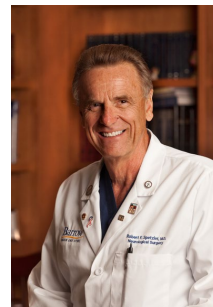




**ROBERT SPETZLER, M.D.**  
1944 --

**Honored as 2017 Arizona Historymaker  
World-Renowned Neurosurgeon**



The following is an oral history interview with Historymaker Dr. Robert Spetzler (**RS**) conducted by Diane Spatz Smith (**DS**) for the Historical League, Inc. and video-graphed by Diane Smith on December 8, 2023, at the Barrow Neurological Institute in Phoenix, Arizona.

*Original tapes are in the collection of the Arizona Historical Society Museum Library at Papago Park, Tempe, Arizona. Interview edited for clarity.*

**DS** This oral history interview is being conducted with Dr. Robert Spetzler on December 8, 2023, at the Barrow Neurological Institute in Phoenix. Dr. Spetzler is a 2017 Arizona Historymaker who led Barrow from a regional facility to an internationally recognized center of neurological excellence. He retired in 2017. The interviewer is Diane Spatz Smith for the Historical League. First of all, thank you for doing this interview with us today.

**RS** Diane, it's my pleasure.

**DS** We'll just start at the beginning. When and where were you born?

**RS** I was born in a little tiny town in Germany, which is close to Würzburg, it's maybe the next biggest city and then farther north, Nuremberg, but it was 50 inhabitants. And I was born there because this was obviously at the end of the war and that's where my mother was to protect her brood.

**DS** What was it like growing up in Germany after the war?

**RS** Well I left in 1955. So, I was – I was really 10 years old...

**DS** Mm-hm.

**RS** And I was a member of a family of six children, so we were sort of a nucleus. We had each other all the time and we had an extended family with my grandparents, my mother's parents and that created another source of unfettered love and attention. So, I always felt privileged growing up in Germany and all. I was protected from the real fallout of a nation that had withered, collapsed.

**DS** You nearly died from a tetanus infection, right? When you were little?

**RS** Yeah, when I was 6 years old. When I was 6 years old, I stepped on a rusty nail and sometime after that I began having all sorts of weird symptoms. They took me to the local physician and there was no diagnosis. And then I became worse and worse, and they took me to a specialist, and he diagnosed tetanus. I had stepped on this little rusty nail, and I had an appointment to go to the university hospital the next day. But that evening, when you have tetanus, you have these tonic seizures. You become sort of spastic. Your back arches. I bit my tongue into shreds. And, so my parents, because they were concerned, put me in the anteroom of their sleeping chamber and I slept there. But, when I had one of those attacks, I broke my mother's favorite vase that'd been in the family a long time and I expected some sort of retribution, but instead got a hug and tears. And in the middle of the night, they took me to the hospital because I was so bad and my dad had to keep telling me stories because as long as I was awake, I wouldn't have these seizures. And I got there, and I remember it very clearly, a room full of white coats that held me down so that they could cauterize where my little wound was from the nail. And I had progressed so severely that they didn't put me into the pediatric ward because they didn't expect me to survive the night. So instead, they put me in the storage room which had these iron lung machines because this was polio time, right?

**DS** Right.

**RS** So, these to my eyes naturally, they were monsters in this room and the little oval window, and I remember my mom crying at the window saying if he's going to die, let me take him home. But I was given this new drug called penicillin which came from the United States and obviously I survived. But I spent, I think, maybe three months or so in the hospital.

**DS** Wow.

**RS** And there's one more episode in that journey that had a bearing of how I treated my patients. And that was the professor who was in charge of my case rightfully felt a great deal of ownership. So, I was presented at a meeting of all the staff and the students, etc. To my 6-year-old eyes, it was a room that was vast, just an auditorium. And they put me on a little table on the stage and he unceremoniously just took off my gown. So, I was standing there, 6 years old, in the nude, incredibly embarrassed. So that he could show the reflexes. And that was just the way you

did it back then. I mean, there was absolutely no concern for whether this might be...

**DS** You were just an object.

**RS** I was just an object. And so that made such an impression on me that I hoped that I showed more respect to my patients than I might have, had I not had that experience.

**DS** I was about to ask if that inspired you to go into medicine, but I can't imagine how that experience would inspire you to go into medicine.

**RS** Not that – not that particular experience--but this whole thing in the hospital. My father was an engineer. My forefathers they were – they were in teaching or engineering, so they were academicians. Nobody was in medicine. But I'm sure that this episode had something to do with my being interested in medicine.

