

**John S. Najarian, M.D.**  
Narrator

**Dominique A. Tobbell, Ph.D.**  
Interviewer

**ACADEMIC HEALTH CENTER  
ORAL HISTORY PROJECT**

**UNIVERSITY OF MINNESOTA**

## **ACADEMIC HEALTH CENTER ORAL HISTORY PROJECT**

In 1970, the University of Minnesota's previously autonomous College of Pharmacy and School of Dentistry were reorganized, together with the Schools of Nursing, Medicine, and Public Health, and the University Hospitals, into a centrally organized and administered Academic Health Center (AHC). The university's College of Veterinary Medicine was also closely aligned with the AHC at this time, becoming formally incorporated into the AHC in 1985.

The development of the AHC made possible the coordination and integration of the education and training of the health care professions and was part of a national trend which saw academic health centers emerge as the dominant institution in American health care in the last third of the 20<sup>th</sup> century. AHCs became not only the primary sites of health care education, but also critical sites of health sciences research and health care delivery.

The University of Minnesota's Academic Health Center Oral History Project preserves the personal stories of key individuals who were involved with the formation of the university's Academic Health Center, served in leadership roles, or have specific insights into the institution's history. By bringing together a representative group of figures in the history of the University of Minnesota's AHC, this project provides compelling documentation of recent developments in the history of American health care education, practice, and policy.

## **Biographical Sketch**

Dr. John Najarian was born and raised in Oakland, CA. After completing his bachelor's degree at the University of California-Berkeley in 1948, he attended medical school at the University of California-San Francisco. He graduated from medical school in 1952, completed his surgical internship in 1953, and then served as division surgeon in the U.S. Air Force in Albuquerque, NM. Following the completion of his military service in 1955, Dr. Najarian returned to the UCSF medical school as a surgical resident. In 1960, he pursued his growing interest in transplantation as a special research fellow in immunopathology at the University of Pittsburgh Medical School, where he worked with Frank Dixon. Dr. Najarian followed Dr. Dixon to Scripps Clinic and Research Foundation in La Jolla, CA as a senior fellow in tissue transplantation immunology. Interested in further pursuing his surgical career, Dr. Najarian returned to the UCSF medical school in 1963 as an assistant professor of surgery, director of the Surgical Research Laboratories, and chief of the Transplantation Service. Dr. Najarian then moved to the University of Minnesota-Twin Cities, where he became a professor and chairman of the Department of Surgery in 1967. He developed an internationally recognized transplant program at the University, which performed many of the early and more complicated pancreas, liver, and kidney transplants, and supported the training of many important figures in organ transplantation. As part of his transplant work, Dr. Najarian also developed Minnesota antilymphocyte globulin (ALG) to decrease chances of organ rejection. In 1993, Dr. Najarian resigned as chairman due to federal and university investigations into the sale of ALG. Dr. Najarian was ultimately exonerated of all charges and continues to serve in the Department of Surgery. In 2007, the University created an endowed chair in Dr. Najarian's name to support research in organ transplantation.

## **Interview Abstract**

Dr. John Najarian begins part one of his interview with a reflection on where he was born and raised and how he became interested in medicine. He then discusses his time in the U.S. Air Force, his interest in transplantation, the research he conducted under the mentorship of Frank Dixon and Joe Feldman, his decision to return to surgical work, his time at UCSF, and his move to the University of Minnesota. Dr. Najarian then reviews his time at the University of Minnesota, covering all of the following topics: his efforts to increase the number of surgical patients and work with surgeons in the community; relations with administrators at University Hospital; the continued training of academic surgeons; relations between different departments within the Medical School; cultural differences across the United States; the organ transplantation program at the University; ethical issues in transplantation; Robert Good's work on bone marrow transplantation; transsexual surgery at the University; the faculty practice plan and income in the Medical School; the impact of Medicare and Medicaid; the health manpower shortage and problems with manpower distribution; and efforts to recruit minority and female surgeons.

Dr. Najarian begins part two of his interview by reviewing collaborations with different schools and departments across the University and the differences between the University

of Minnesota and the University of California-San Francisco. He comments on his experiences as the College of Medical Sciences reorganized as the Academic Health Center and relations with the state legislature. Dr. Najarian then discusses the following topics: changes to the hospital's Board of Governors; space and staffing issues; the expansion of the hospital in the late 1970s and 1980s; and the sale of University Hospital to Fairview. Dr. Najarian spends a considerable portion of the interview reflecting on the development of Minnesota antilymphocyte globulin (ALG) and the legal problems he faced with the FDA and the University surrounding its sale. In the remainder of the interview, Dr. Najarian discusses the following topics: the leadership of Lyle French and Neal Vanselow; the impact of the National Organ Transplant Act of 1984; transplants conducted in pediatric patients and Jamie Fisk's successful liver transplant at eleven months old; and changes in surgical technologies. He concludes his interview with reflections on the legacy of Dr. Owen Wangenstein and other figures important to the history of the AHC.

**Interview with Doctor John S. Najarian**

**Interviewed by Dominique Tobbell, Oral Historian**

**Interviewed for the Academic Health Center, University of Minnesota  
Oral History Project**

**Interviewed in Doctor Najarian's Office  
Phillips-Wangensteen Building, University of Minnesota Campus**

**Interviewed on September 27, 2011**

John Najarian - JN  
Dominique Tobbell - DT

DT: I'm Dominique Tobbell. I'm here with Doctor John Najarian. It is September 27, 2011. We're in Doctor Najarian's office in the Phillips-Wangensteen Building.

Thank you, Doctor Najarian.

To get us started, can you just tell me a little bit about your background, where you were born and raised, and your education?

JN: I was born in Oakland, California, and I was raised, primarily, in California in Oakland. I went to the University of California-Berkeley...undergraduate. Then, I went to the University of California, the San Francisco [UCSF] campus, for medical school. I graduated in 1952, and finished a surgical residency of one year, following which I went into the Air Force for two years and was a division surgeon for the 34th Air Division in Albuquerque, New Mexico, and, then, returned from the service and did five years of surgical training, including a year of research. Then, it goes on and on.

DT: [chuckles]

JN: I don't know how much you want.

DT: I'll follow up with you on some of the points you've already made.

I'm curious. What led you to a career in medicine?

JN: I suppose the main reason was that I had appendicitis when I was age twelve. I had a ruptured appendix. At that time, there were no antibiotics available for civilians. What antibiotics we had available were being used by the Armed Forces. The family practitioner that took care of me was smart enough not to do anything. If he had closed it, it would have killed me. But he smartly left it open so the purulent material, the pus, all just was able to come out. I was in the hospital for about six weeks. During that period of time, the people that I admired the most were the doctors and the nurses who took care of me. I was going to do everything I could, if I made it through this, to find out how I could become one of them. Prior to that, I had really no ambition toward medicine whatsoever. I was probably going to go into the rug business, which my father was in. It seemed like the easy thing to do...Najarian & Sons. But this gave me a definite goal to pursue.

DT: Were your family supportive of that decision?

JN: They were, yes.

DT: Your father wasn't worried that you weren't going to go into the family business then?

JN: No, he wasn't. Shortly afterwards, unfortunately, he got double pneumonia and died.

DT: Mmmm.

JN: So he didn't have much to say about that. My poor mother who had never driven a car or anything like that had to be trained in how to drive a car and had to raise three boys by herself. Also, it taught me a lesson: that had antibiotics been available, my dad would not have died when I was twelve. He would have survived it. Most people with pneumonia do survive. But it was prior to that time.

DT: What was the impact, then, of the introduction of antibiotics and some of the other major new drugs that were introduced in the 1940s?

JN: I think the impact was that, all of a sudden, we started healing infections and we could probably credit antibiotics for saving literally millions of lives...one of the more important advances made in the past century. The most important advance, of course, was the development of tissue transplantation, but that's my own bailiwick.

DT: You mentioned that it was the family physician who operated on you. That's quite different. That wouldn't happen today, so can you comment on that?

JN: At that time, unless it was a complicated operation, most family physicians did things like appendixes and hernias, really minor surgery. Some of them even did tonsillectomies and the like. Major surgery, entering the abdominal cavity or the thoracic cavity, was done by qualified surgeons, at that point. There were many qualified

surgeons to do it. But the family practitioner really took care of all the minor...sewed up the wounds, that sort of thing.

DT: My understanding is that attitudes towards general practitioners, family practitioners, doing surgery, even minor surgery, began to change in the late 1950s. There was quite a lot of acrimony between the American College of Surgery and the American Academy of General Practitioners around this issue. I think a lot of this happened in the 1950s.

JN: There was some concern about that, but for the most part, even today you know, appendiceal surgery for a ruptured appendix is handled by most family practitioners. They're now trained to do minor surgeries, hernia repairs, things of that nature. It's worked out very well. I don't think it's been a major problem.

DT: What were your responsibilities in the Air Force?

JN: I was the division surgeon for the 34th Air Division and my responsibilities were really quite minimal. I took care of airmen. I was stationed at Albuquerque, New Mexico, at the Kirtland Air Force Base. I took care of airmen in the Aircraft Control and Warning area, ACW, for the whole southwest area of New Mexico, Colorado, and to some degree part of Texas and part of Arizona. My responsibility as division surgeon was to take care of these airmen that were at those bases where I had—I can't remember what they were called—medics. These were young men and women who were, basically, trained to take care of sore throats and minor things, sew up wounds and the like, what a general practitioner would do today. Then, I would go to the various bases on a regular basis and they would save cases for me that were more complicated for me either to do or to advise them to send down to the Kirtland Air Force Base where I was in Albuquerque to have them taken care of. So, basically, I was kind of the physician for all airmen in those four states.

DT: Were you just dealing with their surgical issues or were you dealing with other more severe medical problems, too?

JN: I had to do the whole works, because I was considered by the Air Force as a medical doctor, not as a surgeon, even though, at the point when I was in the Air Force, I had had one year of straight surgical internship. So I certainly wasn't qualified to do an awful lot.

DT: If there were really serious surgeries, would you, then, call in a more senior surgeon to help you?

JN: No. If something was more demanding surgically, I would have sent down to the base. At the Air Force Base in Albuquerque, we had a regular hospital and there were two or three qualified surgeons there that would do the surgical procedures. If it was more complex than that, then they were referred into a larger base, but, for the most part, we could take care of everything at the hospital. *We*—I was a minor part of it—could take care of most everything that came down to us.

DT: After your service in the Air Force, did you say you returned to UCSF to continue your residency?

JN: That's correct...in surgery.

DT: What led you to decide to focus on transplantation?

JN: While I was in the Air Force in 1954, a very important thing happened and that was that there was a transplantation of a kidney between identical twins [Richard and Ronald Herrick] in Boston and it was successful. Prior to that time, I had my eyes set on becoming a cardiac surgeon and doing cardiac surgery. I was very interested in cardiac surgery at that point, but, all of a sudden, several things happened besides the fact that the transplant was done.

What had happened was that most of the problems associated with things that I was interested in, namely open heart surgery, were being solved by a pump oxygenator, which was developed here at the University of Minnesota, actually. So, all of a sudden, defects in the heart were being closed by thoracic surgeons, cardiac surgeons, and what I saw there was that in 1954, the only thing that was going to happen in cardiac surgery was that newer devices would be developed, newer pumps would be developed, newer valves would be developed, and it was becoming very boring and mechanical.

Whereas, with the first transplant...what an opportunity. I mean, to take somebody who is going to die simply because his organ doesn't function, and you take it out or leave it in, and put in another one and keep him alive. Well, that's fantastic. So I made a rapid turn in my goals and began to study immunology, learning more and more about how we can do successful transplants, not only between identical twins but, eventually, of course, between other siblings, and, then eventually, between other individuals and, then eventually, between people who've died and people who are living but need an organ. So, there was a very steep turn in my activity and my interest at that point.

DT: You mentioned that the first kidney transplant, the successful one at least, took place in Boston. How many places were actually experimenting with transplantation, would you say?

JN: Very darn few. It was being studied in laboratories. People were working on it. There were two hospitals in France who were very actively engaged in trying to do transplants. Peter Bent Brigham had tried to do transplants. David Hume, who is since deceased, did a transplant of kidneys into the thigh of an individual who needed a transplant, who was in renal failure. Ultimately, I think he did about six or seven. One of those patients went on for six months, one who had been given steroids, cortisone. So that was intriguing. But, the fact is that the graft eventually failed. So, then, the whole question of transplantation was now something that everybody was kind of looking at. How can we get there? How can we break this immunological barrier? We can transplant identical twins and, then, from there, maybe we can do twins that are fraternal



and from that other family members and, then, extend it on to those who were not related and, eventually, to deceased donors. That was the progression of transplantation. But it was going on very actively in France and England and in the United States. Those were the three and a little bit in Germany.

DT: You mentioned the immunological barriers to transplantation. Do you recall when it was that researchers became aware of the histocompatibility issues? Was it in the 1950s or had they known about it for a little while before that?

JN: About incompatibility? Oh, yes. All these people had been working with mice and rats and guinea pigs and the like, as I did. This is based on a lot of experimental work that went way back. Actually, the first time that we recognized that it was going to require something more, because they couldn't transplant between individuals, was about 1920. Then, it took from 1920 till the Second World War...

In England, the gentleman Sir Peter Medawar, Nobel Laureate, was asked by the British government to look at the problem of the fact that England was being bombed by Germany with bombs that were causing fires and people were getting burned and there just wasn't enough skin to cover the individuals that were being burned. Could you figure out some way that we can put skin on individuals, not their own, but somebody else's skin, and have it stay, at least long enough so they can survive and, then, grow new skin? So they picked him. He was a zoologist, actually, by training. He looked at the problem and, eventually, came up with the finding that this an immunological response. It's a defense mechanism that allows all of us to survive in a very hostile environment and the reason we can fend off infections and bacteria and the like.

As a result of that, we have to find some way, then, to break down that barrier and it became apparent that the only way to do that was to somehow suppress that immune response that was our own defense mechanism and, then, this would allow for successful transplantation. But, of course, it would also make the individual susceptible to infections and other tumors. So we had an imbalance system going at that point.

DT: Were the patients that these early transplants were attempted on kept in isolation then to help prevent those infections?

JN: Oh, yes. Initially, the first patients that were being transplanted, we were so fearful of infection that they were placed in very, very strident situations with respect to their isolation. I remember double-door isolation. You couldn't go into the room without being dressed like you were going to the operating room, basically with a cap and a mask and a gown and whatnot, so that you couldn't possibly infect the one. So, initially, we were very, very cognizant that they were going to be susceptible individuals and that we had to take a lot of precautions.

DT: When you decided to change track and focus on transplantation, you decided to go to the University of Pittsburgh for a fellowship, is that right, in immunology?

JN: That's correct.

DT: What led you to choose Pittsburgh?

JN: Well, to tell you the truth, the best work immunologically being done in this country at that time was being done by a gentleman named Doctor Frank [J.] Dixon, whose picture is up there. It's the fourth one over from the left, a nice-looking gentleman, probably one of the smartest people that I ever knew. He, basically, was the first person to really look at the immunological question, not like we were taught in medical school as something that was part of our immune mechanism, but as something that could actually reveal the role of antigens, dissected in such a way that you could make sense out of them. So when I read some of his work, it became very apparent to me that if I was to learn immunology, probably the most effective area that I could go to would be Pittsburgh where he was.

