Department of Surgery History Interview
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This interview presents Dr. Scott Levin, Interim Chief, Division of Plastic, Reconstructive, Maxillofacial and Oral Surgery, Department of Surgery, Duke University Medical Center. This interview takes place in Dr. Levin's office in Duke Hospital South. Interviewer is Dr. James Gifford.

Good morning, Dr. Levin. Perhaps we could begin by having you tell us something about your own personal and professional background, highlighting those factors that led you to your current career choice.

Well, thanks Dr. Gifford. First of all, whether this is included in the text or not, I just want it stated for the record, that based on the background you have given me, I consider this interview an absolute honor that I would be able to b e included in such an important document, specifically, that which you are fabricating. As you can see on my wall there, there is a picture of Dr. David Sabiston on your right, and, really, I can trace my routes, in answer to your first question as to how I got to be here, by a long relationship with Duke University and just tell you that I think Dr. Sabiston has been the role model for all of us in the Department of Surgery, and has really carried with him, as you know, the lineage of the excellence at Johns Hopkins under Dr. Blalock, and continuing the Halstead tradition here at Duke, and making Duke, obviously, the finest Department of Surgery in the country, and I feel very strongly about that. Despite the fact that the batan has shifted from Dr. Sabiston to Dr. Anderson, be assured that all of us who have been here for some time still look to Dr. Sabiston and I am sure, including Dr. Anderson, as the beacon of excellence which we continue daily.

My relationship with Duke started in 1973 when I came here as an undergraduate student from Philadelphia. And I looked at a number of Ivy League schools, and just on a whim, drove south with a high school classmate, that he wound up ultimately going to Princeton, and I came to the Harvard of the South, Duke in 1973. I majored in zoology and actually in

1974, I had my first job in Duke Hospital reading cardiac oscilloscopes in the Intensive Care Unit in old Duke South. And, from there, I got a part time job working my way through school as an orderly and a guy who mopped the floors in the Emergency Rooms in 1974. And people like Randy Chitwood and Bill Meyers, and others, were just interns and young residents at that time, and got a glimpse into the Department of Surgery as far back as back as 1974. At that time, I met Dr. James Urbaniak, who really just starting the hand and digital replantation program at Duke, and started to work in their laboratories as an undergraduate on various projects related to microvascular surgery, digital nerve repair, and really, as a young man, became fascinated not only with surgery, but surgery of the hand, and orthopedics. I finished my undergraduate degree in 1977, I stayed on for a year of graduate school, and ultimately left Duke (was not successful in getting into Duke Medical School) and graduated from Temple University School of Medicine. I had the greatest love for Duke Medical School at that time and was honestly disappointed that I could not matriculate in the medical school. Nevertheless, at the end of my career at Temple University in 1982, I had several interviews for orthopedics. I always knew I wanted to go into Orthopedics and do Orthopedics, reapplied, and Dr. Leonard Goldner, who new me from my undergraduate days, said: 'you have a position'. I had also been accepted at Rush Presbyterian in Chicago and again, on another whim, despite being rejected from Duke Medical School, knew the excellence that existed in the Division of Orthopedics under Dr. Goldner, and decided to come back to Duke. The prerequisite at that time was two years of general and thoracic surgery training before orthopedics, and honestly, I didn't even know who Dave Sabiston was all my years as an undergraduate student. But very quickly came to know him and understood the excellence in the outstanding department which I became a part of. In my early days at Duke in 1982, were rotating through all the surgical specialties in urology, etc. and those I were, I would say, the golden days of the general and thoracic experience for the sub-specialties we really functioned as general surgery residents. Today, because of constant economics and health care changes, and manpower changes, the curriculum, if you will "PGYI or intern may have changed. For example, in orthopedics now, we have gone to a one year primer in general surgery and followed by orthopedic training. Well, I had two years of general surgery and I have written Dr. David Sabiston several times as to how

grateful I have been for those first two years of my training which really not only made me a good physician, but showed me the standards of excellence that one needs to have to be good at what they do. I then moved into Orthopedic surgery under Dr. Leonard Goldner, and subsequently, Dr. Goldner who was very much a father figure to me, retired. Dr. Urbaniak, at that December interim point in time took over, pretty much at the time that Don Serafin became Division Chairman for the Division of Plastic Surgery to succeed Nicholas Georgiade. Dr. Goldner and Dr. Georgiade, of course, were very prominent in their day, and carried their divisions with greatness both in clinical work and in research. And, proceeded always knowing that I wanted to do surgery of the hand but certainly needed to get the broad scope of orthopedics under my belt. And, when Dr. Urbaniak took over, he made it clear to the people interested in hand surgery, that if you wanted to pursue a Fellowship in Hand, you would have to do that outside of Duke. In other words, if I can't teach you everything I have to teach you about Duke hand surgery in four years as a resident, then you are not paying attention or I am not doing a good job. So, when I got to be Chief Resident, the options to stay at Duke as Dr. Goldner had for people interested in hand surgery in previous years, didn't exist. So, I was faced with the issue of leaving Duke to pursue a Fellowship. Along the way, an evolution took place in the arena of microvascular surgery or free tissue transfer. In the early seventies, Dr. Serafin, and Jim Urbaniak, from different vantages were doing replantation of hands and limbs, but really, through Dr. Sabiston's decree, as I understand things historically, the orthopedic microsurgeons, as they were known, really did the hand and digital replants and a lot of the hand trauma, Dr. Urbaniak was certainly a pioneer in free tissue transfer, but as time evolved, Plastic Surgery became the division that was doing more and more free flaps, or free tissue transfer, (transplanting tissue from one part of the body to another part of the body), and I had a very keen interest in microsurgery. And hand surgery is a subspecialty, if you will, that is practiced by both orthopedics and plastic surgeons. So with this change in microsurgical teaching, I said: "Where can I go to become a great microsurgeon, like my mentor, Jim Urbaniak?" If it is not at Duke in orthopedic hand surgery training, maybe I will stay, or consider or was encouraged appropriately by Don Serafin to do a full plastic surgery residency which I applied for and was accepted. So, the fact that an orthopod would become a fully trained plastic surgeon starting at the