**DS** How did your family decide to come to the United States?

**RS** My father was a very well-known watch engineer. He had patents on the self-winding watch in Europe. He had a small factory. He had a couple of stores. And his partner absconded with all the money and went to South America. And so, he had a lot of offers to come to the United States by various watch companies because of his reputation. So, he left behind his wife and six children and came to the United States for a year to see if that was an appropriate place to bring his family and naturally, it was a terrific thing for everybody. He ended up being the vice president or vice chairman at Timex for research and development. So, he had a very, very good career.

**DS** Tell me about your mother. What was she like?

**RS** Well, my mother – my mother ran the stores. She was very much involved. She was a dental assistant, and then when we came over here, she really had her hands full learning the language and taking care of six kids.

**DS** What was it like as an 11- or 10-year-old to show up in LaSalle-Peru [Illinois]. Did you speak any English?

**RS** Not really. Not really, but my dad had a retired English teacher, and she was magnificent, and we would go over there during this whole summer period – during vacation and we learned rudimentary English, very, very basic. But I went right into 5<sup>th</sup> grade. And learned by being there. And it was – I – I - *[laughs]* it was always a positive experience. The fact that I had so

many siblings, never gave me that lonely feeling that somebody might've had if they were put in a new environment all by themselves.

**DS** You always had a support group?

**RS** Exactly. Exactly.

**DS** What was it like growing up in the heartland in a small midwestern city?

**RS** LaSalle-Peru was terrific for us. My dad worked at a company called Westclox, which back then was a huge watchmaking factory. And he was actually instrumental in automating watchmaking and on the trade magazine he was pictured as the person that automated making watches. We lived in a house which abutted the cornfield, and that cornfield provided a playground of many, many adventures. *[Laughs]*

**DS** Yeah, I had 15 acres of corn in my backyard. *[Laughs]*

**RS** It makes so much difference. It's so much fun.

**DS** So, when and why did you decide to become a doctor/neurosurgeon? I found your high school yearbook, and you said in the yearbook that you were going to be a neurosurgeon.

**RS** Yes, yes.

**DS** So how did – how did you come to that so early in life?

**RS** Well, you know, I like to say that it was a full moon one night and...

**DS** *[Laughs]*

**RS** ...wind was coming through the unairconditioned.... No, I really don't know. But I had a focus starting in high school that I wanted to be a neurosurgeon. And that led to a lot of decisions because I had made that decision. So I went to Knox College, and I did an honors project on blood flow in animals-in dogs, and I worked with the Thudichum Laboratory in Illinois, which was a state-run laboratory with Dr. Harold Himwich MD (Thudichum Laboratories) who was in charge there.

And then after college I went to Northwestern because Northwestern had the most prominent

neurosurgeon as head of their department. And he was instrumental because he then sent me to Europe as a medical student to visit some world-renowned neurosurgeons. And then he's the one that suggested that – because he was going to retire – that I shouldn't stay there for my training and he made a telephone call and I ended up in San Francisco training there, which was another just serendipity that all played a role in what I did, and which were all such incredibly fortunate events.

**DS** What years were you in San Francisco?

**RS** We went to San Francisco in 1972 and stayed there until 1977.

**DS** Very interesting years in San Francisco.

**RS** It was absolutely, absolutely. And there was so much around it. I mean, you could go down south. You could sail. We ended up buying a sailboat with a couple of other residents. Cheap sailboat. But we sailed – sailed on the bay. You could go skiing up in the mountains – tremendous years. Worked very, very hard because that's what residents do. Spent six months in Europe again in my residency, which also is very unique since that was the very first time that the chairman of that department had allowed that. And I talked him into it. So, there were a lot of really, really good things. We loved our time in San Francisco. We had our two children there. We got married there.

**DS** So very, very good memories for you.

**RS** Very good memories.

**DS** When did you decide to specialize in neurovascular surgery, which is a very distinct subspecialty of being a neurosurgeon, right?

**RS** So, I was attracted to what was the most challenging. And neurovascular surgery – operating on the blood vessels in the brain was considered the most difficult part of neurosurgery. And it was a great challenge for me and in San Francisco, I did research and spent time in that area of neurosurgery, all in addition to my residency, so, it was really right from the beginning that I was attracted to neurovascular neurosurgery as well as skull-based neurosurgery. They sort of go together.

**DS** After the University of California, you went to Case Reserve in Cleveland. What were your experiences there, and then follow up on why you decided to leave.