I applied to Frank Dixon and he took me on and placed me in the hands of a gentleman named Joe [Joseph] Feldman, who was one of his staff. He and I began working together and doing a series of animal experiments with mice, guinea pigs, rabbits, et cetera, developing the method of examining the immune response and finding out how we could alter it. A whole series of papers that I wrote, which, basically, are probably the first twenty or so citations in my bibliography, were all published, most of them in very sophisticated medical journals. I think the greatest compliment I was ever paid... I was at a medical meeting and presented some of my immunological work and this very, very important immunologist in the country—not Frank Dixon, but another one—came up to me and he said, “Are you a surgeon?” I said, “Yes.” He said, “I would never have guessed it. That work is magnificent.” He was just absolutely overwhelmed that somebody who was not an internist or a scientist could do the work that we were doing together. It's primarily because Frank Dixon had made the immune response something that you could grab a hold of and alter it in ways that made a lot of sense. Prior to that, it was a mystery. When I stop and think about things that we learned in medical school about immunology, it had nothing to do with what we were doing. We were learning about, you know, getting flu shots and things like that, which was just crazy. It had no sense at all compared to what real immunology was. So, anyway, my luck was to be accepted by Frank into part of his crew. He and I got along very well. I see the kickoff of my immunological background as my work with Frank Dixon and Joe Feldman.

DT: You spent two years when you were at Pittsburgh and, then, moved to the Scripps Institute. Is that right?

JN: At that point, they had a lot of money out there at Scripps in La Jolla [California]. They recognized Frank Dixon's potential and what he was doing and accomplishing. So they used money from Scripps, which was very large at that point, to offer him a very nice boost in his salary—whatever his salary was, I have no idea—if he would come out there. He said he would come out if he could bring his whole crew, of which I was one now. They agreed to that, so he got these *beautiful* laboratories right there in La Jolla. If you've never been to La Jolla... Have you ever been there?

DT: No.

JN: The name itself means the jewel in Spanish, La Jolla. If you look out at the water there, which is bluish green, it is a jewel. We had these unbelievable laboratories. We all went out there and spent the next...it was more than a year. I think I spent at least two years or more there, two and a half, maybe, and did some of the best work that I had ever done, largely due to the fact of Frank Dixon's mentorship and Joe Feldman's mentorship.

DT: Did you notice by moving to Scripps where you've got this private research institute that there was a notable difference in the amount of research money available to you versus at the university setting?

JN: At my level, I didn't worry about money, because that was up to Joe Feldman and Frank Dixon. They were so well endowed by the money from Scripps as well as from the National Institutes of Health [NIH]. We were called fellows. As a fellow, money was not something that we knew anything about. We just spent it. We ordered twenty more guinea pigs, you know. We didn't care, because the money was taken care of. Nobody ever came and said, "You cannot do that." So when the time came and we were doing some very sophisticated things with electron-tagged atoms and the like, it was amazing. I mean, we never asked if they could afford it or not. If they thought it was a good idea, they just let us do it. It was wonderful. It couldn't have been a better environment for a fellow, which I was.

DT: This was all laboratory research?

JN: All laboratory research, yes.

DT: Did they have any clinical research facilities at Scripps?

JN: They did, but we weren't part of that.

I'll tell you one person who was part of it and that was John Wayne. One day, we were in the laboratory and, all of a sudden, we noticed all of our female technicians, who, prior to that, were fine, nothing special. They came in and they were all made up and had on very nice clothes and whatnot. [chuckles] Their hair had been done. They had been told that John Wayne was going to come and visit the lab, because he was in the clinical part of the Scripps Clinic being investigated for a problem. He had this lung mass which turned out to be a cancer and eventually killed him, from smoking. He was to visit and it was amazing what these young ladies in the laboratory did that day to receive John Wayne.

DT: [laughter]

JN: I think in a way, they were a little disappointed. I don't know how many people knew it, but he was bald...

DT: Oh!

JN: ...and he had a toupée. The day that he came down to see us, his toupée was a little disarrayed.

[chuckles]

JN: So it became very obvious that that's what he had. Despite that fact, he was still John Wayne and everything that you ever thought of in a movie star and a very imposing person. He was about six [foot] four [inches]. He played football at the University of Southern California, as a matter of fact.

DT: So you had something in common with him then, as a footballer.

JN: Oh, yes, except we hated USC.

DT: [chuckles]

You eventually returned to UCSF. You decided to leave Scripps. What led to that decision?

JN: Well, you know, Frank Dixon wanted me to stay on and continue to be a research investigator in his laboratory. When I say this, it sounds like bragging, but I was really putting out some pretty good stuff, fortunately, because we had to do it. He said, "You should stay here. You'll be on the faculty and you're going to be this and that." I said, "Frank, you're a nice guy. You and Joe Feldman are wonderful and I love you both. I spent five or six years in surgical training to become a surgeon and this isn't surgery. So I'm going to have to return home."

My chairman at that time, who was Leon Goldman, the second one from the left [referring to photograph on the wall], wanted me to come back and be on the staff. I did, since I wanted to be a surgeon and be a research investigator as part of my entire persona.

DT: It's interesting because what you were doing in immunology is quite different from the actual practice of doing surgery. The immunology, obviously, informs the theory behind transplantation and kind of the therapeutic innovations that came forth. But I'm wondering, did your training in immunology influence other aspects of your surgical practice?

JN: Not really. It was just something else that I had in my armamentarium, but it didn't have any influence on my surgical practice, which was, basically, mastectomies and fibroidectomies and gastrectomies and all that. During the course of all my mentorships, I've always tried to train my people to be surgeons first, good at what you're doing. If you can make that, then you can do the other. There's nothing worse than not being able to be a good surgeon technically while claiming you're a surgeon; if you're an excellent

research investigator, that's fine, but you should do both. You should be able to do both and keep them separate and that's what I tried to train my people to do. As a result, I'm quite proud of maybe over several hundred individuals I've had the privilege to train to become surgeons or surgical investigators.

DT: Do you think your attitude towards practice and research was unique at that time?

JN: To a degree, it was. For instance, at the University of California-San Francisco when I first was on the staff, most of the surgeons on the staff there were only interested in one thing and that was money with a capital M. So the more cases they did, the more money they made and there was no limit to the amount they could make. There were quite a few of them that had very nice homes in the Bay Area with swimming pools and the like and all the things that go along with being a very successful surgeon. Then, there were the renegades, of which I was one along with Bill [William] Silen, who was a fellow resident with me, who went on to go to Beth Israel Hospital [Boston, Massachusetts] as the chief of surgery there, and Frank Moody, who went on to the University of Alabama and was a successful surgeon there. The three of us primarily made up the three people who did research as well as technical surgery, and we weren't out looking for cases. They were coming. We were more interested in making sure that the experimental aspect of our life was still intact and very much an important part of our general profile.

DT: As I understand it from your autobiography, you established the transplantation program at UCSF.

JN: That's correct.

DT: Can you talk a little bit about that process of setting it up?

JN: Well, it was pretty easy. I was the only one that knew anything about it.

DT: [chuckles]

JN: I had done all my immunological training and I had now done all my surgical training, so now I was ready to put the two together and become a transplant surgeon.

There was one transplant that had been done on the West Coast prior to that. It was done in Los Angeles by Will [Willard] Goodwin, a urologist. Other than that, there had been none on the West Coast. Tom [Thomas E.] Starzl in Denver, Colorado, had done several transplants at Denver. So they were pretty rare.

When I came back, it was thought that I should develop a transplant program. That's what Doctor Goldman felt and that's what I wanted to do. So I started looking for individuals who would need a transplant. Of course, what you do then is you align yourself with a nephrologist, which is a medical doctor who takes care of kidneys, and, then, you can establish a program. He'll say, "Well, I've got this patient who needs a

kidney transplant.” Then, we would take that patient. Does he have any family members who could be donors? Then, tissue typing comes into it, which I’d been trained to do. Then, if he doesn’t, is it possible that we could look at other members of the family and, then, if not, could we look at a deceased donor, someone who has died? That’s how you develop a program.

DT: Obviously, the nephrologist is important, but what about the other people on the team? I imagine that the nurses had to develop certain skills both in the OR [operating room] to help with transplantation and also taking care of the transplant patients.

JN: Of course, those are two different nurses.

DT: Yes.

JN: The nurse in the operating room... I brought one nurse with me when I came here and that was a young lady by the name of Justine Wilmert, who was a scrub nurse that I knew well. I really appreciated her ability in the operating room. So when I decided to come back here, I wanted to bring back somebody who understood what the complexity of doing a transplant in the operating room would be, so she was the one. When I came back here to take this job, that’s the only person at the University of Minnesota I brought with me. She helped me get started here. Then, eventually, I lost her at the University of Minnesota, although she’s still alive.

What happened at the University of Minnesota was that we were doing very well with kidney transplants and had one of the best and most successful programs, I think, in the country at the time, but then also needed to add other areas of transplantation involving pancreas transplants and liver transplants. The young lady [Jamie Fiske] on the cover of my book was one of those who benefited from a liver transplant.

Anyway, regarding the key role of nurses, I was at a meeting in Boston soon after moving to Minnesota; a young lady was there who I ran into during coffee break. She came up and said, “I’m delighted to meet you, et cetera, et cetera, et cetera. I’m from Texas.” I said, “What part of transplanting are you involved with?” She said, “Pancreas transplants. Of course, we haven’t done one, but I’m a pancreas transplant coordinator.” I thought, my God. You know we should really get into pancreas... So, anyway, one thing led to another and, eventually, I made a classic error and I hired her to start a pancreas transplant program and she would be the one that would take care of the logistics of it. My Justine Wilmert, who was in charge – her nose went way out of shape.

DT: [chuckles]

JN: *I am* the transplant coordinator, she said. Anyway, that led to her leaving, not that I pushed her out but she left in a huff. I’m not really sure whether that was a mistake or not. She was getting to the point where she was very possessive of her position, which is okay, but she had to recognize that we couldn’t just do kidneys, that for livers and pancreases, other people would have to do these things who had special interests and

special skills in those areas. And that was hard for her to accept. Anyway, she left. She went down to Arizona, I imagine doing what she did when we were in San Francisco together, being a scrub nurse and, to the best of my knowledge, may still be doing it. I don't know. She's still alive. The only reason I know that is because a gal that I trained here, who got married and left the area, keeps corresponding with her, apparently. She tells me at least once a year that Justine is still alive in Arizona. Good for her. Not a word since.

DT: I guess it points up though, as you say, for each organ there's specialized knowledge and a skill set that you need.

JN: Right, absolutely right. Everybody's got their little fiefdom.

DT: Was it typical and is it still typical that the transplant coordinator is a nurse?

JN: Yes, it was at that time. Now, we see some male nurses who do the work as well. At that time, it was mostly classic female operating room nurses.

DT: Was there any particular reason why nurses were best suited as coordinators?

JN: Well, they knew something about operations and they knew something about surgery and they knew something about all aspects. They didn't have to know anything about immunology. That was unimportant. We took care of all that. All they had to do was make sure that the facilities were available: things like having two operating rooms side by side so you could remove the kidneys and walk from one room to the other, lots of logistical things like that.

DT: That does sound like that falls very much within the purview of nursing and nursing administration.

JN: Oh, absolutely.

DT: What led you to leave UCSF then and join Minnesota?

JN: All of a sudden, here we were... We had a wonderful home on Twin Peaks, to this day, I think one of the nicest homes we've ever lived in, although the one we currently live in is great. But it was on top of Twin Peaks and we overlooked the Golden Gate Bridge here and the Bay Bridge there and the entire bay in front of us and all of San Francisco laid out. You could go to the bathroom and do your thing and look out the window. We didn't have to have shades because we were on top of a hill—unless a helicopter came by, you know. So we had an ideal situation.

We had four boys [Jon, David, Peter, Paul], one, two, three, four, right there. My wife [Mignette] would take them down to Golden Gate Park. We lived in Mount Parnassus. I don't know what else it's called? It was just behind the hospital.

DT: The Inner Sunset neighborhood?

JN: Yes. All I had to do was take the brakes off my car and go right into the hospital. My wife would take the boys to Golden Gate Park. There was a mother and children's area she would take them to frequently. There were swings and slides, all the typical things. Then, in 1967, for some reason, partly I guess it's because San Francisco is San Francisco and they're extremely tolerant, the hippies from all over the United States came and made a big thing in San Francisco. I'm sure you remember. All of a sudden, my poor wife is down there with four boys and guys are walking around, some without any clothes on, smoking marijuana. It was obvious that this was no area to raise kids. It would be only so long before your own children might be influenced by this environment. Today, do you realize—you may not realize—that there are people in parts of San Francisco that walk around perfectly naked. They were just talking about that the other day on the radio. They're making them sit on towels. I mean, I can't believe it, but it's just an extremely tolerant city. Even though it's one of the most beautiful cities in the world, it's just unfortunate that there is that element. If you can avoid that element, it's fine. Go to the restaurant over here, it's just great. Take the cable car down to Fisherman's Wharf, it's great, et cetera. But, still, that element is there.

I had been offered jobs at almost every major university. In transplantation, I was one of the big guns. Everybody wanted to get a transplanter. Everybody wanted somebody to run a department, et cetera, et cetera, et cetera. Here I was; I had both things in my pocket. All these positions that were offered to me in the past, I had turned down; all of a sudden, I started listening and I looked at about twelve of them before I decided on this one. I had *definitely* made the decision that I had to leave San Francisco. The most important thing to me was my kids. I wasn't going to screw up their lives.

So, I took this job and why did I take this one? It was the *only* one of all the jobs I looked at where every single faculty member had a research laboratory. The reason for that was that my predecessor, Owen Wangenstein, who is up there on the far right of Pat Miles, said, "If you are going to travel, you have to have a grant, because I can't give you any money from the department. If you're going to have a secretary, you better get a grant, because I'm not going to give you one. If you are going to do anything at all in a laboratory, you better get a grant, because I'm not going to give you anything." *That* attitude was the best attitude he could have had, because it *forced* them all to, then, at least apply for grants from the National Institutes of Health or from any organization. All of a sudden, you found all these people with grants. They had laboratories and they were doing research. I'd never seen that before. At every other place, they were like those surgeons that we didn't care for in San Francisco; they just were out to make money. I thought, oh! wow! What a place. So that's why I came here.

DT: Do you think that the distinction, where at UCSF a lot of the surgeons just focused on money and here, they were focused on research, holds for other specialties as well, or was it just surgery?



JN: Number one, the surgeons make the most money. There were some internists here [at the University of Minnesota], who shall remain nameless, who made a fair amount of money, because of the unique practices they had. And there were surgeons here who made money, but, for the most part, they were interested, except for a few, in their research endeavor rather than in their ability to gain a larger and larger practice with better results in increased compensation. At the University of California, you could only make so much money if you were on the faculty. But anything you made above that then could be used by you for having a research laboratory, having an extra nurse in your office, or whatever, a little better office, a little better whatever. Here, for the most part, there weren't too many that were just out to make a buck. It was primarily because of Wangenstein and his insistence that either you produce in the research laboratory or you're done.