bottom of the heap again, was a very unusual, almost unprecedented, almost unheard of career move. But I had a vision that this would make me an individual which is what I am now, who is not only fully trained in orthopedics, but fully trained in plastic surgery, and the dimensions that plastic surgery added to my education, my skills as a surgeon, my technical ability and my ability to do free flaps or free tissue transfer, is just a very, very good thing. In other words, I have grown as an individual by leaps and bounds again through the efforts of Don Serafin accepting me into this program. I was a wild card, there had never been an orthopod in the division of plastic surgery. I am sure if we scratched hard enough we would find undercurrents of adversity to Don's taking me, only from the standpoint that I wasn't trained as a traditional general surgeon even though I had two years in Dr. Sabiston's program which was an extremely rigorous two years. Well, to make a long story short, I went all through my plastic surgery training and learned everything, head and neck, breast reconstruction, aesthetics, and enjoyed it, and loved it. And, it wasn't in lieu of orthopedics, it was complementary to and in addition to my orthopedic training. And to make a long story short, I was asked by both Divisional Chairmen, Don Serafin and Jim Urbaniak to stay on the faculty both in the Divisions of Orthopedics and Plastic Surgery at the conclusion of the Duke Plastic Surgery Training Program. And, in the early seventies or late sixties, an individual by the name of Morton Kasdan, who is a hand surgeon in Louis-ville, developed a relationship with Dr. Kenneth Pickrell, who I new, incidentally, he did not know me very well, but I knew who KP was as he was fondly referred to by his residents. And when I worked as an undergraduate, doing research with Dr. Urbaniak, Dr. Pickrell used to have his clinic in SPDC in Duke South, and I knew him and saw him with his patients, and to make a long story short, I am again, honored that my relationship with Duke spans the 22 or 23 years that it does, so in the process of giving this interview as an aside, I have a little more perspective than just a young guy who is a newcomer. I was kind of a fly on the wall for many years. Now, getting back to plastic surgery, I was asked to stay on, and did so with Dr. Sabiston's support, again, both in the Divisions of Orthopedics and Plastic Surgery. Rather than forming an alliance or an allegiance with Urbaniak or Serafin, my role and my mission was to basically work and function as two guys in one pair of shoes. And, over the last five years, I have gone very freely back and fourth between both

divisions and my personal interest is in hand surgery, microsurgery and what I call orthoplastic extremity reconstruction, or limb salvage. And, what I have been able to do, at least here, has now been recognized literally in other institutions, and I am invited to various places to talk about this integrated approach to extremity care in the areas of trauma, tumor and sepsis. And, again the dessert or the icing on the cake, is my first love, hand surgery, but as I explained before, the hand or surgery of the hand is practiced around the world by orthopedic surgeons and plastic surgeons, they both do it. So, I figured like Dr. Sabiston, I try to be the best or create excellence, and my uncle once told me (who was a urologist), never sacrifice your training, instead of doing just a one year fellowship as I said, I did three (getting back to Louisville, Mort Kasdan developed a relationship with Harold Kleinert who is a very prominent hand surgeon, and for six months of the plastic surgery residency, we go to Louisville as hand fellows, so I had that to mention.) Louisville is an internationally recognized center of excellence in hand surgery, so I had the benefit in addition to very excellent hand training as an othopedist here, to even get more hand training in Louisville for six months, and our residents still go there. At the end of my residency in Plastic Surgery, I went to Taipei, Taiwan to pick up some very sophisticated techniques in reconstruction microsurgery and brought those things back here, because, again, that is an interest of mine. And we now in the residency program have a one month exchange, where the residents in plastic surgery go to Taipei which is one of the largest plastic surgery units in the world for cleft lip and cleft palate, as some additional microsurgery, etc.. So, I started on the faculty in 1991, started in the area of limbs, although I do head and neck reconstruction and general plastic surgery, trauma orthopedics. My practice is somewhat collective, but basically heavily based on hand surgery, reconstructive microsurgery and limb salvage. All that being said, why you are talking to me now is that after a decade of running a division, Don Serafin who was the Chairman, wanted to move to different things in his career, let us just say. And, Bob Anderson was the new Chairman of Surgery, and Don resigned. And we were without an active Chief for several months, and then Bob Anderson came to me and solicited me to become the Acting Chairman three months ago. So, I have been doing this job trying to get a multi-faceted, unpolished gemstone with different personalities, different internal and external conflicts, trying to grow together in the same boat to

kind of reestablish the excellence in the division that had been under Ken Pickrell, and to a large part, Nick Georgiade. And, very much in the early days, Don Serafin. But, for a variety of reasons, the directions the division was going, I don't think was the direction that Bob Anderson necessarily wanted. And, that is why I am doing this job. Let's go back a little to the history of excellence in plastic surgery.