**RS** I was there for six years. I was a young attending; I had the opportunity when I finished my training in San Francisco to go to a whole number of places. I could've stayed there. My chairman had asked me to stay. But I was very eager to go someplace where they didn't have the expertise that I had acquired during my residency and that was called microsurgery. That was operating through a microscope. That was just the beginning of that era. And that person that had really created that was somebody named Yasser Gill in Europe who I visited as a student and then again as a resident. And Case Western did not have a microsurgeon. So, I was attracted there and that's when I went there, and I loved every minute of my six years.

**DS** What brought you here?

**RS** So, I was very young. At six years I had just become an associate professor. You go from assistant to associate to tenured. And I also had a pretty big ego and I thought I should be the next chairman even *[laughs]* though there were people much senior to me. It was sort of very silly. But, I had gained enough recognition that with all my presentations and my publications, etc., so that I was considered as a chairman in other places, and at that point in time I was actually negotiating with a university in New York, Einstein (Albert Einstein College of Medicine), when John Green--John Green was the person that really created the BNI (Barrow Neurological Institute). He asked me to meet him and one of his associates at a national meeting. And they had initiated a search, a committee to search for a new head of neurosurgery at the BNI. And they'd had somebody there from Harvard that was there for two years, but that venture failed. So, John Green was getting on. He was desperate to find somebody new. They'd already had the committee. They had somebody that was the leading candidate, and I was sort of a last -- somebody had mentioned me and so we got together and talked. Although New York was sort of exciting, it was really not my place. The Einstein University Hospital was in a place where you need armed guards to get in and out. So, I was never really enthusiastic. I was going to do it because it was a great academic opportunity.

So, John Green asked me to come and visit. And he said, you need to bring your wife when you come. I'd been to Einstein maybe five times. Not once did they ask my spouse to come. So, when I went home and I told Nancy that I was going to visit Phoenix, she said, "Well, if you're going to Phoenix, you're going without me."*[Laughs]* She remembered as a 10-year-old, being in Phoenix in July without air conditioning and *[laughs]* that was her memory. Well, John Green insisted that she come along, and we came and must've been September maybe or something. Absolutely gorgeous. People were so incredibly friendly. We made friends from that trip that lasted a lifetime. And, I had liked the challenge. It was a huge challenge. When academically speaking, it was something that nobody should attempt to build that up. But I was naïve. I was enthusiastic and I didn't understand the word no. And that's how we came.

**DS** Well obviously you were up to the job since Barrow has grown tremendously under your

leadership, from a regional center to an internationally renowned center. How did you accomplish that?

**RS** Well, I just came back from visiting Cornell and Columbia's visiting professor and my talk I gave was really my journey as a cerebrovascular neurosurgeon, vascular neurosurgeon. And my fortune has been serendipity, so many things have just happened at the right time. I also married somebody who knew what this was all about. She was a neuro-oncology nurse. So, in San Francisco we'd actually go to work together, come late at – home at night. So, I had somebody as my partner who understood what neurosurgery required and so she never took me to task for missing many of the social events that had been planned far in advance because I had to be at the hospital or in the operating room. And also, I could bring home any visitor at any time and be added on to the dinner table. So, she was the perfect partner. Remains the perfect partner. I adore her. But that made a big difference.

And so, when I came to Phoenix I also found somebody called Volker Sonntag who was in private practice--his program director and I were good friends. We went skiing all over the world together. He said, "He's a good man, you should contact him." Contacted him. Then became best friends. And he shared my vision of what to build. So, when I came, we looked around and looked at the best neurosurgeons that were in the area. We gave them the option of either coming in and joining us or we would find somebody else for that area of neurosurgery that I wanted them to specialize in. So, one of the key aspects of coming here was sub specialization. Dr. Sonntag ended up doing spine. Dr. Andrew Shetter worked in pain, and so on down the line. The reason for that is because if you subspecialize, you see enough of something that's not very common, so you can make a contribution. When you are a generalist, which is an important function all of its own, you will never get that opportunity to really be at the cutting edge and make a contribution to the treatment of that particular niche. So that was number one.