A classic story was when Norman Shumway, who developed cardiac transplantation, who is the father of cardiac transplantation, went in to see Owen Wangenstein before he [Shumway] left. Owen Wangenstein was the chair. Shumway said that he was interested in staying on on the faculty. Doctor Wangenstein said, "What research have you done? What papers have you written? What grants did you have?" He, at that point, had none, but his potential was so obvious to everybody else. Wangenstein said, "Come back and see me when you've written some papers and achieved some government grants, et cetera." So Shumway said, "Screw you," and left and went out to California and went into private practice in San Bernardino or Santa Barbara. He did that for a while. He was so bored with private practice. Private practice by itself can be very boring. I don't know how people do it. If you make enough money at it, I guess it makes some people happy. Just to see the next lady come in who needs her gallbladder out and some guy who's got a hernia... I mean, there's only so much of that you can take. I guess if you're making money at it, it's all right. Other than that, if you are at least a potentially cerebral person, this would end up to be something you couldn't take. So he did it only for a short time. It just got to him, so he went up and applied for a job and, eventually, got a job at Stanford University and the rest is history.

DT: When you arrived here, you were hired as chair, as Wangenstein's replacement. How was your appointment received by those who were on the faculty?

JN: The two people who definitely were against it were C. Walton Lillehei, who was head of cardiac surgery, who felt he should have been the successor to Wangenstein, and his little brother, Richard Lillehei, who went along with C. Walton Lillehei, so the two Lilleheis. The rest of them were very happy, because they didn't particularly care for the two Lilleheis.

[laughter]

JN: Dick [Richard] Varco, who was the strongest person in the department, was one of the people that helped recruit me, along with Bob [Robert] Good. They are two of the people that I admired the most here, so, therefore, when they came out to UCSF and sat

in my office, it was pretty hard for me to, eventually, say, “No, I wouldn’t [come to Minnesota].” So I accepted their request to come out and at least visit, which I did.

I came out in January particularly. I did that because I wanted to see if, as a native of California, could I live in such a place? My mother said, “There must be nothing there but Eskimos and people like that.” So I came in January to see if I could make it. I came back and said, “It isn’t bad. What the hell, you just put on a heavy coat and cover your ears and you’re okay. And it’s kind of pretty out there with the snow and all.” Once I felt that was true, the next thing was to see the people. I went around and talked to each of the members of the faculty. It became apparent to me that I could make it here, and, as I pointed out, I liked all the things that they did: that they all had their own little grants, and their own little offices, and their own little money.

DT: When you arrived here, did you make any changes in the way the department was operated and organized?

JN: Oh, my lord, yes. A hundred members of the faculty were surgeons. How many surgical patients? About twenty-two.

DT: Oh. [whispered]

JN: So it was, basically, about five to one surgeons per patient. The reason for that was that if you got a grant and Owen didn’t care, you got a lab and you had your own money, maybe something good will come out of what you do, and, then, he’ll take credit for it, and, then, it will be all wonderful. They were all here. So the very, very first thing I said was, “We’ve got to start moving out of here.”

So I went to Ed [Edward] Humphrey, who was the chief of surgery at the V.A. [Veterans Administration, now Veterans Affairs] Hospital [in Minneapolis]. I said, “Ed, I’ll tell you what. We’ll graduate all of your people that are out here now taking their surgical residency at the V.A. Hospital and as soon as they’re graduated out, we’re going to bring in our own people and you’ll become part of the University of Minnesota, no longer just a V.A.-trained person.” He, of course, was delighted, as he should be. Now, all of a sudden, you’re part of this University of Minnesota. Well, the University of Minnesota has a wonderful reputation. So there was no trouble getting him.

Then, the next thing, I said, “I better go over and make sure that I get the Saint Paul-Ramsey Medical Center [now Regions Hospital]...” So I went over there and talked to John Perry and did the same damn thing. I said, “We’ll graduate all your people, eventually, and you can become part of the University.” He was delighted.

Then, the only thing I lacked was the emergency room. We had a Level II emergency room, which is really kind of an “I’ll take care your scratches and whatnot, but not the big stuff” place. Where was the big stuff being done? It was at Hennepin County [Minneapolis General Hospital], so I went over and saw the head of Hennepin, Claude Hitchcock. Got an appointment to see him. He sat there and I said, “Now, what I can see

is if we can make Hennepin County..." "No, you can't." "Why is that?" "Because this is *mine*." He turned me down one hundred percent. Eventually, I found out why. The why was that when he finished the residency, he was hoping he would stay on the faculty here and, instead, Wangenstein sent him to the County Hospital to do surgery there. He thought that was a snub and he never forgot it. Therefore, I had to live with that. Then, the next thing I had to get was someplace where we could have an emergency room, so I got North Memorial [Hospital] and...anyway, to make a long story short, I just changed the whole program around and spread it out and made it what it is.

DT: By bringing in these other hospitals, you would increase the number of surgical patients?

JN: Absolutely. All of a sudden now... For instance, I got the Methodist. Methodist Hospital had some fine surgeons there and they had a very active practice and a Japanese fellow was the chief there, a very good man, a very technically capable individual. [Earl G. Yonehiro changed his last name to Young in 1982. He died February 27, 1988.] I called him in and I said, "I'd like to incorporate you into the University of Minnesota." He was delighted. I said, "What we'll do is we'll send out some senior residents to you to get their training." It started one of the greatest training programs ever, because they went out there and the people at that hospital let the residents do as much surgery as they wanted. It was just night and day. You could operate like crazy. The faculty out there *loved* it. They would just help them with it. Our guys were out there. They were on call. The staff people out there didn't have to take a call every night, et cetera, et cetera, et cetera. It was a win/win situation. There were a lot of ways we just made it better.

DT: In return, the surgeons who were working at these other hospitals, they were, then, given clinical faculty status?

JN: Absolutely. All of a sudden, instead of being Joe Blow, a surgeon at Hospital X, he became Assistant Professor or Associate Professor So & So at Hospital X. Something about ego... What you need to do is learn where people's egos are and, then, tickle them just enough to get them going.

DT: [chuckles]

That's a massive restructuring. Were there any other changes that you incorporated in the department?

JN: Yes, but I can't really tell you all of them, because it would take the rest of the year.

DT: [laughter]

What did you see as some of the major challenges facing the department in those first few years?

JN: Getting it going. Getting the program going. Getting these other hospitals in. Getting emergency rooms, all of that. These were all challenges, every one of them. Little by little, you had to... It was a pretty good effort to get them. You could see the potential. Wangenstein believed that it's all here and we're the University of Minnesota. What more do you want? We made the whole city ours and the county and, eventually, the better part of the state competing with a small clinic about ninety miles south of here.

DT: [chuckles] The Mayo Clinic [Rochester, Minnesota].

JN: We had to, you know. God, people were saying, "Well, if you're really sick, you better go to the Mayo Clinic," that kind of thing. I didn't want to hear that.

Then, I must tell you the stories that have come out of the Mayo Clinic since have just been *awful*. I can't even repeat them, because I don't want them in any text. But there are bad things that have happened down there. Some of them made the newspaper. I'm surprised more of them didn't. The reason for it is it's kind of supermarket medicine. If you go down there, you're a number. You're number 58642321. Go in that room over there and they're going to do an electrocardiogram, and then over here and they're going to do this, and then they're going to do that and they're going to do that. In two days, they're going to shove a thing up your rear end and shove one down your stomach and do all this. By the time it's done, they'll give you a stamp of approval. The only problem is when you do that, you lose sight of the individual completely. As a result, mistakes happen, because you can't do supermarket medicine. As a result, things get forgotten. Things get missed. I can't talk about it here, but there have been a variety of things that have happened. I can't say it's not their fault; it's their fault because they like to do too much. But that's what they are. When you do that, all you're doing is... Say you're looking at chest x-rays as a classic example, they go shoooo, chest x-ray, shoooo, chest x-ray, shoooo, chest x-ray, shoooo, chest x-ray and, pretty soon, there's a little spot on one that you missed that wouldn't be missed if that was only one of twenty x-rays that the radiologists were looking at in a given day, but not one of two thousand that they were looking at in a given day.

DT: How does that contrast with the University? How is the University able to do something different?

JN: The way you do something different is you don't try to do that. My wife thinks I'm wrong on that. She thinks we should do like they do down there and have an executive physical, you know, where you go down there, you get two days of having things shoved in every orifice in your body. I guess that's all right if you're one of the lucky ones and they don't miss anything. I can't tell you, but there are things that have been dropped because of that.

DT: It's interesting about how you were able to build the residency program so successfully, particularly by going out to these other hospitals and working with surgeons in the community. Something that I understand from other people I've interviewed is that there was a real tension between the private practitioners in Minnesota and the

University physicians, that there was some town/gown antagonism. That doesn't seem to be the case in surgery?

JN: It's always the case. You're either in or you're out. If you're out, you're out. So, therefore, it's like this. What you do is you try to bring them in. If you're unfortunate not to know who you're bringing in, sometimes you bring in a bad apple, a bad apple trained in another clinic. So when the bad apple has a problem, he doesn't send it to you to be done at the University of Minnesota but rather at that clinic. That's not good. There are a variety of subtleties there. But there will always be town/gown. That will never change. You're either in or you're not in. Hopefully, we tried to get all the right people and make sure they were part of us. [sigh] And that's not always true.

DT: You obviously talked about these relations with these affiliated hospitals, but what was the relationship like with the University Hospital and the hospital director? How were things there? You've got the department in the Medical School, but your patients are in the University Hospital and these affiliated hospitals. Was there much dialog, conversation, with I think it was John Westerman, who was hospital director when you arrived? [First Ray Amberg, then John Westerman]

JN: I really don't understand the question. Did John Westerman run the hospital? He was administrator. He was the guy we'd go to and say, "Hey, we need to get a better recovery room than the one we have now. See if you can get some money, to get that done, from the state." He's there, or whoever is there in that position, to serve us. We're not in competition, but rather a complement to one another.

DT: That's what I wonder. Have the hospital directors been, then, generally responsive to what you've wanted from them?

JN: Absolutely, because you're looking at money. We're money. We bring money in. If we don't get the things that we want so that we can facilitate our practice, then there are not patients in the beds, and if the patients aren't in the beds, that administrator isn't getting any money.

[telephone rings]

JN: Excuse me. [Doctor Najarian speaks briefly on the telephone]

DT: John Westerman had to go to the legislature to get funding. He would often go trying to get requests met?

JN: Yes, that's true. We're part of the University of Minnesota, and as part of the University, we're dependent on the State of Minnesota for some of our funding. The majority of the funding, we've got to make ourselves by putting patients in the beds, which doesn't cover everything. We also have to set aside areas that are used by residents and students for teaching purposes that are in concert with and part of the hospital situation. So *this* hospital is different than *that* hospital out there. In that

hospital out there, there's a bed and a bathroom and there's a sink, et cetera. In ours, there's a bed and a bathroom and a sink *and* an area for teaching, as well, within that same structure.

DT: It sounds like the training program that you had here was quite distinctive from other training programs around the country. I've seen it written—I think you talked about it in your book—that you were training academic surgeons. This was something that was not so widely done.

JN: Well, a lot of people liked to do it. I think that Doctor Wangenstein set it up so you look for grants, you did research, et cetera, et cetera. That develops academic surgeons. Now, there are two ways you can develop academic surgeons. One is our way, which I think is the right way. The other way is done by hospitals like Johns Hopkins, where they feel like they can develop academic surgeons simply by giving them longer periods of time in clinical surgery. In other words, rather than just general surgery, they would spend some time, maybe three, four, five months, in Ophthalmology, in Otolaryngology, in Proctology, God knows what all. That would be part of their training, so it would take eight or nine years to get their training. But in the eight years or nine years that we might train somebody, three years of that would have been research. Whereas, the eight or nine years at Johns Hopkins simply represents an addition of other services, which made no sense to me whatsoever, because what do you care about Ophthalmology? You're not going to operate on somebody's eyes. But that was their attitude.

DT: Has that changed in the years since?

JN: I think they're a little bit more traditional in their training, now. I say that without as much knowledge as I should. I've been a visiting professor at Hopkins on two occasions. They are little by little getting more and more like traditional training. So it has changed.

DT: When you arrived at the University and in those first few years, what were relations like between the Department of Surgery and, say, the Department of Medicine, Department of Laboratory Medicine? How were relations between the departments, would you say?

JN: [pause] Good, is all I can say. I didn't see any problems. Everybody seemed to get along fine. The whole thing depends upon each chairman. I didn't take this job until I had seen the chairman of every single department in the Medical School. I looked at them, and I talked to them, and I said to myself that I can live with this person. He's not a loser and he's kind of interesting. So I think that I would never have taken the job had I seen any conflict between the departments of any major degree. There's always some. You're walking on my territory, that kind of thing. But there was nothing major.

DT: How would you say relations were with the Dean of the Medical School, Bob [Robert] Howard? How was his management style, I guess?

JN: Okay, I guess. I can't find fault with him. He was the Dean when I came. So, basically, he was one of the people that accepted me, so we were friends and have been ever since.

DT: I've heard from other people who were at the Medical School in the 1960s that it often seemed like the department chairs had more power than the Dean.

JN: Oh, that's always true. They have all the power.

DT: Can you elaborate on that?

JN: Well, the power is that if we don't do a good job at what we're doing, the Medical School goes down the tubes. So, therefore, we have power. If I call them up and say, "Look, they're sending off the medical students for three hours twice a week to such and such. Personally, I think that's a waste of time. Also, it's difficult for us and I don't think you should." If I feel strongly enough about it, he'll come around to my way of thinking.

DT: That's why it must be good when all the chairs get along, because if you have chairs with competing visions, competing ideas, that could be problematic.

JN: That's true. That's very true.

DT: [chuckles] Would you say the Dean has any kind of power over the Chair, over any kind of influence?

JN: Theoretically, we serve under his okay. He can get rid of us.

DT: I interviewed Bob Howard a couple of years ago. He felt that his only power was in his ability to assign space.

JN: Oh, that's not true. We serve under his wishes. I don't know why he didn't believe that, but apparently not. If, say, that a department chair maybe was carrying on with some nurses and he shouldn't have been, et cetera, et cetera, and he thought it was a bad thing. He could...sqwick, sqwick [as if snipping or cutting].

As a matter of fact, one of my problems here was Richard and C. Walton Lillehei. C. Walton Lillehei felt he should have been the chair when Wangenstein retired. I said, "Let's live together. If you can't stand it, then you can leave. You might find that we could work out together." Well, he felt that he should have been, one, the chairman, which he never should have been, and, two, that he would be nasty and leave, because he could be a very good chair. So what he did was he picked up all of his stuff from his lab one day and, in the middle of the night on a weekend, put it in a U-Haul truck, and hauled it to Cornell [University], where he was the chair. He lasted about two months. He had an apartment that was directly across from the hospital and a number of young ladies who

ended up going across and back and forth; it was quite common to the point that he *never* should have been chair.

His comeuppance came when his dean's kid had to have an operation. It was a heart operation. For whatever reason, the dean decided that he was going to go to the operating room and put on a mask and gown and observe the operation. The operation was supposed to begin at eight. The dean was there. The kid was put to sleep and no C. Walton Lillehei. Two hours later, C. Walton Lillehei shows up. That was the beginning of the end. The problem was that it wasn't high on his priority list.

DT: [chuckles]

When you arrived here, one of your main priorities, it seems, was to set up the transplantation service here, as well. Can you talk about that?

JN: Obviously, they had done some transplants here prior to me coming. They had done forty, I think, or maybe forty-one, kidney transplants. There was one liver transplant in a child; that graft lasted two weeks. That was it. There were no pancreas [transplants]. One of my things is that I'm a transplant, so, of course, I started building the transplant program. What can I say?

