie between mathematics and music, and there are huge ties between the areas of the brain involved. Of course, a lot of math is very abstract. I hadn't really looked at the literature. I don't even know if the literature exists on what happens in the brains of really high-level mathematicians. My bet is that it's very similar to what happens in music.

S: In both hemispheres, you mean?

R: Right.

S: Are there any other activities that really involve both hemispheres as much?

R: There are lots, but not necessarily at the same time. Most of the motor-functions that we carry out, as we learn more and more about the brain, even though one part of the brain has been suppressed, because we are so dominant, there really is bilaterality in a lot of our functions. A person who could give you much better input than I just gave you is Ken Halman. I'm sure [he could] go on about that into some length.

S: I think I'm going to stop.

[End of this interview session]