Number two was residents. I put all my effort to getting the very best residents and at this point in time, the BNI is clearly the number one residency program. It's the largest residency in the country, and people come from all over, including, naturally, many different nations all the time. And then the next thing and last thing was really academic productivity. And that meant publication. That meant research. That meant writing. So, it became very, very productive in that area. Got NIH (National Institute Health) grants and then the community became incredibly supportive with the women's board and – and the Barrow Neurological Institute board and it was all done in a manner of not expecting it, to really sort of go on this rollercoaster ride. And it was all done because it was fun. I would have the residents over every weekend. We would play volleyball. We'd go biking and so on. So, we'd build a real community of the residents. We always included the spouses, significant others, for when we had a visiting professor, or we had a party. When I went to Columbia and Cornell, the people that went out for dinner were all just the neurosurgeons, never the spouses. So, we built this community, and it was very important because residents got to know their counterparts outside of the hospital and, more importantly,

*From Robert Spetzler, M.D., 2023 Video Interview*

the significant others or spouses got to know each other so they could all lament at the long working hours, the hard work together, but they could support each other.

**DS** You're renowned for refining the cardiac standstill surgery for giant aneurysms that people think are inoperable. Can you describe that surgery and what it's like to have all these people in the room and all the – all the effort?

**RS** Yes, it's an incredible undertaking, and it was featured on numerous national TV shows. And what it really is – it's taking a human body and cooling it. Cooling is the most protective mechanism we know to protect the brain when there's no blood flowing. So, there are stories of a little 5-year-old in Chicago falling through the ice, being under the ice for 45 minutes, coming up, no heartbeat, no pulse. Resuscitated and making a complete recovery. The reason being is because cold shuts down the metabolism in the body. So, you're not requiring the constant oxygen. If the brain is without oxygen for seconds, for seconds, it will have irreparable damage.

This is reserved for the rare patient with an aneurysm at the base of the skull where the risk of a routine surgical approach would lead to an unacceptable risk of rupture of the aneurysm. This technique of cardiac standstill is reserved for patients who would otherwise be left to die. So, this was really the last resort. And so, what you do is you begin to cool the patient. The anesthesiologist does that. Then we have the cardiac surgeon put in pipes into the artery and into the vein in the legs and the groin and then that blood circulates through a machine that oxygenates it and cools it, cools the blood. So, it takes the blood, cools it, oxygenates it and brings it back in the body. As the patient's temperature continues to drop, the heart will stop on its own. And so now you're dependent only on this machine and you keep bringing that temperature down until you get to the target temperature which is somewhere between 12 to 15 degrees centigrade. And then you stop the pump. You sort of drain out the blood. Now I'm able to look with my microscope deep down into the brain. See this monster that we're treating and that monster collapses. So that I can fold it together, bring it together, and eliminate it with clips.

And then the process is reversed. That machine starts up again, but now instead of cooling, it heats until the temperature gets high enough and hopefully the heart starts on its own. Sometimes it has to be shocked until it's back to body temperature. It's amazing because there's so many things attached to the patient. So much technology in the room to make it possible and naturally there were always people from around the world that wanted to witness it.

**DS** I imagine there were a lot of people in the operating room.

**RS** Yeah. Usually between 12 to maybe 18. Anybody else had to go downstairs and watch the monitors. It was not without risk. There were serious complications up to 25%. But it was that or no chance.



- DS** You said you put a clip on it. Was there a clip that stayed in the brain?
- RS** Yeah, yeah. It's like a balloon on a blood vessel. It's like in the old days the tires bulging out of the cars. Do you remember that?
- DS** Mm-hm.
- RS** And so, that balloon is clipped off and the blood vessel underneath it remains intact.
- DS** And so there's a physical...
- RS** Correct.
- DS** ...like a – like a hairpin or something.
- RS** Right. Yes. Yeah, yeah. Yeah, tiny little clips that were this small or smaller.
- DS** You did far more of these than anybody else.
- RS** Yeah. I pretty much did the vast majority in the world except for people that did one or two and usually didn't succeed very much. Because you needed the full team. It wasn't just me by any means.
- DS** I've read that it's not done so much anymore because of medical advances?
- RS** Correct.
- DS** What advances have been made?
- RS** You have abilities to drop the blood pressure now with just mild cooling to the point where you can get some of these lesions done. You have endovascular techniques where you put in pipes through the groin, or you fill up the aneurysm with what are called coils. So, the new technology also has its problems. But it's certainly the reason why the cardiac standstills have become very uncommon.
- DS** Mm-hm. But they were incredible for their day.