DT: Chair in the department seems like a lot of work. How much time were you able to spend in surgery versus administration versus research?

JN: My secretaries always knew that the mornings I would spend in the operating room and the afternoons I'd spend in administration. I divided my time accordingly.

DT: One of the things that strikes me about transplantation is that it must be hard... obviously, any time a child is sick or someone is sick, it's hard for the family members. But when you factor in the discussions about could a family member be a donor, did you see it present unique challenges for communication with family members?

JN: More so on the West Coast than here. On the West Coast, the families aren't as close. Here, if somebody gets ill and needs a kidney or something like that, all of a sudden, you've got seven people walking in to your offices, "We're ready to be typed to see if we can be a donor." Two reasons: one, "Minnesota nice," and, two, people here are different from people out on the West Coast. People here are more family-oriented. One of the reasons we came here is there are just nicer people. As soon as we came here, we never had trouble finding donors.

DT: That's a really interesting observation, the cultural differences.

JN: Absolutely.

Where are you from?



DT: Just outside of London [England].

JN: Then there's nothing to be compared to it.

DT: [laughter]

JN: People here are entirely different from the people out on the Coasts.

DT: Yes. I've spent time on the various coasts and, yes, it's noticeable.

JN: You know the difference.

DT: Yes. But it's just interesting that, even on something so important as organ donation, you see those cultural differences play out

JN: That's where it's *brought* out. Prior to that, you know, it's a I-never-did-like-him-anyway kind of thing.

DT: What would you say were the major challenges facing the transplantation program here? Were there technological issues, clinical issues, or any kind of political challenges?

JN: As I said, it was much easier here, because the family members would come forward. So that was not a problem. Technologically, there was no problem. Doing the actual operation, there were no problems. Prior to my coming, transplants were being done by Joe [J. Bradley Aust], who, eventually, went to San Antonio; Dick Varco, who really wasn't interested in it but was here; and Richard Lillehei, who was more interested in doing cardiac surgery than transplants. So, basically, there was nobody, other than myself. I hired Dick [Richard] Simmons with the idea that at least the two of us could do transplants and, then, it went on and grew from there.

DT: I know that you testified at Walter Mondale's hearings in 1968. They were discussing, I think among other things, the moral and ethical implications of transplants. Do you remember much about that and kind of why transplants were even being discussed in Congressional hearings?

JN: I'd been here one year. Successful transplantation really didn't begin until 1960, 1961, so it was going into six or seven years. Congress, for whatever reason, decided that maybe there was a problem in transplantation and they ought to look into it. I think it was kind of a silly investigation, because there was no investigation. They wondered if something was being done that was being done underneath the table, if we were maybe transplanting people we *shouldn't* be transplanting or not transplanting people we *should* be transplanting. I think after some short discussions and interviews and whatnot, it was apparent that it was being run in a very, I think, careful and proper manner.

DT: I have a student who has looked at Walter Mondale's hearings and it seems like some of the questions related to the problem that there weren't enough donor organs, and, then, if you have a shortage of donor organs, how do you allocate those scarce organs?

JN: That's a silly question for him to even get involved with. What you do is you make a list of who needs it the most. There are a lot of things that go on. Number one, an organ now has become available. Now, is it going to come to your institution or not? Well, if it was obtained in your institution, sure, it would stay there. If it wasn't obtained in your institution, you'll be given an offer, if they can't use it where it was obtained. If you have somebody that would match, then you look down your list and say, "We have two matches that would work out very well. They both need a liver," or whatever. There was never any problem. The problems were ones from people who didn't understand how it worked and that committee was one of them. Legislative committees frequently are looking at things that they don't understand and trying to be educated. I hope that's what they're trying to do.

DT: All along, from the surgeon's perspective, you were always making these decisions, once you've got the match out of the way, on who is the most sick and most in need?

JN: That's exactly correct. I mean, it's just so obvious.

DT: At the same time that you're building the organ transplant service here, the bone marrow transplantation program is taking off, too. I know you mentioned Bob Good was one of the reasons that you decided to come here. How much connection was there between the organ transplantation programs and the bone marrow transplantation programs?

JN: None. Those are two different things entirely. One of them is putting in blood cells and the other one is putting in an organ. The advantage was that those people were people that we used for other aspects of our transplant program, such as tissue typing, which was done by that group, and things of that nature. But, no, the bone marrow transplant... basically what you do is you aspirate bone marrow from the iliac crest and put it in a syringe and inject it into people just like you would blood cells. Then, it goes out and gets distributed in the proper places. As I say, their good to us is the fact that... The reason we have a good typing lab, which we do have with Harriet Noreen taking care of it, is because of them and that means when we get somebody typed, we can be *assured* that they're properly typed and matched.

DT: Really, there are similar immunological issues with the tissue typing and what not, but, beyond that, that's as far as it goes?

JN: That's as far as it goes.

DT: One of the other things I understand was going on in surgery around the time of your arrival was that Minnesota was one of only two places where there was transsexual surgery being done, like sexual reassignment surgery. But I haven't been able to find

very much out about it. As chair of the department, you probably had some awareness of this. No?

JN: I was aware of it and not particularly interested in it. It's primarily the Department of Urology. When I got here, Urology was a division of general surgery as was Orthopedics and Neurosurgery. The first thing I did was to reassign Urology, so I got rid of that. We're one of the few places that did it. I've had no interest in it. It's one of those Alice in Wonderland things. We did have a good group who was involved with it in Urology and they did a few cases. Nothing bad ever came out of it. As I said, one of the early departments that I got rid of when I took this job was Urology, so, therefore, my involvement with it became zero.

DT: Do you remember the names of any of the urologists who were involved?

JN: Oh, yes. Colin Markland was the main guy. I wonder if he's still alive. [Dr. Markland died in May of 2013.] He was doing it and he was doing it well...sexual reassignment. He was making boys out of girls and girls out of boys. I guess there was a need for it or people who wanted it. Somebody had to do it, and we had one of the better guys doing it. I don't think he ever got in any serious problems with it that I can recall.

DT: Changing focus a little bit and going back to something you were talking about with regards to UCSF and the income of surgeons. An issue that seemed to be a major controversy in the Medical School during the 1960s and through 1970s was the issue of faculty practice and how much practice income the faculty were earning. Do you remember any of the discussions around the faculty practice plan?

JN: No, I don't, to tell you the truth. It was always a mystery to me. Everybody... [pause] Either I have a very bad memory or I have no knowledge of anything about that. We all made what we could and it seems to me that we did have a limit. I don't know how that was established. In California, we had a limit and, then, above that limit, you could use for other purposes. We had a limit here...

DT: It's just interesting. When we were talking about Bob Howard earlier, he and several other people who were at Minnesota prior to your arrival, so they were here earlier in the 1960s, commented that Bob Howard had tried to change the faculty practice plan so that there would be a limit and over that limit, the faculty would have to give that money back to the Medical School, and there was staunch opposition to that plan. That had, somehow, tarnished Bob Howard's deanship in what he could accomplish. But, ironically, after Howard stepped down, in the 1970s, his idea had actually been instituted, that it was realized that there needed to be some kind of a limit and that then, beyond that limit, the money would go back into the Medical School to distribute those resources.

JN: Did it ever come about?

DT: Yes.

JN: Don't know.

DT: [chuckles]

JN: Either I've forgotten about it or... The financial parts of the department rested on one person named Jim Coggins, and he was my financial guy. So everything like that went to him, so he would have known about it and understood it and all that, and I didn't get involved with it only because as chairman of the department, there's only so many things you can get involved with, and I thought it was more important to get residents trained, fellows trained, students taught, et cetera, and surgery done. I can't give you a good answer.

DT: Actually, it strikes me from what you had said earlier about the attitude of surgeons at UCSF and how it compared to here, your attitude, it sounds like, was already towards not focusing on money anyway, so I can understand that it may not have crossed your radar so much. But it's interesting that, apparently, some of the big names in surgery before you came here were the most vociferous in opposing Howard's plans.

JN: Oh, yes. If you were making a lot of money and living high on the hog and you needed an extra swimming pool and whatnot... Once they get the money, it's hard to get it away from them. If you get on top of it before they get the money and you put a limit on it, that's one thing. Then, it's a lot easier. Oh, my, I made my limit. Now, I've got to give the rest of it to the dean. At no time did I think that ever happened. Do you know better?

DT: I know in 1974, 1975, it was Lyle French and I think it was in part from pressure from the Legislature that the Medical School was making this much money and that the incomes were disproportionate across the school, and the state mandated that there needed to be an auditor who would set the limit for how much faculty income will be made and, beyond that, how much would get kicked back. That was, I think, in 1975. But Howard had originally proposed it back in 1960, so it took some time.

JN: Not one of mine...

DT: [chuckles] That's interesting to know.

Still on the question of finances... You may not have much perspective on this either. I'm curious if you perceived any impact of Medicare and Medicaid on the economics of clinical practice when they were passed in 1965.

JN: Medicare was very important, because then, all of a sudden, those individuals over the age of sixty-five were covered, so that made it much easier. Prior to that, we were kind of stuck. If you had somebody that was over the age of sixty-five and needed an operation and they were destitute, and they came from a county somewhere in California, for instance, and if that county didn't come up with the money for them, they didn't get operated on.

[break in the interview]

JN: So, then, all of a sudden, largely due to the efforts of Hubert [H.] Humphrey, it became available to individuals that would now be covered under Medicare, which was, I think, one of those wonderfully humanitarian moves. Medicaid was one that played a part in taking care of people under the age of sixty-five who would need clinical support economically. When those two things came in, it meant something to the communities from where they came and to the individuals, but to us, it made no difference, because we didn't take anybody unless they could pay. They first had to get through the hospital administration and if they couldn't show that they had enough money through their insurance or their own personal wealth to cover their hospitalization, then they were shown the direction to the county hospital. It was kind of a sad system, but it worked.

DT: I was just reading that University Hospital here was not a county hospital, which was quite unusual for teaching hospitals. At major universities oftentimes the university hospital was the county hospital.

[pause]

JN: That's not that true. In big cities like Minneapolis, Boston, and Philadelphia, et cetera, the university has the university hospital and, then, there is a county hospital. I could see where in a smaller community that a university hospital would also serve as the county hospital, as well, but that's not been my experience.

DT: Okay.

Something that was just running in the background in the 1960s were concerns about a shortage of health care workers. There was a shortage of physicians, a shortage of dentists. I wonder if you have any recollections of what that meant for the Medical School.

JN: They kept pushing the numbers up. When I went to medical school, there were seventy-two of us medical students at the University of California. That's a big state and seventy-two people is a small number. We currently have, in association with Duluth, close to two hundred. So the number has gone up rather remarkably. But, still, the number of practitioners that are available in areas where they are needed, which would largely be areas that are non-urban...and it's most commonly due to a wife. A guy gets married and his wife says, "No, we're not going to Timbuktu. We're going to stay here in Minneapolis, because that's where I want to be." If you want to keep peace in the home, you follow certain... It's always been difficult to get people out to the smaller communities for that reason.

The way of combating it and what the University has done is that when we take people into Duluth, they are asked whether they would go to a... In the first place, they look for people who come from small communities in Minnesota, and, then, they say, "Would you

go back there,” or somewhere similar, and they say, “Yes.” Some of them are lying and some aren’t. You get some people who go on out and practice out there. But there will always be a shortage of doctors in smaller communities, because there’s only so many people who like to live in a small community when they have the opportunity to have some of the advantages of a larger urban area. So I don’t know what the answer there is, except to say that we tried most everything.

One of the things that we did was we had a program where, in the third year of medical school, a significant number of the medical students would end up going to a smaller community and be under the auspices of a practitioner in that community. The ones that did it loved it and, frequently, went back to something like it, because it met with their feeling of being a real doctor. So it did work. What we did...myself as the chairman, I would always go to at least a half a dozen and or more of those hospitals, maybe even more, per year and I would go there, fly there. If it was close by, I would drive, but, otherwise, the University provided air transportation. I’d fly there and spend the day at that hospital with the student who was assigned there and the fellow or doctor, whoever was there, a mentor at that position. *They* would love it, because they would save good cases to discuss, and *we’d* love it because we had an opportunity then to see the student in action and to see the mentor. The mentor then would like us or dislike us. If he liked us, it had an added plus in that he could pick up the phone and say, “Hey, John, I’ve got a guy up here who’s got such and such. Could you see him down there?” I’d say, “Sure.” So it was advantageous on both sides and it worked out well. A lot of the students ended up in a smaller community because of it. So it was a good program.

DT: It sounds like it was. My sense is that Minnesota was really at the forefront of that effort to train physicians for rural practice.

JN: We were. I can’t remember the guy who set up the program. It was a guy in Family Practice.

DT: Yes. John...Jack Verby?

JN: Jack Verby. I haven’t thought of him in a hundred... I don’t know if he’s still alive.

DT: I don’t think so. [Doctor Verby died on October 23, 2007.]

JN: I haven’t seen him in a while. He might not be.

Yes, Jack Verby set it up and it was very nice and we all enjoyed it. I tell you, it was a plus/plus. You went out there. You saw their patients. They liked you and it was kind of fun. Then, all of a sudden, you’d get cases that would come in—not that that was why you went there, but, somehow or other, that was realized by the institution as well. There would always be a nice lunch that they would set up and all the nurses in the hospital would come to that lunch.

[laughter]

JN: You know, in one of these small rural hospitals, there might not have been more than half a dozen nurses, but they'd come. Here was somebody from the city. They'd go out of their way to make that a very pleasant occasion. I enjoyed it. That was a good thing. It was a good thing in every way. Everybody benefited from it.

DT: It sounds like the State Legislature probably liked it, too, because they were concerned about ensuring health care access throughout the state.

JN: Yes. What have you been doing for rural Minnesota? Well, we've got this program [Rural Physician Associate Program] at the U.

DT: With the significant increases in student enrollment, did that put pressure on the faculty at the Medical School in terms of teaching responsibilities?

JN: [pause] Not that I'm aware of. Our teaching responsibilities usually ended up two-fold: small classes that are broken up and, then, some individual tutoring. I never heard anybody complain that they were overwhelmed or anything like that...not that I knew of.

DT: Related to increasing enrollments, all the health sciences, it seems, were involved in increasing the recruitment of African American, Native American, and other minority students beginning in the late 1960s. I'm wondering if you had any experience on that side. I've heard from several people that you were very good about recruiting minority surgeons into the residency and beyond. So I wonder if you could spend a little time talking about that.

JN: You know, it's been difficult for minority students to get to some of the better programs. There was still a degree of prejudice that was present when we came here in 1967. As a matter of fact, it was surprising to us. Minnesota is a very prejudiced state, which really comes as a total surprise. I think the reason for it is there were so few blacks... Like my wife, for instance, who grew up in a small town in western Minnesota. She was eighteen years old before she saw her first black, if you can imagine. There weren't any Jews either. They knew one Jew. He had a junk shop where he would sell old machinery and things. So it's easy to understand where maybe prejudice came. I was born and raised in California in the Bay Area. My God: blacks, Jews, Chinese, you name it, it didn't make a bit of difference. It was all part of the culture you grew up in, and you accepted it, and they were your brothers and sisters, and that was it. Prejudice here was very strong initially.