The thing I would like to say about plastic surgery, Ken Pickrell came from Hopkins, I guess Dr. Hart brought him here. And Pickrell was trained to do a lot of different things. He was even formally trained, I believe, in neurosciences, neurosurgery, but Deryl Hart or actually, I guess it's Dean Davison, you would have to go back to your first volume on Surgical PDC. Pickrell was brought here and said you are the plastic surgeon. He had everything at Duke, he had plastic surgery, neurosurgery, general surgery, and Pickrell became Chief of Plastic Surgery, trained Nick Georgiade, he trained Don Serafin. I knew him, that is the only link I had. I knew who he was. He obviously did not train me, because of the chronologic disparity, but KP produced just like Dave Sabiston has produced academic scholars. Teachers of excellence. Department Chairmen, KP produced people like that. They went on to run divisions, run departments, became leaders in the field of plastic surgery. Individuals like Norman Cole, like Frank Thorn, like Nick Georgiade, like Henry Neal, and several others around the country. People of prominence today in plastic surgery, were Pickrell disciples. And, subsequently, Nick Georgiade had perhaps, or there was a trend towards less academicians being trained, toward people who wanted to go into private practice were financial incentives during Nick's regime. Then, there was Don Serafin. Well, I have to say a few words about Don, because Don knew me and had known me since I was an undergraduate. He was around and saw that I was interested in microsurgery. As a matter of fact, I still have letters that I wrote to him when I was in Japan, studying with the Japanese Hand Society in 1977. And, to make a long story short, Don was one of the pioneers in the world in microsurgery, and put Duke, along with Jim Urbaniak, but at least in terms of the plastic surgery standpoint, Don really pioneered microsurgery in the United States. He was one of the founding fathers of microsurgery and did a lot of free flaps, and of course, as he got older, his interests changed, and he brought on younger men like Bill Barwick to do

microsurgery and that again should be entered in the history books. So, under Don Serafin, Nick retired in that time, Greg Georgiade, Ron Riefkohl who did aesthetics. Ron pursued private practice opportunities in aesthetic surgery. Then there was Bill Barwick, and Greg Ruff. This was before I came on. Bill Barwick was an unsung hero with Duke, an individual who did not do a tremendous amount of work in the laboratory but was a consumate plastic and reconstructive surgeon. He was an absolutely superb micro-surgeon that carried the backbone of teaching in all areas of plastic and reconstructive surgery on his back. Bill was tragically killed in a car accident in May, 1992, very shortly after I came on the faculty. Bill was a mentor of mine. He basically taught me everything I knew in plastic surgery and micro surgery. He was a real hero and a wonderful individual who Duke surgery will miss forever. I gave the eulogy along with Don Serafin at his funeral at Duke Chapel, and the entire Chapel was filled. And, I could spend hours telling you about Bill. His picture is up there on my wall, beside Harold Kleinert. And Bill was just a very talented, kind, warm, wonderful person, who is missed by a lot of people here. I know there is not a day in my life that goes by that I don't think about him. So that was the department. And then I came on. Bill died, and Don hired an individual who is now on the faculty by the name of Ed Ritter, and subsequently another resident was hired to care for the VA Service by the name of Rainer Sachse. So, Don resigned in 1995, last April, so we are now in the process of rebuilding. I think we have an exceptional group of residents. We have a three-year program. We have always been respected, even now, when I am doing the residency training reviews, we have over 150 applicants to come here.

Where have we gone. Well, Duke is known for microsurgery. Duke is know for the excellence in craniofacial lip and palate that Dr. Georgiade set the standards. Nick, I believe, was the President of the Maxillofacial Society, has held several offices is aesthetics. Don has similarly been recognized for his excellence in microsurgery, literally around the world.

The Division as it existed under Dr. Pickrell. Did it have any research component?

I don't know. Nick could better answer that. If I am not mistaken, in those days, it was probably mainly a clinical service. I would be tempted to say that although I don't know. Nick started a lab.

What was the focus of Dr. Georgiade's laboratory?

He did some work in, I would have to look back on his papers, again, this is kind of before my time. As I said, a lot of lip and palate work, he may have done some dog work on craniofacial abnormalities. I am not sure. I just don't know.

But you said he oriented the Department more toward the practice and clinician, than the academic surgeon.