**RS** Oh absolutely. Yeah.

**DS** What's the most challenging surgery you ever performed?

**RS** I had so many cases that were sent to me from around the world that were truly, truly challenging. So, there are some that stand out. One was a young girl who ran across the field, at a rodeo show and a tractor ran over her head. She survived to make it to the hospital because the earth was soft, so part of it was – but she had created what's called a pseudoaneurysm. She had created a tear in the artery at the very base of the brain. And this was at a time when we had a national meeting here -- the reason she didn't die is because the blood clot tamponaded that tear in the artery. And so, the only thing I could think of, this we needed to use cardiac standstill so that I can remove that and fix it. And so, this was actually being televised to the audience when the parents agreed. And this little girl who had no chance in the world, made a complete recovery.

**DS** Wow.

**RS** So that's one. There are so many others. We could spend all day here.

**DS** It goes without saying almost all the surgeries, all the people who came to you because nobody else could do it.

**RS** Yeah.

**DS** How do you prepare for these incredibly complex surgeries? And you have all these people in the room and all these procedures going on and – and not running into each other...

**RS** So, I have a very relaxed operating room until I need everybody's full attention. And the reason I do that is because nobody can focus for 8 hours fully. I want them to be able to talk, etc. I – I allow that. So, when I ask their full attention, the anesthesiologist, the nurses, etc., they give it to me. And they give it to me 100% and that makes a very big difference. So, it's more relaxed. How I prepare is--I've had many sleepless nights. And my mind goes through the case over and over again. And what could go wrong. So, in a sense, I prepare myself for any eventuality and it gives me the opportunity to be prepared in a way that I wouldn't be if I didn't have those sleepless nights. So, I think that's how I prepared.

**DS** Amazing. You talked about the mental focus. But you're there for hours. I'm sure you need mental focus...How do you have the – the physical stamina and – and the mental stamina to...

- RS** It's never a problem. When you're looking through the microscope through those tubes and you're looking at somebody who's placed their life in your hands, time really just disappears. You can feel completely empty at the end, but while you're doing it, time really is not of essence.
- DS** You enter another universe, sort of?
- RS** Yeah. You're really – it's almost being like hypnotized. You just don't see anything else except the world that you're in.
- DS** Interesting. How do you cope when you lose a patient? I can't imagine.
- RS** You cry. You cry – and – on the inside. I'm north European. I'm stoic faced, but you cry. So, when you're visiting professor, you talk to the residents at those institutions, so just a couple of days ago they always ask the same question. And I say the most important thing about a complication is that you learn from it. We have what are called complication rounds, morbidity, mortality, where we present every case where something untoward has happened in the patient. And then we dissect it. Not in any accusatorious way, but rather about if you had to do it over again, what would you have done different? That is an incredible learning process. And this learning to go step by step through a case and visualizing what you're going to do if you're confronted with the same problem makes you a better surgeon. Before you start a case, you're mandated to have a pause. A pause is where you're with the anesthesiologist and the nurse and the resident and you agree that you're on the right side. That this is indicated, etc. And then I add a pause at the end of the procedure, and I ask the resident, if he or she were to do this case again, what would they do different? Make the opening smaller? Make the opening bigger? And that way you really constantly improve to the benefit of your future patients.
- DS** That's interesting and that it is in a non-confrontational....
- RS** It has to be non-confrontational because otherwise people become afraid. Yeah, I've never yelled at anybody. I've been unhappy with them. I've had to fire people. But I think we all live in glass houses, so we've got to be very careful before you hold people to a standard that you yourself aren't living up to.
- DS** What were your favorite parts of your job?
- RS** I would say my favorite part was rounds, which I held every day, three days out of the week, most days, and Dr. Sonntag the other two days. Where all the residents and attendings that were available, we would sit down in a room. We'd go over cases, but we'd also discuss anything

under the sun. Whether it was politics, whether it was religions, and because we had so many international visitors, there was always a – a NATO feeling.

**DS** Hmm.

**RS** And so, there were spirited discussions. And it was a really neat interaction of some very, very bright minds that were there. And to see them, that sort of, moment of recognition, that yeah, that person might be just right about that and learning. It was delightful. And naturally I love teaching. I loved my patients. And I loved surgery. So, there was really no aspect to my day except potentially some – some administrative function that I didn't enjoy.

**DS** Yes, I noticed many interviews that I read, you talked about teaching and how important it was to – to teach and – and pass the knowledge on.

**RS** Yeah.

**DS** And I was interested when you described the rounds. Because we all have this image of all these people standing around a patient's bed and then tromping to the next bed...I don't know if that's accurate or not.