Because of that, I felt that it was important to make an opportunity for those who wanted to...because the more we brought in, the more would go out in the community, and there's nothing better than having a minority doctor taking care of some Swedish family. I mean it's just a beautiful sight and they accept it completely. All of a sudden, that degree of prejudice begins to melt away. Some of the best residents I ever had were black, as a matter of fact.

DT: Were there specific things you did to try to recruit minority surgeons into the program?

JN: We didn't try to do it, but if they applied, I gave preference. Frequently, if it was down to a few people that we were looking at and we needed six for next year, and it got down to two and if one of them happened to be a minority student, I'd pick the minority student. It made for a much better program.

DT: Did that apply also to recruiting women as well?

JN: Yes. Women in surgery were very unusual. The first one I ever trained was the first one *ever trained* in Minnesota, at the University of Minnesota. I trained Caliann Lum. She's a redheaded Chinese woman. She dyes her hair red, bright red. I'm not talking about just a little red; I'm talking bright red. She is an absolute gem, one of the smartest people around and one of the nicest people. Then after her was the second one I trained. Colleagues would say you can't have a woman in a surgical program. So the second one I trained was Nancy Ascher. She went out to California and became the chair of the department of surgery at my old alma mater and has done an outstanding job, been an outstanding surgeon, not female surgeon, *surgeon* ever since, married one of our guys that we trained, has two kids and they're doing well. I was very pleased with that and very proud of the fact and they're good.

DT: In your really positive attitudes about recruiting and training minorities and women, did you find that you had a positive influence on your colleagues? Did that start to kind of influence other faculty chairs in the Medical School? Or were you still kind of just the lone figure in that regard?

JN: I don't think it influenced. I couldn't tell you who went into neurology or who went into medicine or went into pediatrics or OB-GYN [obstetrics and gynecology] or whatnot. I couldn't tell you. So I don't know. There's no way of knowing that anything that we did influenced any other of the departments in the Medical School. They had their own attitudes not influenced, really, by surgery, in particular.

DT: What about beyond Minnesota? Do you feel that you maybe influenced other surgeons around the country who may have been resistant to encourage minority surgeons?

JN: If I did, I'm not aware of it. They'd be aware of it. I'm not aware of it. Today, it's no longer a problem. There was a time when everybody was white and male and that was it. Then, little by little, you know, more and more women got in, and, then, more minorities got in. So, as that happened, it kind of happened over time. It wasn't all of a sudden, but there was a period of time when the first woman, Caliann Lum, in our program was there and everybody said, "Oh. A surgeon." Then, Nancy came along and she's made her name. Now, I don't know the exact percentage—you could ask—but I'll bet you that over fifty percent of our residents in surgery are women, over fifty percent.



DT: It seems that that statistic is that women are now, yes, at least fifty percent, but maybe a little bit more in medical school entrance, too.

JN: They have passed us by and, in many cases, it's just as well.

DT: It seems that, proportionally, minorities are still less well represented.

JN: Up here in particular, because there are just not many minorities up here. The minorities here now are getting to be primarily Asians of one sort or another. We don't have that many blacks up here. For instance, right now in the Department of Surgery residency, I can think of two black guys and one black woman. Now, I don't know them all, but just going the rounds and seeing who is there, that's it.

DT: How big is the residency program? How many do you usually have?

JN: Normally speaking, we will probably recruit anywhere from eight to ten with the idea that we'll finish off with six or seven. Two or three will drop out or go into subspecialties. So that gives us a good base.

DT: We've been talking for just about two hours. I have many more questions. I'm wondering if we can set up another time to continue the discussion.

[End of First Interview]

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**Interview with Doctor John S. Najarian**

**Interviewed by Dominique Tobbell, Oral Historian**

**Interviewed for the Academic Health Center, University of Minnesota  
Oral History Project**

**Interviewed in Doctor Najarian's Office  
Phillips-Wangensteen Building, University of Minnesota Campus**

**Interviewed on October 4, 2011**

John Najarian - JN  
Dominique Tobbell - DT

DT: This is Dominique Tobbell. I'm here with Doctor John Najarian. It is October 4, 2011. This is part two of our interview with Doctor Najarian.

So, thanks, again.

JN: You're welcome.

DT: I want to start today by asking you about some of the institutional changes that were taking place at [the University of] Minnesota where you first arrived. In particular, the health sciences were undergoing reorganization and expansion with the abolishment of the College of Medical Sciences and the creation of the Academic Health Center. I wonder if you could reflect on that at all. What are your recollections of that time?

JN: I have very little recollection of that time. [chuckles] It didn't play an important part in what I was doing there as chief of surgery at the time. It didn't really affect us. So from our point of view, it was not a change.

DT: Compared to how it was at UCSF [University of California-San Francisco] was there any discernible difference in the way that the two institutions were organized within the health sciences?

JN: Comparing the two, I can't think of much. The advantage here is the fact that this is on the campus with the undergraduates, which is important from the view of the different classes and availabilities of physics and all the other undergraduate courses. Whereas, in

San Francisco, it was strictly a medical campus and when we moved the first year of medical school over to San Francisco, of which there are mainly three, we didn't have that luxury. If we had a project or something in research that demanded, perhaps, some input from undergraduate sciences, we would have to go to Berkeley to get it. That made it different. How badly did that affect us? Not really too seriously, but it is much more convenient here.

DT: Did UCSF at that time, when you left, have a nursing school as well?

JN: Oh, yes.

DT: And dentistry and...?

JN: It had the works.

DT: Okay.

JN: They were all on that campus: medicine, dentistry, nursing, and...I forget. That's really it, I guess.

DT: One of the impetuses for the reorganization here at Minnesota, it seemed, was partly to do with facilitating the expansion of enrollment across the health sciences, but, also, this idea of promoting a team concept, team teaching, team practice. Did you see that play out at all in what you were doing in surgery?

JN: I think that's a concept which we always had. It wasn't one that we developed because we were here. Surgery is a science of one aspect of medicine that involves an active role in constructing, or removing and deconstructing areas, of the body. It's always been convenient to have other people from the undergraduate levels that could feed into that concept, which is something we didn't have in San Francisco, but I didn't recall that it was much of an impediment.

DT: How much collaboration, would you say, was there between the different health science units? Were you engaging much with what was happening in Nursing or in Public Health, for example?

JN: Not really. We were delighted they were there, but, at least from my point of view as the chairman of the Department of Surgery, there was very little interaction between Nursing, Dentistry, or any of the others...Pharmacology, probably more in Pharmacology than anywhere else, because a lot of our immunosuppressive drugs, et cetera, were, of course, related to pharmacological research. But, beyond that, in Nursing, we were delighted that they were there taking care of our patients. With Dentistry, we had no relationship at all. So I would say Pharmacy and Nursing to some degree.

DT: What about within the Medical School? Were there particular departments that Surgery was particularly aligned with or where there was particular overlap?

JN: I would guess Medicine, because Medicine and transplantation represented nephrology and hepatology and the like, which is part and parcel of what we do. We just happen to be the ones that take it out and put it in. So there's a strong relationship with Medicine and Pediatrics. As far as the other departments are concerned, not as rich a cooperation.

DT: What about with basic science departments? I know when Doctor [Owen] Wangenstein was here, obviously, he had a close relationship with Physiology and [Doctor] Maurice [B.] Visscher. What role did basic science play institutionally for the Surgery Department?

JN: Well, the one you point out is the most important one, and that was the one that Doctor Wangenstein, my predecessor, had a great deal of attraction for, because they represented the kind of science that he was interested in. Now, the kind of science that I'm interested in, and was at that time interested in, was primarily immunology; whereas his was mostly cardiology, because of his development of open heart surgery and all that. Prior to that, one of the things that made this institution great is the fact that in the early 1930s he sought out a basic science, namely physiology, which eventually was taken over by...

DT: Maurice Visscher?

JN: Maurice Visscher. They had a very close relationship and almost everybody that finished up here who earned a Ph.D. or a master's degree had a minor in physiology and that was important. That would expand all the way across cardiology and the whole area of cancer surgery and the like. Now, that pathway had already been established before I came here so it was nice that we could continue it.

My efforts were more towards Medicine. I worked with the nephrologists and the hepatologists and people in Medicine, because we were actively involved in either transplantation, or in excision of tumors, et cetera, et cetera, et cetera. Our relationship with Medicine was strong. Our relationship with Pharmacology was strong. But beyond that, we really didn't have much else.

DT: As you said earlier, the reorganization really didn't have much bearing because you were already engaged in these close relationships anyway.

JN: And you have to be, because they represent part and parcel of what you're doing.

DT: You mentioned about the benefit of having undergraduates here compared to at San Francisco. Was there any discernible difference in the relationships between the different departments of medicine or the basic sciences here compared to in San Francisco?

JN: The basic sciences here are available to us, some of which were not on the San Francisco campus, and, as a result, that required a relationship with Berkeley, which was

inconvenient but it was not that inconvenient. We could go across the Bay Bridge. You'd end up working more with those that came over with us. Those that came over with us when surgery was fully integrated in San Francisco... Medicine was there. Pharmacology was there. I would guess that we had most of the basic science there. It was never a problem. You sought out the people you needed.

DT: Something that I'm curious about with the University of California system is that, obviously, the University of California began in Berkeley and that was kind of the main center for it, but there was also the UCLA [Los Angeles] campus, and there was a medical school and health science campus there and, then...

JN: That's two of about twelve.

DT: Yes. I wonder, was there any kind of relationship between the UCSF and, say, UCLA medical schools, or were they completely separate?

JN: Completely separate. We knew each other and worked in similar areas, but the six or seven campuses that were part of the University of California were very much autonomous.

DT: Obviously, California is bigger than Minnesota, but it's interesting that California had several medical schools in the state that are part of the UC system; whereas, in Minnesota, it's just the University of Minnesota and, of course, you have the Mayo Clinic [in Rochester, Minnesota] there. Do you think that influences the nature of academic medicine when there's only one main research university?

JN: [pause] Not really, not that I am aware of. What it meant was that here at the University of Minnesota, we had to have almost everything here; whereas, when you have eight campuses throughout the State of California, there were various things that were going on in other campuses which were not present here. As an example, we had oceanography, which of course you wouldn't have here because there we had an ocean. Other than the fact that the various campuses were there, they didn't really play a part in what we were doing. I'm trying to think if there was any relationship we had with any of them and I can't think of any offhand.

DT: Do you think it changes things for patients? In Minnesota, obviously, the Mayo Clinic is there, but for a long time, it was really...you'd come to the University of Minnesota; whereas, in California, depending on where you're located in the state, you can go to any one of these other campuses. Do you think that makes a difference for patients?

JN: People tend to go to the nearest facility. So if you're in the Bay Area, you go to San Francisco. If you're in L.A., of course you go to UCLA...San Diego and then up and down the coast. I would guess that it was more dictated by geography than by specialty. There were very good programs... Almost everything we were doing at UCSF was duplicated in UCLA and to a lesser degree, but also similarly, in San Diego. As far as

between San Francisco and L.A. is concerned, Monterey and a few other areas up and down the coast had unique facilities such as oceanography and things of that nature, which were not part of the campuses of San Francisco or L.A.

DT: It's interesting because Minnesota as a state is quite different from California. You have that unique perspective of being able to comment on both, having experiences in both.

JN: Actually, there are many differences, but that's just one of them.

The reason why we came here was because we wanted to get away from what was happening in California, which turned out to be an absolute magnet for everything related to drugs and hippies and different forms of unfortunate human behavior.

DT: Getting back to what was happening in Minnesota... As part of that reorganization of the health sciences, Bob Howard stepped down as dean of the College of Medical Sciences and Lyle French was appointed as the first senior vice president for health sciences. What is your recollection of that change in leadership?

JN: It didn't affect us. Bob Howard was a good friend. I think I told you this before, but as dean, he is there to make sure of what we can get with his help, that which can help, whether it be financial or just by influence or the like. He shines if we shine. If we don't shine, he is not shining. So, therefore, it behooves him to do as much as possible for building the department. He's the person that, eventually, decides who's going to be the chair. He decides how much of the state money goes to each one of his departments and divisions and things of that nature. So, in a way, he orchestrates what's going on and has the power of appointment. In other words, as I think I told you last time, I sat in the chair as his acquisition, if you will. He could drop me from the chair and take another person in our division, our department, and make them the chair. So we serve at his blessing. But he would do everything in his power to make that good, because if we're good, he's good. If we're lousy, he's lousy. It's a very nice relationship.

DT: Do you have any sense of what the attitudes were of your colleagues when Bob Howard stepped down and was replaced by Lyle French?

JN: It's not a nice thing to say, but Lyle French was a much nicer person and, therefore, was more readily received. Also, Lyle French was a surgeon—he's a neurosurgeon—and as a result, surgeons...we honor our own and we are more comfortable with our own. So when he was in that position and became the executive, he was very well received. Bob Howard is a nice guy. Bob Howard, though, couldn't hold a candle to Lyle French's science, his clinical acumen, or any other part of him. Bob Howard was an administrator. He didn't necessarily have to be a doctor.

DT: There does seem to be a quite significant change when Bob Howard was appointed as dean. He was very young, was, I think, in his thirties, so hadn't had a lot of clinical practice.

JN: I didn't realize that he was that young. I knew he was young.

DT: I think that's right.

As you say, Lyle French had an established clinical career.

JN: Yes. He was recognized as one of the five foremost neurosurgeons in the country.

DT: He wasn't still practicing then when he was vice president. Is that correct?

JN: I know he saw consultations. Whether he did operative procedures, I don't recall. I don't think so. I think he was busy enough that that wasn't possible.

DT: Obviously, it's a benefit that a surgeon is vice president, but, at the same time, you lose someone who's a foremost neurosurgeon in practice.

JN: However, he had trained some very excellent people. I wish I could remember their names. One of them went on to be chief of neurosurgery at Johns Hopkins and another one...they went all over the country, because they were French trained. When you have that kind of a reputation, these people were sought after by good universities to head their departments.

DT: I've heard from people in Nursing and Public Health that Lyle French was really personable and had a great capacity for making people feel comfortable and...

JN: Did you ever meet him?

DT: No, unfortunately not.

JN: A very nice guy. You could never find fault with him. I never saw him mad. I don't know anybody who didn't like him. It would be wonderful if people would say things like that about other people. I can't think of anybody who didn't like him. He was that kind of guy.

DT: In the 1970s when he was vice president, there was still a lot of work being done for expanding the health sciences that necessitated going to the Legislature and getting more money. Do you have any sense of how the Legislature felt about French?

JN: They loved him like the rest of us. He could go there to the Legislature and come back with what he asked for. I mean that respect that he had in the institution extended, I think, beyond the institution and beyond medicine. People respected him. I'm surprised they don't have a huge statute of him somewhere, because he, basically, was responsible for this building we're sitting in and the one next to this [Doctor Najarian refers to Moos Tower and Weaver-Densford Hall], because he went there and fought for it.

DT: I know that there were some legislators by the mid 1970s who were less inclined to give the Medical School or the health sciences what it wanted, that they had enough buildings, enough money. Do you remember that?

JN: Oh, yes. The Medical School gets a lot of the pie, the fiscal pie, for the University and rightfully so, because, basically, your Medical School is, in this instance—that's not always true on other campuses—it's the flower of the institution, because all good things came out of it, open heart surgery, transplantation, you name it. As a result, I think it's very important that the Medical School gets that recognition. Its recognition is reflected on the institution.

DT: Did you ever sense that some on the University campus maybe resented the Medical School getting that extra slice of the pie?