Well, that is probably a misquote. I need to be very careful. He did have a laboratory. If you look at the people who graduated, for example, under his regime, I would say most of them, I believe, are in private practice. He made our program international. He took a lot of guys from foreign countries, some Swiss people, some people from England, they have all reached high prominent positions in plastic surgery in their communities. Let us just say, there are not too many I know of off hand that have become Divisional or Department Chairman, Unlike Pickrell who has had several. And, really, there is only one guy who comes to mind under Don, I need to interject quickly. Chris Peterson was on our faculty, he went back to Texas, he trained here, did a microsurgery fellowship with Bernie O'Brien in Australia and came back here for a period of time on the faculty, and then went back to Texas (which is where is was from). He was Chief of Plastic Surgery at the University of Texas, San Antonio for awhile and then went into private practice with a hand surgeon by the name of David Green. So that is a vignette that you should probably include. Chris was a great disciple of Bill Barwick's who was a great teacher and friend to all of us, and really carried the batan of reconstructive microsurgery very well, passed from Don Serafin to Bill Barwick to Christ Peterson, and I came along after Peterson left and picked up the strength, if you will, of reconstructive microsurgery as it exists in plastic surgery. And I have an active microsurgery role today, inter-

nationally, nationally and locally. That is what I do. And, of course, in hand surgery.

Since you have had the long experience here with the education program perhaps you could talk a bit about how the residency program has changed over time?

The day that I signed on and I got to work, leaving Orthopedics one day and showing up for the Division of Plastic Surgery the next, I was told that we were going from a 2-1/2 year training program to a three year training program. In other words, the Residency Review Committee said to Don Serafin appropriately, "You go to Louisville for six months, that is 2-1/2 years, if you will. You can either be a two-year program and give up Louisville, or go to a three year program and include Louisville in the residency training program." Don appropriately with a lot foresight thought that the Louisville experience was so helpful and such a great part of our training, and it is, I can't emphasize enough, again started by Mort Kasdan in the late 60's or early 70's, that we ought to continue to go to Louisville. And, I added this Taiwan dimension for cleft lip and palate. The reason we go to Taiwan now is that under Nick Georgiade, we were getting almost all the lip and palate babies in the State of North Carolina, southeast, whatever. But as more and more people were trained, more centers became established, our numbers went down in order to train people. So, in order to compensate we now go to Taipei, Taiwan with Sam Nordoff lives there. Probably created the best plastic surgery in the world there. So, we are fortunate to be a part of that training process. Getting back to how the program has changed, Don saw to it that we went to a three year program. Don was instrumental in nurturing the lab better and more than it ever had been and hiring Bruce Kletsman many years ago, we took what was probably a laboratory experience under Nick and really developed a microcirculation science effort to support all the work we were doing in microsurgery. Under Kletsman, Serafin, the faculty and etc. the use of the laser doppler machine for monitoring free tissue transfer. A tremendous amount of research, vascular prostheses, all sorts of things, to the credit of Don and Bruce Kletsman kind of became developed. But in terms of how the residency program changed, that extra six months allowed the resident to go into the laboratory for three

months to do some basic science research and research projects, and really lengthen the program, but the strengths were that we gained literally a whole year of experience more that people in two year programs. And so, the end product as I saw it of our residents, myself included, was to come out with hand fellowship in Louisville, Taipei, Taiwan, a laboratory experience, and three years of training as opposed to two. And when I started my remarks, and I think that no one would agree more with this than Dr. Dave Sabiston, that in-depth training for long periods of time and surgical apprenticeship can't be substituted in terms of the end product and quality that we produce. And, what we are being forced to look at right now, today, is to cut back the time of training of our plastic surgery training program perhaps to two years with a year of fellowship training after that in hand surgery and craniofacial aesthetics, because as health care changes, reimbursement changes, graduate medical education changes, we cannot afford to train people for three years.

Let me be sure I understand the sequence. When you talk about a two year or a three year program, you are talking about the years beyond the two years of general surgery.

In my case, it was two years of general, four years of orthopedic. The prerequisite by the American Board of Plastic Surgery, is that one trains in either general surgery, orthopedics or otolaryngology. We took our first otolaryngology trained plastic surgery resident this past July. However, the time honored course that had been traditionally sought before an odd duck in otolaryngology or an odd duck in orthopedics was a full board eligible, board-certified general surgery training program, a minimum of five years. And, that has really been the gold standard and will probably continue to be so until which time the American Board of Plastic Surgery, the Committee on Graduate Medical Education, Dr. Snyderman, Government, National Educational bodies say to us, you have got to curtail the amount of time you train. Now, plastic surgery around the country has looked into the so-called "combined programs" where someone is taken out of medical school, does three years of general surgery and three years of plastic surgery, a total, if you will, of a six year training program. Perhaps with a year of Fellowship

beyond that thrown in. In the areas, for example, like craniofacial surgery, hand surgery, pediatric plastic surgery.

But the funding will have to come from somewhere other than Medicare.