**RS** We did that as well. But that was a smaller group where we went to see each patient. But the rounds I was talking about are really the rounds where we're reviewing what we've done and we're looking at what we're going to do and we're reviewing cases that are sent from around the world with questions and we have this dialogue that's outside of medicine as well.

**DS** I've read that you had a piano in your office.

**RS** I did.

**DS** How did you come to play the piano? What's your favorite music? And what did – what did that bring to your life?

**RS** Oh my goodness. I started learning piano probably ten, so I ended up teaching piano and at one brief moment I actually thought about becoming a pianist when I realized that it's much, much easier to become a world-renowned neurosurgeon than a world-renowned pianist. *[Laughs]*

**DS** *[Laughs]* Okay, if you say so.

**RS** But the world of piano opened up a lot of vistas for me. Because I made a lot of money teaching.

I would teach after I went to high school and then for two or three hours, I'd be teaching. I made enough money so I could buy a horse, secretly at first from my parents. I ended up with multiple horses.

**DS** *[Laughs]* That's pretty hard to keep that a secret.

**RS** I organized it all. And I bought this horse at a stable that had cut its foot and they thought it would never be rideable. And I brought it back. I think I paid \$50 for it, \$60, about that, because they didn't think it was useful anymore. So anyway, horses became a big part of my life. But it's the piano money that I made that allowed me to do that. Music has been very important. Nancy is a flutist. So, every year we would perform for the women's board, or in Japan in front of a huge neurosurgical organization, couple of thousand neurosurgeons. And I still regret to this day that there's not one piece of music where the flute accompanies the piano. It's all *[laughing]* the piano accompanying the flute. But we had a lot of fun together.

**DS** So, was your family musical?

**RS** My father was musical. Yeah, yeah. Not anywhere to the degree that I became. But he was the one that had a piano in the house. He's the one that urged me on and sometimes we would listen to a record, like a Beethoven symphony and we'd follow the notes like a conductor, you know, going through the thing. And we played four hands together. Nancy and I just came back from New York, as I mentioned. We went to the opera, yeah, we enjoy music a great deal.

**DS** So you had a piano in your office here?

**RS** Oh yeah.

**DS** So did you use it to release tension?

**RS** Yeah, yeah. I'd use earphones so they couldn't hear me.

**DS** I want to move to a whole different part of your life.

**RS** Okay.

**DS** Which is a very important part of your life. And it's your love of athletics and it's not the common stuff. It seems every sport you do is the amped-up version. Mountain biking, mountain climbing, heliskiing. Tell me about that and why that's so important.

- RS** And again that's something I discussed with the residents just a few days ago. For me, it was the counterweight to the intensity that neurosurgery required. Everybody has a different way of dealing with the stresses in their life. And Nancy and I played a lot of tennis together, social tennis. It was great fun. But then I found biking, and I had this group that would bike every weekend. There was a whole period in my life where I'd bike back and forth to work. And we entered a lot of competition like the Tour of Tucson, Tour de Phoenix, Tour de Scottsdale, and I entered one race called LoToJa, which is Logan, Utah to Jackson Hole, Wyoming. It's 207 miles.
- DS** *[Laughs]* That's a long way.
- RS** Three mountain passes.
- DS** Well, yeah. It's not flat.
- RS** I won my age group twice. My greatest accomplishment in the athletic world. *[Laughs]* Yeah. Skiing was another. Everything I did really I shared with my family. And they all love to ski. And the highest achievement in skiing really was having the financial wherewithal to go heliskiing. And heliskiing was where you go up in the mountains and a helicopter takes you up and you come down fresh terrain all the time. And it's absolutely magnificent. So yeah. I was a swimmer in college. It was all fun. But we can't leave the sport world without one incredible ultimate dismal failure. And that was in our 70s, Nancy and I decided we would take up golf. And this little white ball that sits there not moving.
- DS** Very frustrating! It won't do what you want it to do.
- RS** Very, very frustrating. *[Laughs]*
- DS** *[Laughs]* Were you brought up in a family that was very physically oriented?
- RS** We were all athletic; my oldest brother was a long-distance runner. He held the record in Illinois for a number of years. My next one was a swimmer. I took after him. Yeah, we were always physically active.
- DS** I've read that every year you led a rim-to-rim Grand Canyon hike with your – with your staff or your residents or?
- RS** So, this was all part of that trying to nurture an environment where we got to know each other outside of the hospital as well as in it. We went across the Grand Canyon with some friends,

Nancy and I did. Very early when we came. I thought that it was almost a spiritual thing to go down into that beautiful canyon through the ages of the rocks, when history happened. And it was a physically challenging hike. So, the next year, I organized the residents and anybody that wanted to come, and my colleagues joined. In the end we had people from Europe, neurosurgeons that would come all the time. I've crossed the Grand Canyon 34 times. Nancy did it 33 times.