JN: Oh, my yes. "You fat cats over there at the Medical School, you get all the money." Well, it happens to be that we happened to do something.

[chuckles]

JN: There were a lot of professors on the other side of the campus that showed up once a week for a lecture and the rest of it was handled by teaching assistants and whatnot. We worked full-time. I'm here and, then, I lecture and, then, I'm in the operating room and, then, I'm down in the clinic seeing patients. There's no part of the entire medical cosmos that I don't participate in, whereas that's not true of our fellow professors over on the other side.

Now, that's not to degrade them in any way. Teaching assistants and whatnot are the reason good research is done. They're out there teaching and as a professor, you're lecturing once a week or twice a week or whatever, so that provides you with an opportunity for more time to do research. The real kudos go to those people who do good research, because they demand money from the National Institutes of Health, et cetera, et cetera, and as a result, they have more secretaries and more technicians and more laboratory space, et cetera. They make your institution what it is. So I think it is important. This is primarily a clinical and then a research institution.

DT: What about the other health sciences? Did you ever feel that there was any issue there with the Medical School getting the biggest slice of the health science dollars?

JN: What health sciences are you referring to?

DT: How did Nursing, Dentistry, Pharmacy perceive of the status of the Medical School?

JN: Well, the Medical School, obviously, gets the most, because we're the most expensive, so it goes down like that. I don't think I've ever heard a word of concern from Nursing or Dentistry that they're not getting their fair share. If that does exist in their



own minds and in their own discussions, then I'm not aware of it. But there's no question that the Medical School gets the first plum off the cake. Then, the rest of them will go down the line. It was that way in San Francisco. It's that way here and I assume it's probably that way at all medical campuses.

DT: Did you feel, because this is a state institution, that the State Legislature expected certain things from the Medical School, that it expected it to, say, produce physicians that would go out and work outstate? Did you ever feel that was a responsibility of the Medical School faculty you had?

JN: Oh, it was what we were supposed to do, but we had a special area. I thought we discussed that last time. People that go to the University of Minnesota-Duluth go there with the express statement that they're interested in going into practice in the rural community or they don't take them. And they do go, but they don't last long. They, eventually, migrate back to the larger cities, many of them, but many of them stay and that's good, and thank God for that so that we have a good network of competent medical doctors out in smaller communities throughout the state.

How did we get onto this?

DT: [chuckles] I was just asking about the influence of the State Legislature.

JN: Well, the State Legislature is very happy. This guy who was a representative or a congressman from Timbuktu is happy that there is a doctor that goes to Timbuktu periodically and stays there for a while and provides health care for his constituents. That makes him look good. So the whole thing works very well, as a matter of fact.

DT: Yes. As I understand it, the establishment of the Duluth Medical School really was addressing a problem, that there was a shortage of rural physicians.

JN: Absolutely. I think we have about—correct me if I'm wrong—225 medical students here and, then, another 40 from Duluth, so that all together, we're about 260, 270. It's that Duluth group that brings that number up. Now, they stay in Duluth for the first two years and, then, come down and join us in the last two clinical years.

DT: That seems to be a good system.

JN: Yes. I don't know who worked it out, but they did the right thing.

DT: In addition to Lyle French being appointed as vice president, there was a new dean in the Medical School, Neal Gault. Can you talk about how his appointment was received and kind of his function as dean of the Medical School?

JN: I have nothing but good things to say about Neal Gault. He's just a nice man. How effective he was as a dean, I don't know. He seemed to do the job correctly. He has a son, as a matter of fact, who currently is one of the number-one infectious disease people

here. I only know that because I always spend some time with my own son in Connecticut where I contracted Lyme disease, so when I got back here and was tested for it, the person who was in charge of the testing was Neal Gault's kid. The kid is about sixty years of age.

DT: [chuckles]

JN: He ran all the right tests, came up with a positive diagnosis, put me on appropriate antibiotic, and I no longer have Lyme disease. I'm eternally grateful to Neal Gault. This kid, sixty-year-old kid, is a very competent doctor. I want to say that Neal's wife is also a doctor [Doctor Sarah Gault].

DT: Yes.

JN: They would do such things as go off to China for two years and do a sabbatical over there, that sort of thing, just very decent, decent, people.

DT: Yes, as I understand it, Neal Gault had a big hand in the relationship with South Korea and the University there.

JN: Yes. I misspoke about China; it was South Korea. You're correct on that.

DT: We talked a little bit about University Hospital last week. One of the things I forgot to ask you about is... The hospital got a Board of Governors in 1974. I wondered, did you notice any change in the governance of the hospital with that?

JN: No. It's a group of people that would meet periodically. I don't know how often. Three times a year or something like that. The dean would be the chairman of the board and they would have input into whether we should have more physicians, fewer physicians, how was our training, how are our departments, and do we have the proper emphasis in our departments. It didn't change much, because, basically, up to that point and prior to that, that was all done by the dean. Now, the dean had a group of individuals who could help support his position and, perhaps, suggest different things that maybe he hadn't thought of. At our level, we saw no change.

DT: As a clinical chief were you involved in those meetings with the governance or was it all mediated at the dean level?

JN: That was strictly a dean's level thing.

We—I don't know if they're still doing it; I assume they are—as the chiefs of each of the medical services, we would meet for lunch every Tuesday, and we'd have a lunch, and we'd have anywhere from a half-hour to forty-five minutes to an hour-long discussion. Ophthalmology didn't like ENT [Ear, Nose, & Throat] and they thought they were getting the short end of the stick as far as the pay system. Something like that would

come up. I think, if I'm not mistaken, I was chief of the clinical chiefs for a long time. I think that chair behind you was one that... Does it say something...?

DT: Yes. From 1976 to 1982.

JN: Yes. So for six years I was chief of that lunch. They're a feisty bunch, but I was bigger and stronger than all of them, so it didn't make any difference.

DT: [laughter]

JN: It was an opportunity for the various departments to get together. When I was in San Francisco, we had no such meeting. So it was a welcome sight, because you got to know the guy in Ophthalmology. You got to know the guy in Neurology, et cetera. He wasn't just a name on a door. You found he was a very decent fellow and you could work things out with him. So a certain amount of governance is important and we were fortunate that we had it here.

DT: You mentioned space as an example of perhaps an issue. Was space within the hospital particularly contentious or problematic?

JN: Not in the hospital, but here. You're not in the hospital here, but you're here in departmental offices. Fortunately, I was that person...and that's the reason why, just between you and me and the fence post, I got the *whole* eleventh floor. Initially, that wasn't planned. Initially, I was only supposed to get what was in the Phillips-Wangensteen Building, but because of my position here, I insisted that our research laboratories had to definitely expand out, so we ended up with the whole floor. You try to do everything you can to build your department the best you can, with sometimes, maybe a little heavy handing. But if there were complaints, they were behind closed doors.

DT: Were there any concerns about nursing and other staffing levels in the hospital through the 1970s? There was a general shortage, at least in the state, of nurses and other health care workers. I'm wondering if that had any impact on the hospital itself.

JN: Not that I'm aware of.

Our surgeons were all out there. Many of them would leave. As we trained them, they would leave. For the most part, they'd go out to California. That's where the oranges are, and the good-looking girls, and the surf, you name it.

DT: [chuckles]

JN: That's kind of a dream that that's where you're going to go. There was a minor bunch that would go out to the East Coast, out in Massachusetts and that area, Boston and the like. Primarily, they'd go there for subsequent training and, then, they liked it and they stayed.

How did we get on that subject?

DT: I was just asking if there were any problems with the staffing levels in the hospital.

JN: Not that I'm aware of.

DT: According to my research, efforts began in the late 1970s to expand the hospital and to renovate and enlarge it, but there was some resistance from the State Legislature about building the new hospital. Can you comment on that at all?

JN: That's where Lyle French played a very important role. He was responsible for going there and pleading the case. They loved him and we got it. As I pointed out, we should have a huge statue of him somewhere, because these buildings that you're in, this one and that one, are related to the fact that he went to the Legislature and said, "We need doctors and we're not going to get doctors out in those small towns and whatnot... We have to train them and they have to be trained at the University and they can't be trained in the facility we have now. We've got to expand." The legislators listened and, for the most part, we got the money.

DT: It seems like it took quite a long time, though, for the hospital to finally be built. Lyle French started working with the Legislature to get permission to build the hospital in the late 1970s, but it didn't open until 1986.

JN: [pause] Well, things move slowly. What can I say?

DT: [laughter]

More space was needed to accommodate more patients and to facilitate the training of more physicians? Is that why the hospital needed to be expanded?

JN: I think that the state was underserved with physicians and that's the point that you were making. The only way you can change that, being the only medical school—at that time Mayo didn't have a medical school—is to increase the number of medical students. If you're going to increase the number of medical students, you have to increase the number of classes and the number of laboratories, and everything that goes along with increasing your medical school population.

DT: While we're on the subject of the hospital—it's jumping forward a bit—do you have any understanding about why the University Hospital was sold to Fairview?

JN: I don't know. It was one of the stupidest things they ever did. The idea was that they were going to get money and the money would be used by the [University] hospital to get better facilities. We were going to get a new MRI [magnetic resonance imaging] machine like the one we just put in down there, things like that. Anyway, we were going to get it and we were going to take advantage of it. So they sold it. We sold our soul.

What happened? The University grabbed the money and they—quote—beautified the campus, and that's where it went. So after we sold our soul, we got nothing for it and the devil was in our back pocket.

DT: What does it mean to have the hospital run then, not by the University but by a for-profit company?

JN: For a while there, they were being very penny-pinching. We were mad because we were sold, sold like slaves. But, in addition, the people that now governed us were bottom-line people. All they thought about was is it making money, you know.

We had a session today in our grand rounds where we were talking about volunteerism and going off to Africa. We have a place in Tanzania, et cetera, et cetera. Members of our faculty go there for anywhere up to five, six weeks and sometimes longer. Medical students, residents, we send there. All of those things cost money. What it does is it does something good for humanity. It doesn't do anything for the bottom line at all, except make it smaller. So for a while there, it looked like we were going to have to pull back some of our overseas activity, particularly in parts of Africa. But somehow or other, enough people on the faculty had gone or were going that they will save the situation. So they had a whole session for an hour and a half on what it's like now... various buildings we built over there as part of our extension. Students got up that had gone and spent four to six weeks in Africa and showed pictures and what it was like, and, even though they were just early residents, they found themselves in charge. You were the chief of surgery of this place, because you were better than anything they had. So it was good training for our guys. It was good for the people that were getting treated over there and it was good for our image.

DT: So Fairview taking over the hospital, then, really had a much broader impact on the Surgery Department and presumably others in the Medical School than one might assume?

JN: They did; they still do. It largely depends on who is the administrator over there. If it's a good administrator, then things go along smoothly and you don't notice any change. We've had some that weren't that good and were strictly bottom-line people. If we wanted to do something like our overseas commitments and whatnot, they would make it difficult for us to accomplish that.

DT: Having Fairview take over the hospital, did it change the way the Medical School then trained physicians? It didn't change the culture of training or anything?

JN: No. There's only one way to train them and we hope we do it the right way. It made no change there. Training physicians, you know, basically, it's you give them lectures. You take them to simulation laboratories to simulate operations or to simulate whatever. Then, you put them on the service and they're part of a team of doctors that circulate and see the patients. So this is all part of their training. Basically, it's part didactic and part on-the-job, if you will.

DT: With Fairview taking over, do you think it had any impact on patient care?

JN: Not that I was aware of. Our patient care is largely that you come in and you've got a problem. I see you in the clinic and set you up for a breast biopsy or for the removal of some organ or whatever. Then, that happens. You get treated. Then, you leave. It largely depends on whether you can pay. If you have insurance and you can pay, fine. If you've got Medicare... You're not that old.

DT: [chuckles]

JN: If you don't have any of these things and you can't pay, then, usually what we do is transfer you to Hennepin County [General Hospital] where they would take care of you and they take care of you very well, probably as well as we would.

DT: On this subject of patient payment, something that I'm curious about is it looked like in the early 1970s that the health sciences were trying to develop a health maintenance organization at the University.

JN: They were. Isn't it still there?

DT: Yes, think so.

JN: It's called UCare.

DT: Yes.

JN: It worked well. Again, it's something that I know very little about, because I don't get involved with that.

DT: You don't remember any of the discussion about setting it up?

JN: No, I don't. I guess I should, but I don't.

DT: That's okay. You had other things on your plate at the time. [chuckles]

Changing track a little bit... I want to go back to discussing your transplantation work and setting up the program and I want to spend some time talking about the important work you did developing antilymphocyte globulin [ALG]. Can you talk a little bit about why there was a need to develop a Minnesota ALG, what some of the scientific and clinical rationale was for that when you first started working on ALG?

JN: Basically, it started in San Francisco. ALG...it's a long story.

DT: We've got some time.

JN: The antilymphocyte serum goes way back. It goes back, actually, to the turn of the century. We knew that there was something that was better than what we were doing to suppress the immune response. It came from cells that stimulated the immune system to make an antibody; the antibody was either protective or destructive. So we knew it was there way back at the turn of the century. With time, we tried to develop it.

In San Francisco, what we found was that if we could make it pure, so pure that you couldn't eliminate it from your body, then we could inject it into you intravenously and you would be tolerant of it. Your body wouldn't even recognize it as being foreign, and you would tolerate it, and we could give it you over and over again. It turned out to be an *outstanding* immunosuppressant. We made it in horses. These were horses that we had in Golden Gate Park in San Francisco. So we were able to ride the horses on the weekend and, then, inject them during the week and bleed them. So it turned out to be a win/win situation.

Then, I came here. The fact that in California our veterinary campus was in Sacramento, which was a little better than a hundred miles removed from San Francisco, made it hard to get good cooperation. I came here and the campus is right next door, practically, so it made it very easy.

It's a long story. [sigh] Okay, the first thing we've got to do is we've got to get some good cells. Prior to that time, the cells to make ALG, antilymphocyte globulin, were cells that were removed from tissue that the cardiac surgeons gave us. When they would open up the chest to do an operation, they would take the thymus out and these cells were the ones we used. Actually, it was called antithymocyte serum for that reason.

Well, this was a very impractical way of doing it, so my thought was why not grow the cells? I know that they grow lymphocytes in Roswell Park [Cancer Institute, Buffalo, New York]. So I went to Roswell Park, learned how to grow lymphocytes, and, then, we started growing them. We grew them by the pound.

The next thing is we had to stimulate a horse to make antiserum, which was what we did by going to the farm campus: and, again, a win/win situation. We got the veterinary students to take the horses, which were being used strictly for gynecological purposes, for examination of the horses, so they were there, and we would then ask them to inject these cells that we were growing into the horses and, then, bleed the horses. The ones we asked to do that were all veterinary students and we'd pay them for it. So, again, a win/win situation. They did it; that helped us. They got money; that helped them with their expenses in veterinary school.

Then, I got Dick [Richard] Condie to work on it. He was able to make it very purified, so purified that, as I pointed out, you could put the antiserum into human beings or animals and they would not react to it. They would be tolerant of it. So you could use it as many times as you wanted. Well, we had the ideal situation.

We called it antilymphocyte serum, Minnesota antilymphocyte serum, and we started using it on our transplant patients. Our results became about fifteen percent better than anybody else's results in this country or in Canada or anywhere else. Everybody thought we were lying, because we could take patients and we could transplant them and sixty-five to seventy percent of them did extremely well, whereas they were lucky to have fifty percent with the commercially available product from Upjohn [Company].