Exactly. Therein lies the dilemma. So, we have talked about, and these have just been introductory talks, there is a training program in Chapel Hill that has never been lighting the world on fire, I can honestly say. But I have made initiatives to combine our training program with that of Chapel Hill to satisfy the needs under the support of George Sheldon, Chief of Surgery there, and Bob Anderson, Chief of Surgery here, to satisfy institutional needs, training needs, decreased manpower, decreased costs, and still come out with what I think to be a superb product with both institutions combining their resources. And that has been recently under my regime. In terms of what's happening in the scientific endeavors in the lab under my regime, I have started with the support of Bob Anderson, a human tissue cadaver laboratory for dissection which is used for the entire department of surgery, that is something new, that is run by me, a plastic surgeon/ orthopedist for one thing. We have made great strides in the areas of endoscopy as we are applying them to reconstruction and microsurgery. This is new technology that is the next wave. Under Don Serafin it was microsurgery, under Levin or whoever may succeed me, it is endoscopy, getting back to the days of John Hunter where we do cadaver dissections to improve our surgical skills, that is a resource now that we will have for the entire department of surgery that is up and running. Refinements in outcome studies, computerization of databases, laser surgery for aesthetic resurfacing, these are all some hot topics that the Division of Plastic Surgery is "getting into". In addition, despite John Stage Davis, never even being acknowledged, Stage Davis was the first modern plastic surgeon at Hopkins. Halstead wouldn't even talk to him. This is out of the history textbooks. He was never acknowledged at Hopkins. He still want on to become very prominent in the history of plastic surgery, one of the reasons was that Dr. Halstead didn't think that plastic surgery was an offshoot, or had anything to offer, this was World War I and II vintage. But, now even though that plastic surgery primarily was a reconstructive specialty, you know that there is an

emphasis in plastic surgery, again under the leadership of Pickrell, emphasized greatly by Georgiade of aesthetic plastic surgery, Dr. Georgiade has been one of the pioneers around the world in aesthetic breast surgery, his son, Gregg, has carried that theme through. Ron Riefkohl, while he was here made beautiful strides in aesthetic surgery. We are now talking about developing a Center for Human Appearance, or an Aesthetic Center, off site, this is just happening in the last few months. To have an aesthetic clinic would include dermatology, plastics, otolaryngology and plastic surgery. So, in terms of what's in the future, more of an emphasis on an aesthetic practice within the university setting, which in and of itself is unique.

In the course of our conversation you have indicated at various points that participation of the division in things called centers, and laboratories that are in the possession of the Department of Surgery. Does the Division or structure have as much meaning as it once did?

That is also a very good question. I think in my role my responsibility is to keep the division strong in terms of research, education, teaching, national and international prominence, and an input into the med center in terms of the service we provide. What we have seen, at least I will tell you, is the tearing down of barriers, of walls, of turf battles. For example, we work very readily in the areas of head and neck cancer with otolaryngology. Dr. Sam Fisher and I work very closely together. The extirpation and the cancer removal is done by ENT and subsequently our microsurgeons and soft tissue and reconstruction surgeons do the reconstruction for otolaryngology. Hand surgery, we share call, we share residents, we share fellows, we share ideas, we share conferences, we share resources. So, plastic surgery and orthopedics, while there have been traditional competition for patients, now there is a very cooperative spirit. In the area of limb reconstruction and salvage, we provide a lot of the soft tissue coverage work for the orthopedist in terms of fracture work, sarcomas, sepsis, infection, so my personal background has seen to that. Endoscopy is a prime example of a general surgery based advancement now being carried over to not only plastic surgery, but even I am doing it in orthopedics, but we have worked extremely closely with Steve Eubanks, the Director of the Endoscopy Center, to put plastic surgery at Duke on the map as developers of new techniques, new anatomy, new

procedures in plastic surgery based on our cooperation through the U.S. Surgical/Duke Endoscopy Center. Where else? Urology, cardiac surgery, we as plastic surgeons go all over the body, so we interface with all surgeons. Getting back to the question, are the divisions less important? Not necessarily, because of teaching and board certification requirements for residents, etc., but as I have defined to you, the cadaver lab project, for example, that is a departmental institutional project, a limb salvage institute, an initiative towards a limb salvage program is a multidisciplinary program. Our lip and palate clinic is a multidisciplinary clinic with speech and hearing, Dentistry, ENT, Plastic Surgery, Social Workers, similar to the Mild Dysplasia Clinic in Orthopedics, with, I will say, peripherally, Plastic Surgery for soft tissue problems, but neurosurgery, social workers, physical therapy, orthopedics, etc.. So, and then this most recent issue of the Center for Human Appearance, or the Aesthetic Center is Occular Plastics, Otolaryngology, Plastic Surgery, so the center for excellence is similar to the heart center. Again, getting back to Dr. Sabiston's and Dr. Greenfield's heart interests is a model for what we are now doing in the surgical disciplines.

The evolution of the Department as a whole, then, when Dr. Hart first came here, he was more-or-less all of the divisions wrapped up in himself. And he split off divisions according to the work load. The divisions were clinical divisions. Then, during Dr. Sabiston's tenure, the basic science aspects of surgery emerged to a degree that had not previously been the case, the divisions, themselves, acquired laboratories, and a variety of specialized laboratories to pursue basic science in surgical diseases, emerged.

Such as the plastic surgery lab with Bruce Klitzman and microcirculation. Just to emphasize that being an example of that.

And now, we have a situation in which beyond the specialized laboratories, interdisciplinary foci are emerging called centers, or whatever, which are once again task oriented rather than basic science oriented, but are using the basic sciences to get back and make the bridge go the other way that once was made.