**DS** That's a pretty ambitious hike. People would have to prepare for that.

**RS** Oh absolutely. My mandate was that anybody that was going to join us needed to climb up Piestewa Peak three times in a row and know that they can do that three more times. Otherwise, they had no business in going.

**DS** Why did you decide to retire?

**RS** So, I wanted somebody to come and replace me that could complete the journey or continue the journey. And I didn't want to be somebody that would just hold on and prevent somebody else from really rising. So, what I did was we attracted Dr. [Michael] Lawton, naturally, who had trained here and then went to UCSF, which was my alma mater. And he actually went there when they offered me a position, as did Stanford and – and Hopkins and Columbia, etc. But I loved it here. And so, I was going to retire, and a resident came to me and says, "Boss," he says, "please don't retire until I finish." So that's why I retired at the end of an academic year, which is the end of June. And I was still the person that any one of my colleagues, if they ran into any sort of trouble, they would run to me to come over and talk, all which I did many times during my career. And I didn't think my ego would take people going around me. I wanted to leave while I was on top, not when somebody put their shoulder on my arm and says, Robert...

**DS** It's time to go.

**RS** ...it's time to go." Which I had to do with my predecessor, which was very difficult. So, I retired at the age of 73, 73 and a half. I actually wasn't planning on retiring. I told Michael Lawton after he'd accepted the position that I would take a six-month sabbatical and then come back. I wanted to give him that six months without my being present so that he could establish his leadership. At the end of six months, I looked in the mirror and I liked where I was. I could never understand how I found time to do surgery because during that sabbatical *[laughs]* I was...

**DS** Obviously you're enjoying your retirement.

**RS** Oh, I love my retirement. Yes.

**DS** So what are you doing?

**RS** So, take this morning for example, first 2 ½ hours were conference. I still get requests for opinions from around the world and from my colleagues in the U.S. And I try to support Michael in any way I can. And I still go around the world and teach. I'm not really sure why they keep asking me. *[Laughs]* But I think they – they sort of like to hear about how we did it.

**DS** Mm-hm.

**RS** It's not much different from the interview. I just came back from Italy where I was the honored guest and really it was, "How did you do it?" And I think that's probably why they keep asking me.

**DS** What do you see as the future of neurosurgery? I had no idea that things were moving so fast. What do you see in the future for your field?

**RS** You know, neurosurgery has always been a specialty that has been populated by leaders. By that I mean, radiation which is a tool, it was the neurosurgeons that took radiation and focused it in such a way that it would become a very sharp point that could penetrate and treat lesions inside the brain. Neurosurgeons are the ones that are leading the incredibly active area of endovascular surgery where you put in the coils and the pipes. Neurosurgeons are developing this spinal instrumentation, this technology for helping people with terrible back pain.

There are almost an infinite number of subspecialties. One of the most exciting being functional. Functional means that, for example, if you have Parkinson's, you can put a little electrode in the brain and eliminate a lot of the symptoms. Much more exciting are the little implants that go in that are connected to computers that can make a paralyzed arm work again. This field is so wide open. There's so many exciting things that are going on. Whenever I hear somebody being down on neurosurgery, I remind them actually how incredibly exciting this time. I wish I could do the next 50 years because robotics, imaging, I mean, it – they're all going everywhere. My son, who is president of Cares which is a molecular profiling company, it's something that really comes down to personalized medicine. And our ability to look into the body and detect problems way, way before they become physically a problem...

**DS** Mm-hm.

**RS** ... is going to change the way medicine is practiced. But neurosurgery, because of its leadership abilities, will continue to play its leadership role.