So what happened was that they wanted our stuff. *We* could use it according to the FDA [Food and Drug Administration], but if it went outside of the state, it entered into interstate commerce. As a result, we would have to charge them for it. So we got permission to do that from the FDA. People would come and say, "You're getting fifteen to twenty percent better results than we are. We want the stuff." I'd say, "I can't give it to you, because you'd have to pull it outside the state." So we finally got that approved through the FDA. And, now, all of a sudden, everybody was getting good results using our stuff.

There was another product available by Upjohn, which was made from thymocytes, taken at the time of cardiac surgery, as I mentioned before, and stimulated in rabbits and horses, and it was *terrible*. Half the time, it worked; half the time, it didn't work. You could never predict. So what happened was when our product was out there, then the Upjohn product never did anything. So then the Upjohn people would go back to Upjohn and they'd say, "Are you selling our stuff?" They said, "We can't. Everybody likes Minnesota ALG."

Then we found out—I don't know if I told you this—that the FDA and the drug houses were in bed together. The drug houses would take the people in the FDA and they would give them trips to the Caribbean and things like this. So they were very upset with us and they went to the FDA, the Upjohn people did, and said, "Something's got to be done. We've got to stop the University's unfair competition." The FDA, being beholden to them, went ahead... We had one vial of ALG that had a leak in San Diego, which is something that could happen. When they heard about that, they shut us down and said, "No more ALG will be used anywhere." And we never got back on track again. We lost, and unfortunately patients lost, one of the best things that ever came down the pike.

DT: As I understand it from what you're saying, you, and first the people you had working with you in San Francisco and then here [at Minnesota], really created a new form of ALG that was far superior. So Upjohn had the competitor product that was on the market even in the 1960s. So why didn't Upjohn change the way that they were producing?

JN: They're not that smart. We were doing all kinds of things. It would take them at least five to ten years at that point to get up to speed with where we were. As I said, we were growing lymphocytes by the pound. This takes a fair amount of technique, which we got from Roswell Park. Then, we were making this purified product, which also is difficult to do, so it could be put in intravenously. They just wanted to use what they had, which stunk.



DT: For the Upjohn version, it had to be injected intramuscularly—is that right?—which is a lot more painful and difficult.

JN: Ours is not painful. Ours went into the vein. That's why we made it that way, so it would not be painful. You put a little catheter in and leave it in and, then, inject it into the catheter and that was it.

DT: Were there other medical schools, universities who were also developing ALG or was it just what Minnesota...?

JN: Others tried, but when they weren't getting the kind of results that we were getting, they would give it up and use our stuff. We would sell them ours. Cost recovery was all we were supposed to get, and that's all we got. Then, the FDA decided how much we could charge and that's the amount we charged. We were doing so well. We were also making money. We made enough money that we built a building that is still there [on the Saint Paul Campus], for \$15 million. We were doing very well. There wasn't an area we weren't successful in. There was a lot of jealousy going on.

DT: I understand that it's a difficult technique to produce ALG, but why is it that we were so successful here and it couldn't be done elsewhere?

JN: Because we were smarter than they. For instance, if you wanted to make ALG today, it would take you \$20 million to set up the equipment and grow cells and get the animals and bleed them, et cetera, et cetera. Putting the whole thing together would take you about \$20 million. That's before you would see a penny and it would take you about another ten years to get it approved by the FDA. So other people didn't do it.

DT: Before you were dealing with the FDA, I guess when you were in San Francisco and when you first came here, how were you funding the development of this? Was this through grants that you had?

JN: I had money in the department, which I could spend for whatever. I could build another office or another laboratory or I could make ALG. That's the nice thing about being the chair.

DT: Was there any question about whether you could patent the process for developing ALG? Presumably, because the ALG was already available with Upjohn you couldn't patent the product.

JN: We could have patented what we made, I suppose. I don't know why we didn't. We weren't into that. We were into making the stuff and giving it to people and getting people well and getting successful transplants. We never looked upon it as a business. That's the reason why we were so successful, I think.

DT: This was before kind of the culture in universities changed where there was a lot more emphasis on patenting with the passage of the Bayh-Dole Act in 1980?

JN: Oh, yes. Oh, yes.

DT: This was long before technology transfer.

JN: If you make something and you made it at the university, then you've got to patent it, and the patent goes to the university, and any profits that come from that will go to the university, and you'll get about five percent. None of that was of any interest to us at all. It sounds like we were just being awfully nice, but we were. The furthest thing from our minds was getting rich. We were plenty rich. We had enough money. How much is enough? We had enough. So that never was a consideration.

DT: The University administrators, they never... This was an opportunity for the University to gain, if they had decided to patent ALG, but there was never any discussion from them to say, "Let's patent this?"

JN: They weren't smart enough. Uhhh... No, there were never any discussions about it.

DT: I'm curious, why horses? Why were they the animal...?

JN: They're big, perfect, placid. They have these female horses over there that are used strictly for gynecological examination by the veterinary students, so they're all there. They have veins on them that are about that big. You'd put a syringe in there and pull out as much blood as you want. They're docile. They're just good. Cows would be no good. I don't know if you're ever looked at horses carefully, but they have *huge* veins on their legs and on their trunk. So we could get large quantities of blood.

DT: And cows don't have that same kind of vein structure?

JN: Well, they have it but they're all covered with crud.

The horses were perfect because, as I pointed out, the veterinary students were using them. There were several veterinary students who, eventually, got through veterinary school largely due to the money we were giving them for injecting the horses and taking blood from the horses. Three of them that I know of—I don't know how many more—eventually, after veterinary school, went to medical school based on the money that we had given them, because they were doing our work.

DT: It's really incredible to think of horses as being such good vehicles for producing this. Because they are so large and the veins, that's also, obviously, an issue and because they're so sizable, they're also producing that much blood, and that's interesting to think about.

JN: Yes. Somewhere along the line, we used to have a chart that showed a picture of a horse and how many liters of blood that was in the horse and how many liters we could take out at any given time. Then, we'd give it all back to them. You take the blood out and give them all the red blood cells back and you just keep the plasma, so the horse was no worse off than it was before.

DT: As you say, you were using horses that are already there. They're already being used.

JN: Already there, being used for another reason. So it's a win/win.

DT: It certainly sounds that way.

As I understand it—I think I got this from your book—you submitted an investigational new drug application to the FDA in 1970, and that's when they approved it for cost recovery. What I don't understand is why did it take the FDA so long in the process of actually approving it as a new drug?

JN: Why did it take them so long?

DT: Yes. Why did it only have status as an investigational drug and not as a legitimate new drug that could be bought and sold?

JN: Oh, well, that goes back to how they approve new drugs. You have to have so many trials, and you have to show all this [unclear], and you have to use a placebo, and you have to put it against the placebo, and we weren't willing to do that, because we knew it worked. Why would we give Joe Doe here something that doesn't work just because the FDA wants it?

Then, we were lucky, because several Canadians came down and they said, "We want to buy some of your ALG, because we see the kind of results you guys are getting. We're not even close. So we'd like to get some ALG from you." I said, "You can get the ALG only one way and that is if you conduct a trial in which half the patients get a placebo and the other half get the drug, and I'll be happy to provide you with the ALG. As a matter of fact, I'll even give it to you. I don't want any money for it. If you do that trial, that will prove once and for all the worth of ALG, which I can't do in full conscience, because I know it works." They were very pleased with that and they did it. They ran a study and it was wonderful. It came out that the people who got the ALG got the kind of results we talked about and those who got the false ALG got nothing. It worked out very nicely. The Canadians were happy because they got it for free, and we were happy because we had a double-blind trial done.

DT: Did you and the Canadians submit that data to the FDA in the hopes of getting the drug approved?

JN: Yes. I was published. Once you publish something, then it's part of the medical literature and, then, we sent it to the FDA. We were going to get it approved. As a matter of fact, as it turned out, had Upjohn not screwed us, we would have been approved within two, three months after that, totally approved.

What would that have done? I'll tell you what it would have done. We would have had a product that sells for a good price and we would have, then, been able to subsidize this entire department and most of the Medical School with money left over for the rest of the campus. It would have been like, I think it's Gatorade that [the University of] Florida developed and as a result of the money they get from Gatorade, it's, basically, paid for a hell of a lot of their education.

DT: And it would have helped, obviously, the patients who would have...

JN: Oh, it was, again, a win/win situation. The patients would have been helped. The University would have been helped. Everybody would have been helped. We, then, could have used the money also to do more research to develop other immunosuppressants, as well. It was right there. It was within our grasp before they shut us down.

DT: I understand the ethical dilemma in doing a double-blind placebo trial when you already know something works. Running those kinds of trials is also very expensive, too. Did that factor into things, as well? The ethics is big enough to cut you off from doing the trial, but I'm just curious because the expense is also really prohibitive, too.

JN: That's why we were happy to let the Canadians do it, and they were happy because they got the drug for free, so everybody was happy.

DT: When the FDA shut the ALG program down here, has there been any effort to revive it in other sites? Has that knowledge and technology been lost now?

JN: There is a man named Albert Moberg, who used to be in our department here. Apparently, he has been trying to resurrect Minnesota ALG. He came in and told me about it and I haven't heard further. He's trying to do it. Any new drug has to go through three phases. You go through phase one where you find out how strong it is, and phase two what the complications are, and phase three where you actually use it in trials. He's at phase two going on to phase three. God bless him. I hope he makes it.

DT: It's hard to comprehend how you can have a product that's so close to approval and that has beneficial effects and for these other reasons was kind of just taken out of the picture.

JN: I told you they were in bed together. I mean it's just rotten, rotten as can be, your government and mine. The FDA is the dirtiest bunch you ever saw.

DT: Did you and your lawyers ever try to pursue that side of it where...?

JN: Do you mean in Washington? Oh, my Lord, yes. We went back there. They tried to trip us up on this, that, and the other thing. We went back there for two and three days. They'd sit there and they'd ask us all kinds of questions trying to find some way to *legitimately* put us down, and they never could, so they had to do an illegitimate thing.

DT: Has Upjohn changed the way it makes the product?

JN: Uhhh... No. Why? I don't know. It's just a lousy company. But there is a product that's made in Europe which comes close to what we had. It's not the same, but it comes close.

DT: Can you talk about what it meant to you in terms of having the FDA investigate you and the role that the University central administration played in all the discussion and debate over ALG?

JN: Rephrase that. I didn't get it.

DT: Well, given that the ALG program faced a lot of scrutiny from the FDA and the NIH [National Institutes of Health] and the University administration played a role in that. I wonder if you could comment on that part of it.

JN: They were just crazy; they were nuts. It was very subtle. When the FDA put us down because of the leaky vial in San Diego, we were shut off, as I pointed out. Then, they claimed that we were doing it illegally, so, then, we were the bad guys. The government came down on us and the first thing they did was they said that they were going to sue us. They were going to take us to court for illegally selling – this is what they approved already – a product. When the word came down, it came down to the president's office. The president [Nils Hasselmo] and I were very good friends. The president used to use me to recruit people for him. He called me into his office and said, "We can't meet anymore, because of this." His legal advisor, who was a real asshole, if you'll pardon the expression, and is still on the campus, told him that what we needed to do is if they're going to sue the University—they'll come after you, the president—we need to get somebody very visible and put him on a flagpole where everybody can see him. Guess who?

So they took me to court. You've read all the court proceedings. They threw the thing out completely. There was no basis for anything, not *one* thing. We had to go through that, which was a \$2 million trial. I don't know if you know anything about trials, but what they do is they do a lot of funny things. One of them is that they have a trial and they bring in a jury and they have a mock trial. They had three of those with full juries of twelve people to find out where their arguments would be and how they would be received by a variety of people and the kind of questions that would come up. Oh! it was just... So, we had to sit through all of that in the courtroom. The judge finally threw the thing out and said, "This is the most ridiculous thing I've ever heard. Here they are *saving* lives. They saved 60,000 lives and you're going to try to convict him and you

gave him permission to do it and, now, you're going to try to...?" I'm sure you read all that. We were exonerated. All the jury came over to our house that night and we had a big party. [chuckles]

DT: That took four years to get that cleared.

JN: Yes.

DT: That's a lot of time and money.

JN: Absolutely. Tell me about it. That was my retirement, the reason I'm here still.

DT: Were you still operating at that time?

JN: Oh, yes.

DT: So you were able to still manage that despite all this work and stress?

JN: I'm a doctor and a surgeon. That's what I'm supposed to do. Nobody said I was giving malpractice.

DT: The president, as you explained it, with his legal counsel decided to kind of make you the center of the investigation. How did your colleagues and other University administrators react to this?

JN: They thought it was crazy. They couldn't understand it. Do you know that the University spent either \$7 or 8 million prosecuting me—my own University—that much money? They brought in these shyster lawyers from Washington and New York and brought them here first class, did everything in their power to bring me down. Those are my buddies over there.

That's because of this idiot, who is still here. His name is [Mark] Rotenberg, if you want to put it in your article. He's still here and, unfortunately, he's the dumbest man that God ever created, but, also, is an evil person. Why he's still here, I'll never know.

DT: The colleagues that you had that supported you, was there ever an effort to pressure the University to stop its action?

JN: I'm sure there was, but I wasn't aware of it.

DT: What about the senior vice president for health sciences? Some of the time it was Robert Anderson and, then, William Brody. What role did they play in this whole picture?

JN: They thought I was getting screwed. Anderson was on my side. Brody was just here. Did you see him?

DT: Yes.

JN: He came in and said it was just terrible. He felt so bad about the whole thing and about the University and what they had done to me. As a result, they [the University] tried to placate all of this by giving me a *chair* [John S. Najarian, M.D., Surgical Chair in Clinical Transplantation] in my name and a *lectureship* in my name and all the rest of this stuff that I didn't need or want. They realized that they were at fault. Brody said, "I can't believe that Rotenberg is still here." I said, "Go talk to the press and find out why. He must know something that we don't know and he knows that they can't get rid of him." The law firm he was in even dumped him. Anyway, there's a lot of stuff around it...

DT: Since you were exonerated—obviously, Rotenberg is still here—do you feel that you've been vindicated?

JN: I have to the extent of all the things that they keep giving me, but it will never be the same. You know, don't stab somebody and, then, put a large Band-Aid on it and say, "Okay. Sorry about that."

DT: Did you ever contemplate moving?

JN: No, this is my home. I came here for a reason. My kids were raised here. My friends are all here. Of course, they're all over, but many of them are here. Wherever I go, I'm recognized and the one thing that makes it easier for me is they all say, "Oh, we think you're so wonderful. You did this for my aunt," or "You did this for my father," or "You did that for so and so." That's nice. That's kind of one of the reasons why I stayed.

DT: I can imagine the whole experience was very difficult for you. It was an attack on you, but it was also, in many ways, an attack on the department. It impacted the department, I should say, the Department of Surgery, and the Medical School. Do you feel like there were consequences for the Medical School and for the Department of Surgery more generally?

JN: The consequences were that they screwed themselves out of a wonderful legacy and a wonderful fund that they could have had, as I pointed out. Other than that, I can't tell you.

DT: Going back in time a little bit, back to Lyle French. I understand that he stepped down in 1982. Do you have any understanding of why he decided to step down?

JN: He retired, didn't he?

DT: I think so. So you think it was just...?