Well, for example, Duke has become under its leadership by Andy Wallace and Ralph Snyderman. Such in and of itself, as we know, a center of excellence. As I see things, there are so many resources available that can help basic science initiatives in certain laboratories, that collaboration exists all over the place today, and that has been a very productive environment in which to work. The orthopedic lab works with the plastic surgery lab, in some areas, the plastic surgery lab, for example, I have done work with Bob Lefkowicz and Debra Schwinn in research of the hand through the orthopedic research lab. These are people that have inordinant depth, science, skills, which we are asking them to apply to orthopedic hand problems, for example. There is no way the orthopedic lab can recreate the wheel and so if you just keep your eyes open around here, you can see a myriad of opportunities for collaboration, for support, and so forth and so on, and then, in turn, that turns back to scientific investigation in the divisions, and ultimate clinical productivity and excellence. So, I guess the barriers are not what they used to be.

It almost seems as though the attainment of a certain level of excellence allowed the amassing of resources that made collaboration possible and we now have a situation where because collaboration is possible, resources can be shared and therefore maximized.

Exactly. You hit the nail on the head.

Somehow, I have got to turn that into something that someone can read.

That's how I see things. I sought out Bob Lefkowitz who you probably know. Knowing what he has done. He had no idea what I wanted. He knew nothing about reflex sympathetic dystrophy of the hand. Yet he turned over the lab and the resources of Debra Schwinn, one of his postdocs, who is a wonderful lady, who has helped me and my residents, and my fellows immeasurably. Looked into clinical problems of the hand that we never could have developed in our own laboratory. Taking twenty or 25 years of his life's work, we can't duplicate that, and we have capitalized on that, with his blessing. And I think Bruce Klitzman has done that in plastic surgery, and

for example Kim Lyerly, with the gene therapy, look at Hilliard Seigler in the department of surgery, an expert in immunology, working with Dick Metzgar in the seventies and eighties. It is not just surgery, its surgery, immunology, a quest for knowledge, and again, Dave Sabiston stimulated this kind of environment and these kinds of initiatives.

That's the next place I want to go, is Dr. Sabiston. Talk to me about Dr. Sabiston and his leadership, and whatever.

Well, it is not because I am here on the faculty or I have been here for fifteen years, but I told you earlier. At one time in the first two years of general and thoracic surgery, there opened a window. I was told because I was a hard-working intern and a hard-working junior resident, "Levin, you're a pretty good guy, would you like to become a general surgeon, would you like to become a cardiac surgeon, it is not too late to switch out of orthopedics into general and thoracic. And I had an unbelievable allegiance to Len Goldner and Jim Urbaniak for taking me, and knew I wanted to do hand surgery. Okay. So, I never did that. I was flattered and trained for nine years, I was in the Department as a resident for nine years under Dave Sabiston. And Dave Sabiston saw me grow up from a medical student, intern, day one, having dinner at his house the night before we started residency, I'll never forget it, he and Mrs. Sabiston prepared a beautiful dinner for all the new interns that came. From soup to nuts, after dinner liquors, in other words guys, welcome, but tomorrow you guys start working. And, if I had to underscore one word that defines Dave Sabiston, it's work. That's what he said about Len Goldner when Len Goldner retired. He said: "one thing about Len Goldner that defines him is the word, WORK. And what impressed me about Dr. Sabiston, no question he is brilliant, he is a gentleman, he is a scholar, he is a surgeon, he is a scientist, he is all those things. But he had as I have come to know it, I knew it before it, but I didn't know it at the time. He has an unparalleled work ethic. Let me give you an aside. The first couple of years on the faculty. I would get here just like a resident, at 6:30 in the a.m., I would leave at 8:00-9:00 p.m. trying to get my practice going, trying to get my research going, doing all the things that I should be doing, and people say I work pretty hard. But, I'll be darned if when I got here, Dave Sabiston's blue cadillac wasn't parked in the lot, and when I went home and got in my

car, many nights, his car was still here. And this model of work ethic is the work ethic that I saw that Nick Georgiade had, that Len Goldner had, and Jim Urbaniak had, and Dave Sabiston, of course. So, you are a product of your environment. And, the reason I have been successful and productive, is that I have worked at it. I am not a genious or a Rhodes scholar, but Dr. Sabiston showed all of us that if you work hard, you are honest, you are conscientious, you take good care of your patients, that rewards, scholastically, and personally will come. And he told us that when he met us as an intern class. and we had a little introductory time, that I assure you, he said, if you work hard here you will get a good job. I have got the best job in the world as far as I am concerned. And, as you probably know, I have been recruited by many places to leave Duke. And, won't leave it because of him, my mentors, and because I believe in the place. And now I am part of it. But getting back to Dr. Sabiston, again, I have said this a hundred times and his previous cardiac surgery resident, when they sign his picture on the wall of fame. "To Dr. Sabiston, role model, model of excellence, teacher, scholar, all of those things, and so why I mentioned that story to you about not going into general surgery when I was silently offered, although he never did. The chief resident said, if you want to transfer in, we could kinda work it out. I must have been doing something right. I have always had regrets at not being part of the Sabiston Surgical Society. That does not mean to say that I trained under the greatest person that I have known is Len Goldner and Jim Urbaniak, that I am not proud of my accomplishments, and proud to be a disciple of those individuals. But what I am saying is, that even beyond them, there was a bigger force in American surgery from the Hopkins tradition of Dave Sabiston, and I will tell you that I am so honored to have been part of his division in general and thoracic surgery, to have trained my entire training under his leadership in the department of surgery and ultimately, up until a year and a few months ago, be working with him as a department Chair. That is the greatest, his legacy, or the opportunity for me to have grown up and have been under his wing, and I have written to him several times and have told him throughout the years, that is the greatest gift I could have gotten. So, my words about Dave Sabiston is that he is a legend, and has been a role model for me. And now that I am the position as the acting chief of plastic surgery, I have more and more reflected back to what his standards are. What are his expectations? What is the model of