- DS** It's on the cusp of so many things that were thought to be impossible.
- RS** Yeah, yes.
- DS** That must be very satisfying for you to know that you brought it so far. You build on whatever people have done.
- RS** Yeah. I think that it's just incredibly important for anybody that's been successful as opposed to all the criticism that Obama got with the plumber. We do stand on the shoulders of everybody else that has come before us. And I have been a big weight on a lot of shoulders. Yeah. And you never do it alone. Neurosurgery in the past used to be a solo practice. The neurosurgeon dealt with terrible outcomes all the time. Today, it's a group. It's a team. And unless every member of that team is really excellent, you're not going to get the results that we all want.
- DS** That sounds very exciting. You've received too many awards to even mention. It'd take sheets and sheets of paper, but which ones are the most important to you and why?
- RS** Maybe what I just received for my birthday from my granddaughter who put together pictures says, "Dear Opa, this is why I love you." And one tear-jerking thing after another. It was so beautiful because it represented the kind of person that I aspired to be, but naturally all aspirations fail in their ultimate goals. And professionally I've gotten it all. In neurosurgery is an award that's the honored guest of our big association. I was the youngest member to get it. And for the very first time in history, they gave it again and that was just a couple of years ago, which was very unique and – and – very humbling. But yeah, I don't take them very seriously because my biggest award, besides my family, is when I see all my students, all the residents and fellows and visitors that have come, go out and practice the very best neurosurgery there is.
- DS** We've probably already talked about this, but I want to put it in one paragraph. What is your proudest accomplishment?
- RS** I think professionally it's the program that I've created, the teaching atmosphere, the success of the residents, and on the other hand, is that despite my commitments professionally, we have a terrific family.
- DS** Yes, I wanted you to talk about your family and how you found time for that part of your life. I saw [a video of] your children talking at your retirement dinner.
- RS** Oh! *[Laughs]* Yeah, I'm very proud of them. Very proud of them. Those were tender moments.

Yeah. So, I purposefully did not do anything like golf, when the kids were young because the time that we had free, we went hiking and did things as a family, to the very best of our ability.

**DS** It was clear how much you love your grandkids. I watched another interview where one of your grandkids photobombed the interview *[Laughs]*...

**RS** Oh! *[Laughs]*

**DS** So you've told me how you've – you've met Nancy and the influence on her life and your family.

**RS** You did – I did not tell you how I met Nancy.

**DS** Oh, you didn't tell me how you met.

**RS** No, no. But - and it's a cute story.

**DS** Tell me about that. It is a cute story.

**RS** She was a student nurse at Northwestern, and she had one job and that was to take care of a 10-year-old patient, a young man with a tumor inside the brain stem. The brain stem is the part of the brain where all the function travels through and it's as big as your thumb. And that tumor was untreatable. So, I was in conference, and I received a page and that was Nancy and she paged me out because I was the last one to write orders in the chart as a medical student. And this was the first time she'd ever paged a doctor, even though I was only a medical student.

**DS** *[Laughs]* You were a doctor.

**RS** So I came, and I went on the ward, and she started saying I think Dillon is dehydrated and I didn't say anything. And then she would just give me every fact on – on poor Dillon. And she ran out of stuff to say, and she finally said, "Well? What do you think?" And I said, very uncharacteristically for me because I was really quite shy, and I said, "You have the most beautiful eyes of anybody I've ever seen." And she said, "Well, back to Dillon...." She went back to the apartment that she shared with her student friends, and she said, "I found the man I'm going to marry." *[Laughs]* And that was it.

**DS** That's wonderful. I don't know how to follow that up because it's such a sweet story, so I'm going to change and go to another topic entirely. Do you have any advice for young people today?

**RS** I've always been a little wary of advice because most people don't take it in the first place. And I've been given so much advice that I've never taken. But yes. I share with the residents a number of things. So, for example, when a resident finishes his program and is going to go out and treat patients as the neurosurgeon, I say, for the first few years, be sure you take on cases that you feel comfortable with. What you want to do is you want to establish your competence, as it relates to referring physicians and your colleagues so that you get a reputation of being good and solid before you take on cases where the risk becomes significant. I also advise that the day always goes easier with a smile rather than a frown. And I advise my residents that they are in the very, very best specialty and they should enjoy this journey because there is no destination.

**DS** What do you want your legacy to be? How do you want to be remembered?

**RS** Oh, you know what? Nobody remembers. And I think my legacy is in my children, my professional children and my personal children. I wish you could be there in one of the rooms like the honored guest. They have a dinner which – the people that you've trained, etc., very good friends come. It is just so incredibly rewarding and humbling.

**DS** Is there anything else you want to talk about?

**RS** *[Laughs]* I have talked with you more than with anybody else about my story.

**DS** Well, this is a very different kind of interview than what you usually do. I really want to thank you for doing this. We were so privileged to have you in 2017 and I'm happy that you agreed to do the long [interview] version again with us. I was very excited to be able to do this.

**RS** You've been absolutely terrific.

**DS** Well, thank you, so have you.

[END OF RECORDING]