JN: He retired and he was at an age where he was ready to retire and, then, he moved down to Arizona, if I'm not mistaken, and stayed there and continued to be active in neurosurgical circles and neurosurgical societies. He was president of several of them and whatnot. He was at the end of his academic time. All people aren't like me that just stay on and continue on forever.

DT: [laughter]

Do you have any comments to make about French's replacement, Neal Vanselow, as senior vice president? Did his arrival and his taking over the vice presidency...did you notice any change in things?

JN: Not from my standpoint, no. Neal Vanselow is a good man.

DT: What about changes in the deanship of the Medical School or are the departments largely insulated by changes in leadership?

JN: [pause] I didn't notice any significant change. No, I can't comment on that.

DT: This is, again, on the subject of transplantation that I forgot to ask you about last time. In 1984, the National Organ Transplant Act was passed. Can you comment on whether that had any kind of impact on the work that you were doing on transplantation surgery in general?

JN: Well, you know, we were responsible for getting it passed. What it did was it just made transplantation much more acceptable, and many more donors were available, et cetera, et cetera. It was all good. All good came out of that particular act and it was largely due to Jamie Fiske, who is on the outside of my book. On her case, eventually, her father pursued transplantation and, with the help of senators and representatives and Vice President [Al] Gore, at that time, passed the transplant act, so that people could be transplanted now. It was a very important step forward.

DT: Jamie Fiske was the first successful liver transplant recipient?

JN: Under the age of one.

DT: Yes.

JN: There had been one that was three years old. She [Jamie] was done at eleven months. They were told that she wouldn't survive that kind of an operation. I'm not the kind of guy that takes that lightly. So I told them, "If a liver becomes available, we'll transplant it and it will work," a pretty brash statement, but it did.

DT: As you said, her case was a hugely powerful symbol for pushing transplantation forward. I wonder, though, because there had been other young transplant patients, not



with livers but with kidneys...or was Jamie Fiske the first young person to really benefit from transplantation?

JN: No. I had done scores of kidney transplants in children who were between one and two. And I've done, the last time I saw it, over fifty in children under the age of one. As I pointed out before, liver transplants are a much more complicated operation. Prior to Jamie Fiske, there had only been one survivor...age three. She was eleven months. So it was very important. That just kind of opened up the field. If we could do that, then we could do anything.

DT: How long was it before other transplant surgeons were doing successful liver transplants on children and infants?

JN: Probably within a year, there were some that were being done. None as young as Jamie until at least over a year. Every one they tackled under the age of one died, because of the procedure or because of the disease or because of immunosuppression.

DT: As I understand it, now if surgeons are going to operate on children or infants, then it's now pediatric surgeons who do those surgeries? Is there always kind of a subspecialty of pediatric surgery or do other surgeons still do surgeries on children and adults?

JN: Well, there are pediatric surgeons. What was your question?

DT: I was wondering whether pediatric surgery became a subspecialty...

JN: It's always been there. It just hadn't been there for transplants. Pediatric surgery, I think, is about seventy-five years old.

DT: So for transplants, though, it's still predominantly done by a transplant surgeon? There's no kind of subspecialization...pediatric transplant surgery?

JN: No.

DT: It seems like transplantation surgery would be challenging enough, but then when you go on to such a young child, it raises that complexity to an even greater level.

JN: It makes it more difficult, yes.

DT: Is it just to do with the size of the child or other factors?

JN: It's primarily the size of everything. You're dealing with smaller vessels, smaller bile ducts, smaller everything, smaller ureters for kidneys, et cetera. You can't be a rough-and-tumble surgeon and do that. It's pretty precise work.

DT: One of the things I'm curious about...I was asking so many questions about Jamie Fiske and how many other young children had been saved by transplantation before her. What's always interesting for me as an historian is to think about which patients became such powerful symbols that there was kind of an organization mobilized around them that was successful in getting legislation passed. I'm wondering what made Jamie Fiske unique. Was it the fact that her father decided to take this forward and really take transplantation on?

JN: You gave the word...father. He was a hospital administrator, and he was damn sure that his daughter was going to get transplanted, and he got, as you know, the senator and Vice President Gore, et cetera, et cetera, et cetera. He was the driving force to get it done. Without him, it could have been a long haul before it got accepted. People had done some children, tried the transplants on children, and they had died. They certainly weren't going to be things that demanded the concern of the press. A couple of them made the press and, then, died, which even made it worse. So from that point on, most newspapers didn't even carry the activity if somebody did a kidney transplant and died. So what? The so what ended up with a father that's a hospital administrator. He was going to push it forward. He is probably the most responsible person for all those things that happened. They happened because of Jamie, but Jamie's father was the reason why they happened.

DT: And he had the connections. He knew where to go.

JN: He had the balls, if you'll pardon the expression. He didn't hesitate. He'd go to the vice president he didn't know. He'd go to the senators, et cetera, et cetera. He'd go to the head of the pediatric societies where he was going to talk about his kid who needs a transplant and things like that. Nobody else would have done that. He was possessed. As a matter of fact, sometimes, I wished he could calm down a little bit. Here I am, operating on a bunch of people and trying to run a department and the next thing I know, I've got Jamie Fiske on my lap and never stopped after that. [chuckles] I loved every minute of it though. My favorite picture...right there.

DT: Yes. That's a great picture.

With Hubert Humphrey being here and Walter Mondale being in Minnesota, two powerful members of Congress... Do you think having them here, and the surgery taking place here, that that also helped the cause?

JN: I don't know. My Hubert Humphrey life is entirely different being his doctor for the last six months of his life, which was a privilege that I will always cherish, but it had nothing to do with this. It was just another facet of my own career and an opportunity to take care of one of the real giants. I don't think it had anything to do with transplant. It just happened to be the same guy who did them both.

DT: There's one other question I have about surgery in general...

[break in the interview]

DT: I wonder if you could comment on any significant changes that you've seen taking place in surgery, surgical practice over your career.

JN: I couldn't even begin.

DT: [chuckles]

JN: There have been a jillion changes.

DT: What about in terms of technology? Could you comment on the technologies that have been used in surgery?

JN: Oh, yes, it's all different. I mean you're talking about an entirely new book. Today, it's minimally invasive surgery. We do everything through a scope and we do it with robotic arms. We do a lot of things we never even thought we would do. It's a rare case where we open things up and really go at it as we used to do. Now, everything is done looking up at a screen. People do better because of minimally invasive surgery. They certainly respond better. There have been a lot of changes in surgery from the beginning. When we would do your appendix, we'd make an incision that was this long and, now, we don't make any incision at all. We don't make an incision for hardly anything anymore.

DT: Speaking personally as a surgeon, when new technologies are introduced into the operating room, how easy is that for you to adapt to those technologies?

JN: You learn it real quick. The first one was the gallbladder. We started doing gallbladders laparoscopically. If you're not doing it laparoscopically and somebody comes in who needs their gallbladder removed, they'll ask you how it's going to be done, and you better do it the way that Mrs. Jones down the street had it done. She was in and out of the hospital in less than a day and had two little holes in her abdomen. There have been major changes in my surgical life.

DT: It seems like it would be a huge difference to go from having your hands in the body cavity, manually manipulating everything, to go to using laparoscopic techniques and robotic arms where you're not so in the body cavity, that you're kind of distanced from it.

JN: Totally. You can even be in another country. People have done that. A lot of that is showmanship and not necessary. But the beauty of it is that it can be done, and it can be done by you sitting at a console in one room and the patient in another room maybe in the same hospital or in another hospital and, as I say, maybe even in another country. These are just some of the magnificent things that have been developed in surgery. Our equipment is much better. Our instruments are better than they were. I think as important has been the fact that anesthesia has been so good. It's a *rare* case where a person dies because of an anesthetic issue. It's extremely rare. I can't even think of the

last one that was done here in the last five years. As a result of that, you have eliminated something that initially, back in the 1850s, was a major, major possible complication, namely the anesthesia that was to be used. So those things have all improved. Our instruments improved. Anesthesia improved.

DT: With the emphasis now on less invasive surgery, do you think that has changed the way in which surgeons need to be trained? Does it change who is best equipped to become a surgeon?

JN: No, it'd be the same people. You know today, kids play with video games all the time and they're very good at it. Well, that's all it is. You're doing the same thing in surgery. We're just looking at a screen rather than looking in a belly...the same surgeons, the same people.

DT: I was struck last week when we spoke and you mentioned about being concerned that if a surgeon has small hands, they may not be able to as effectively manipulate the body. I thought about it afterwards and thought, well, what happens then when so much is done by technology. Does the size of the hand matter as much?

JN: What we do today, even in our minimally invasive surgery, is we do make a hole big enough to put our hand in. So if you have a large hand, the hole is a little bigger. For instance, where we extract an organ, we find a suitable place, usually it's subpubic, just above the pubic hair or right in the pubic hair where it wouldn't even show, and, then, you put your hand in there and, then, you can grasp the organ and pull it out from there. That's the most common thing to do. In other cases, for instance in women, transvaginally you can deliver a gallbladder or a kidney or a variety of other things, going right up through the vagina and, then, get to a point just above the cervix and you can make a small hole in the cervix and you can go up and go to the stomach, go over to the gallbladder. You can go anywhere.

DT: At the time that you're doing that, you also have a camera in there that's helping you figure out where to go?

JN: Oh, absolutely. You have another port which has a camera and a light and you come up through this area. In women where you can go up through the vagina, you can actually do it without having another port. It's better to have another port, because the light is very important.

DT: It's amazing to think when you started out in your career that it was probably a big incision in the abdominal cavity.

JN: Gone are those days.

DT: Obviously, there are many benefits that you've already mentioned of minimally invasive surgery, but do you feel that something has been lost with the introduction of these technologies?

JN: Not really. For instance, today at rounds, we talked about a couple of cases in which something went wrong and made a hole in the stomach that they didn't want. They, eventually, had to go in, so it's important to be able to do both. It's not unusual to have to salvage a case by making a classic incision and opening things up, especially if you've got a bleeder going that can't be stopped, something of this nature that is forcing your hand for whatever reason. So you better be prepared to operate in the abdomen just as you do by looking up at a screen.

DT: Yes, so you need both sets of skills.

JN: Absolutely. I look at the laparoscopic just as an extension of what we used to do. Now, we do it with portholes and tubes.

DT: It's really fascinating. I'm visualizing all of this in my head. [chuckles]

JN: Go to the American College of Surgeons meeting out in San Francisco and in the exhibits, they always have some exhibit showing the various newer minimally invasive instruments and what you can see with them. If you're lucky and they think you're a surgeon, they'll let you get on the big one and manipulate it. It's very interesting. The entire body is. We should know more about our bodies than anything else.

DT: Before we finish today, is there anything else that you think is important to have on the record about the history of the Medical School and the Academic Health Center?

JN: The important things are that my predecessor, Doctor Wangenstein, who took over as chairman of the department in 1930, I think, had the attitude that research was important, an important part of the development of a surgeon, both for the development of his hands as well as the development of his mind. That made this school very important, as important as Johns Hopkins, which has a different way of training people than we do. I think that he was right and Hopkins is wrong and, little by little, they're changing. I think that's the reason why this is such a great school. [pause] I think that's one of the most important things that happened here, so I give him total credit for the foresight. The other thing that he did that was so important is he'd usually put three different people on the same project working them in different labs, with the idea that one of them was going to come up with it. Whoever came up with it that was his baby. He had anywhere from two to three people on *everything* and they developed the first pump oxygenator, et cetera, et cetera, right on down the line. So he did a lot of very smart things and I give him *all* the credit.

DT: Is there anyone else that you suggest that I interview for this project about the history of the Academic Health Center, anyone that you think would have interesting insights to share?

JN: One who would be kind of fun is Paul Quie.

DT: I've actually interviewed Doctor Quie already.

JN: Number one, he's one of my favorite people.

Who else around here knows a lot about this place? [pause] There's an old-timer here in ENT [Ear, Nose, & Throat]. I can't think of his name. Do you know who it is?

DT: Not off the top of my head.

JN: Oh, God, I can't think of it. Wait a minute. [Doctor Najarian retrieves a book and searches for the name.] I get a kick out of him.

Most of them are gone. They ran off and died or went somewhere else. Every once in a while, I run into one, but it's not here. They're out walking around Minneapolis or someplace.

There's a guy that could give you some insight on things, a very pleasant fellow. Philip McGlave. Do you know him?

DT: Yes.

JN: You've already interviewed him?

DT: I have not, no. He's on my list. Doctor John Kersey was...

JN: Very pleasant, very knowledgeable.

[long pause]

I think it's a guy named Frank Rimell. [Doctor Najarian refers to the doctor in ENT], but I'm not sure. He's an old guy who works in Audiology. He's been around here forever. Anyway, write that name down, Frank Rimell, R-i-m-e-l-l.

DT: Sure.

JN: I *think* that's his name. Don't get old.

DT: [laughter]

JN: It's awful.

Most of the good ones are gone. You know who might give you some insight... Did you ever talk to Jack Delaney in our department?

DT: No, I haven't.

JN: Jack Delaney did all of his residency here. He's totally retired, comes here on Tuesdays. He has a laboratory that he works in and does research work on various plastic materials for closing the abdomen and various other structures. Jack is much younger than I. I think he's only seventy-eight or seventy-nine years of age. Maybe he's more than that; no, I don't think he is. He has an office. I honestly don't know where it is, but it is here. He is a retired professor of surgery.

DT: Great. I'll definitely put him on the list.

JN: I would. He preceded me by quite a bit. He was here before I came. He did all his training here under Doctor Wangenstein, had pretty good ideas about the things that he saw. He'd be an *excellent* source for you.

DT: He sounds great, yes.

JN: As a matter of fact, when I first came here in 1967, he was one of the people that every time I had a concern about something and I wanted to learn more about it from somebody who'd been here long before I was, I would always go to Jack and he would usually give me the straight dope on it.

DT: Great. I'll definitely contact him.

JN: Yes. He's a slow speaker, so if that's good or bad for you...

DT: That will make him easy to understand.

JN: Yes.

DT: If you think of anyone else in the meantime, just let me know.

JN: Yes. I hope that Frank Rimell is the correct one. Now, if you want to speak to Frank Rimell, you could ask somebody there in the department.

DT: Yes.

Well, thank you so much for all your time, Doctor Najarian.

JN: You're more than welcome. I'm sorry I couldn't give you more.

DT: Oh! this was great.

JN: Many of the things, I wasn't privy to.

DT: That's useful to know anyway, just how much chairs had insights into.

JN: My life was over here, and all that was going on over there.

DT: Sure.

JN: I did see some of it. I hope I gave you some insights into it.

DT: You did. You've been fantastic. Thank you.

JN: Where will this appear?

DT: I will get this transcribed and I'll get you a copy of the transcript for you to go over and make any corrections you see fit. Then, once that's all finalized, we'll deposit a copy in the University Archives and make it available on the Digital Conservancy so that anyone who's interested in the history of the institution or the history of surgery will have access to it and will be able to use it.

JN: Did you ever read the Wangensteens' book on that?

DT: Yes. Yes.

JN: You did. That should have been helpful.

DT: It definitely was.

JN: *The Rise of...* It's right here. The blue one. That one there.

DT: That one, yes. *The Rise of Surgery [From Empiric Craft to Scientific Discipline]*, [Owen H.] Wangensteen and [Sarah D.] Wangensteen. Yes.

JN: Very good.

DT: Thank you.

[End of the Interview]

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