teacher, scholar, scientist, surgeon? And when I have asked myself these questions, he has paved the way. And that has defined my career. My career has also been defined again by the people who have preceded me, Jim Urbaniak, Len Goldner, Nick Georgiade, Don Serafin in many ways. And so, over all those guys is David C. Sabiston, Jr..

There is a common statement that people make that the key to Dr. Sabiston is the work ethic. There are varying opinions about the value of that. Some people say that it became too much to handle, that there were lots of casualties, a lot of divorces, burn-out. Other people say, the only reason there were casualties and burn-out that there were previous weaknesses in the people who were burned out and the ones who stayed and finished turned into gold. What I would like to know from you is, since you were here for so long, what is the straight scoop on that? Was the work ethic more than it should have been?

Let me summarize. There is a price that one pays for excellence. Personal sacrifice, family sacrifice, life at Duke is a balancing act, work, sleep, self, family. Those are the four things you balance. And I am quoting Len Goldner who if Dave Sabiston was sitting next to you, he would say, yes, those are the things you balance. And, the way one balances is an individual selection. Yes, you have to stay balanced, yes, you have to stay focused. I am fairly successful. I have been fairly well balanced. I guess the one thing I have given up is time or attention to myself. If it comes down to me or my family, I am well happy to sacrifice my needs to give that time to my family, because that is a very precious thing, and we have seen here, and anywhere in life, that without a strong family, no matter how successful you are, how many papers you write, how many Nobel prizes you win, without a secure family, those prizes and accolades in academics can compensate you, but when you go home at night, you are by yourself, and that's a lonely thing. What I am saying is yes, there are inherent flaws, there are people that don't balance well. They disproportionately balance so there are weekends off, they are in the laboratory for twenty hours, they could have spent ten hours in that laboratory and played with their kids for ten hours. So, just as many casualties as you say there may have been, there are also many success

stories. And, I don't know the formula for maintaining balance. I probably personally fall short, to a degree, but I am successful at least in the eyes of individuals like Dave Sabiston in terms of my accomplishments. Let me be more specific and try to answer your question. Because this is soul-searching, Jim. It's not just talking to a tape recorder. You don't get free lunch, and you don't get something for nothing. And, you have to work at it. Duke is not No. 5 in the country and Dave Sabiston didn't create the reputation and the excellence that he did by playing golf on Wednesdays, and taking Saturday and Sunday off. Nor have any of us done that. And the other thing about it is you know being a physician is not just a job, it is a lifestyle. Being a Duke surgeon, is not a job, it is a lifestyle. And, I think that I have a pretty fun lifestyle. Sometimes that causes imbalance. I am here doing the extra case because someone asked me to provide my excellence to do it. I took the hippocratic oath and I can't say no. My wife understands that, and my children, even though they are young, to a degree also understand it. Am I compensating, am I rationalizing? I don't know. That's how I live. And, again, I want to make sure I answer this question because it is very important.

Everybody has a different balance. The majority of people that have spoken have said, it was worth it. There is a substantial minority that say, it could have been different.

But people are masters of their own destiny. They could walk away. They could quit. They could go to a second tier program, they could practice less, write less papers, not be the president of every organization in the world. It depends on what your goal is. And my goal has been to be excellent at what I do. I think, the first response is that there are all sorts of players on a team. Some are great researchers that don't do much clinical work, some do half clinical work, half teaching. Some are just great teachers. Some are just great surgeons that don't do any teaching. And, again, the role model of David Sabiston is that to be a disciple, you need to do all those things well. There are only so many hours in a day. And there is only so much time to do things. And, so if you want to do them all well, you are a jack of all trades, master of none. The trick to success here is to get your papers and academic work done, you do it at nights and weekends. It's not like you take two or

three days off to work in the lab and go home and have Saturday and Sunday off. That has never been the model at Duke as I see it. And you compensate by sacrificing your own personal time, your family. The point is not to do too much to the detriment that everything suffers. And, I think that a lot of people can maintain that balance. I have seen the failures you are talking about. I have seen the failures. I think that without speaking for certain people, they have gotten divorced, they have lost their families, there have been tragedies, and those people were the masters of their own destinies. Dave Sabiston didn't cause that to happen. There is an environment here, and either you learn to function in it and balance, or yes, you will become a casualty.

Now, do you think that is more true here than at other excellent medical centers, in surgery?

No, probably not. I will say that to be the best of the best of the best, or to be one of the top, top dogs, everybody has to work at it. And, Dave Sabiston set the model down for hard work, and people have done unbelievably difficult things. I can tell you that in my career, operate all day, work all night, see clinic patients the next night, get on a jet plane, go some place, give three talks, give an instructional course, come back, meet from 9:00-11:00 p.m. with people in the lab who are doing research. I mean, I am not even exaggerating in terms of how packed a day is. I guess one of the other things I would say, the only down side I see of life here, is there isn't enough time. Time is the most precious commodity. Getting back to happy, not happy, enough work, not enough work, it is all a matter of time. If I had another 24-hours in each day, I would be happier. But we don't have that luxury.

Doctor, I usually try to close these interviews by asking what question I should have asked that I didn't ask. What did I leave out?

Well, maybe the future. And, I think what I need to do, for you, and I can be helpful, since I have lived through twenty years of this, and the last fifteen as an intern, Sabiston era, resident, young faculty, faculty, now acting Chief, which again is a great honor for me, is to reflect on Bob Anderson.

And, I hope these comments come across. We thought that when there was a National Search Committee, to be honest, who are you going to get to replace a living legend? Who can you replace Rod Lavra in tennis, Jack Nicklas in golf, Dave Sabiston in surgery. The Search Committee, the institution, Joe Greenfield in Medicine, great, great figures, particularly Dr. Sabiston. And we thought there is nobody that can come in here and fill his shoes. And, they brought a guy by the name of Bob Anderson here who, on his own accord, went out and got an MBA from the Kelloggs School of Business, just as an aside, who knows Duke, trained under Dr. Sabiston, has the cardiac legacy, and I didn't know Bob Anderson, but I actually remember him from my under-graduate days as being someone who I think I saw in 1973, although he may have been gone by then, But I knew he had been on the faculty. And, Bob came in and is as different from Dave Sabiston, as night is from day. Yet, without any effort made this transition to the current status of the department of surgery which is a breath of air. I have no criticisms of how things used to be, but things seem great and have gotten better under Bob Anderson. Bob has micromanaged. He has appointed vice-chairmen, he has given divisions autonomy, independence. We have to because the change in health care will be financially responsible for our action, our practices, managed care, impact on research, education, teaching, Bob has addressed each one of these things, and still maintains true excellence in the Department of Surgery. He has made new Divisional heads, like in cardiac, General Surgery, Randy Bollinger is running the Division of General Surgery, well overdo. Many of the men who could have been Departmental chairs in other places outside of Duke, have been given their due recognition, here under Bob. I do not, and I repeat, it is not a criticism of Dave Sabiston's style, but Bob's style is different. And I see it carrying us into the next decade or next quarter century, we are tremendously well-poised. I don't think the department has ever been stronger. We have not faltered, we have had no step back, if you will. If anything we are sprinting ahead under Bob's leadership, and I can't emphasize to you enough, the changes that are going on in health care. But what is in the background again, is this image of Dave Sabiston. Even though we have to count our pennies, be financially responsible, work in terms of manage care and contracts and competitive pricing, and become more efficient in the operating room, we still have the excellence in academics. We still have, at least I do in the division,

commitment to teaching, to research, to writing grants, to procuring funds for research. It may, because of decreasing NIH dollars, this research support may have to come with no strings attached from corporate enterprises, from private enterprise, from the institution itself, from our practice plans, nevertheless we will continue the scholar, teacher, scientist, surgeon balance that Dave Sabiston has set forth. And I think nobody is committed to that more than Bob Anderson is. So I really have to praise him because of the person he is, the skills he brings to the table, how he is carrying us through this transition. He is a knight in shining armor. And, it does not mean to say that if Dr. Sabiston had stayed on, we would not have gotten through these times. But, everybody, and I think if you asked Dr. Sabiston, he brought us to a point, Bob has picked up the reins of the chariot and is carrying us forward to the next decade. And I think Dr. Sabiston has been incredibly gracious in handing the department over to Bob and know he has great affinity for Bob, because of who he was when he was here, what Bob has done in his career has made Dave Sabiston, and to see Bob functioning in the capacity that he is functioning in now, Dr. Sabiston has to be extremely proud and very well satisfied. Dr. Sabiston's role is still vitally important in the medical center, as you know, Jim Urbaniak has been appointed the Vice-Chairman of Surgery and Clinical Affairs. He is a person of unbelievable integrity and trust. Dani Bolegnesi is the Vice-Chairman of Surgical Research. The things that are going on now with oncology, gene therapy, it is just exploding in terms our greatness. Again, the Sabiston theme. And, even in our managed care, trauma care, critical care issues, Gregory Georgiade, who has been a tireless worker in the Department of Surgery, a double-boarded individual, plastic surgeon, Nick's son, is now the Vice-Chairman of Surgery for Critical Care and Emergency Services and on, and on, and on. So this Northwestern School of Business management style has done us well to continue the excellence we have here and again, I have been grateful to you for the opportunity to share my thoughts. There is an active search committee for the Division Chief of Plastic Surgery now, but, as long as I have the reins, this is a very unprecedented opportunity for a young person, such as myself, to do what I am doing, I am enjoying it, and will continue to work for Duke, indirectly Dave Sabiston, Jim Urbaniak, and certainly, Bob Anderson, for the excellence that we have had all along.

Thank you, Doctor.