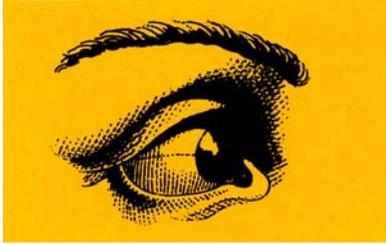


The Foundation of the American Academy of Ophthalmology
Museum of Vision & Ophthalmic Heritage

Conversation Between Norman Medow, MD and Edward Raab, MD
San Antonio TX, March 24, 2012



Drs. Norman Medow and Edward Raab recorded this conversation on March 24, 2012 during the Annual Meeting of the American Association for Pediatric Ophthalmology and Strabismus, in San Antonio, TX.



In this excerpt [Drs. Medow and Raab](#) reminisce about their training under Dr. Joseph Laval. Audio begins with Dr. Raab speaking. ([.mp3 file](#))

Here, [Dr. Raab](#) tells a quick story about a chance encounter at an ophthalmic meeting. ([.mp3 file](#))

The Foundation of the American Academy of Ophthalmology
Museum of Vision & Ophthalmic Heritage

Conversation Between Norman Medow, MD and Edward Raab, MD
San Antonio TX, March 24, 2012

NORMAN MEDOW: Good morning. Norman Medow, M-e-d-o-w.

EDWARD RAAB: And I'm Edward Raab.

NORMAN: I live in New York City. I'm a pediatric ophthalmologist at Montefiore Hospital Medical Center in the Bronx, and I'm a Professor of Ophthalmology and Pediatrics at Albert Einstein College of Medicine.

EDWARD: And I am Director of Pediatric Ophthalmology and Strabismus at the Mount Sinai School of Medicine, and I'm also a Professor of Ophthalmology and Professor of Pediatrics.

NORMAN: So starting from the beginning... and I'll start. How does that sound?

EDWARD: That's fine.

NORMAN: I was born in Brooklyn, 1938. My mother was a housewife. My dad was in the men's clothing business, locally, in the area in which we lived. I have a brother who is six years my junior. I went to Public School 244 in Brooklyn, New York, followed by Tilden High School, also in Brooklyn, New York. My early interest in medicine and perhaps even in eye care came about through the fact that my mother's brother, my uncle, was an optometrist. He married an optometrist. There were no other people in my family that had anything to do with medicine or the medical field, and my aunt and my uncle were both, therefore, somebody who I looked up to. And when I graduated from high school, as a matter of fact, if you look at my high school yearbook, there are these little nice pictures of us who graduated. Underneath it, it usually says what you did high school and what you wanted to become, and under my name it says, "he wants to become an optometrist."

And from high school, I went on to college, and when I finished college I decided I wanted to go to medical school, and I did, and I went to Down State College of Medicine in Brooklyn. And while I was in medical school, optometry never became an issue because optometry is not part of medicine and ophthalmology is. So I thought briefly about becoming an ophthalmologist. My dear classmate Sam Packer was always going to become an ophthalmologist and he and I constantly commented about ophthalmology. I wanted to become a cardiothoracic surgeon a burgeoning field at the time. So when we finished medical school, he went on to go to Yale to become an ophthalmologist, and I went on to spend two years doing general surgery going towards becoming a cardiothoracic surgeon, being deferred by the military at the time during the Vietnam era, which had a quota of doctors in different subspecialties that they allocated. And when I decided after two years of general surgery that I did not wish to become a cardiothoracic surgeon, but rather thought about ophthalmology very seriously. I asked the military, namely the Berry Plan, which deferred me in the Navy, to switch me from cardiothoracic to ophthalmology. And they said they had too many ophthalmologists; they didn't need any more, so therefore I had two choices. One choice was to continue towards becoming a cardiothoracic surgeon and the other choice was to go into the United States Navy, give them my two-year's obligation that I had signed on to originally, and that's what I did. And when I completed the Navy, I came back to New York and began my residency at Manhattan Eye, Ear, and Throat Hospital, completing it in 1972.

I leave the rest of my experience for a little bit later. Ed?

EDWARD: Well, some of what you said sounds parallel to my background. My mother by profession was a teacher, although by the time I came around she was no longer doing that. My father was a physician. He was a general practitioner. He also was an anesthesiologist before there were such things as Board Certified anesthesiologists, and I know from talking to his colleagues that he was highly respected both as a general practitioner and as an anesthesiologist. He was considered the best giver of spinal anesthetics at the Bronx Hospital, which is where he did most of that work.

I have two younger brothers, one of whom is an engineer, and his wife for a time was the Director of Continuing Medical Education for Brigham and Women's Hospital and later for the American College of Cardiology. My

other brother is a retired Chair of the Department of Political Science at the University of Edinburgh. He's lived in Edinburgh all his adult life. His wife is a prominent epidemiologist and biostatistician, and she helps me when I'm doing my clinical studies. I go to her for statistical advice.

My early experiences that led me to a medical career came from admiring how my father did things. He would take x-rays; he would do his own lab work; and he would do minor surgery in addition to his anesthesiology. When I was in medical school I occasionally assisted him doing minor office procedures.

I must say that I didn't start thinking seriously about a medical career until I was in college. I had not thought at all about a law career. I came to law late in life, and, in fact, I have a law degree, and I'm admitted to the bar in New York and Connecticut. I graduated law school in 1994. I graduated from New York University Medical School in 1958. My internship was at Montefiore Medical Center. I don't think you know that, Norman.

NORMAN: Now, I do.

EDWARD: And my original destination was obstetrics and gynecology. Now, why that? Because I enjoyed that most of all of all the rotations in medical school. It had medicine. It had surgery. You dealt with older people. You dealt with younger people. It seemed like something I could be happy in because of its diversity. And then when I was at Montefiore, I was exposed to ophthalmology as an intern. The way I did that was the ophthalmology residents used to moonlight weekends, and they needed somebody to sign out to for ophthalmology, so it was me.

I gave up what would have been a four-year residency in obstetrics and gynecology at NYU, and the Berry Plan was in operation at that time, where if you didn't want to get pulled out in the middle of training you applied for what's called a Berry Plan deferment. Well, I switched to ophthalmology too late to get a deferment in ophthalmology, so I decided I would just go ahead and get my Army service done, which is what you did with the Navy. I got that done, and by that time I had lined up a residency at Mount Sinai. I had applied for and had been given a residency in another city, but then I decided to do my military service, and so I withdrew from that honorably

because I gave them plenty of time. I had occasion to meet the chief of that department socially after that, and he never seemed to hold it against me.

Unlike now, Mount Sinai had one person in each year of residency. Actually, it had been a two-year residency with a Lancaster course or an NYU basis science course as the third year. I was the first full three-year resident at Mount Sinai. I was the last resident of our then chief, Dr. Joseph Laval.

NORMAN: Your ending just now was absolutely perfect for my picking up my career. So I completed my Navy career, I go to Manhattan Eye and Ear, never had any real experience in ophthalmology beforehand, walked into Manhattan Eye and Ear as a first-year resident. I was there three or four days and somebody says to me, “Medow, would you please go up to the operating room and help Dr. Laval” who was doing surgery. So I go up to the operating room; I scrubbed; I went inside; and there was Dr. Laval standing near the wall, gowned, with his hands in front of him and a towel wrapped around his hands. I introduced myself to him and I asked him how to scrub... how to prep the patient. I really had never done it before, and he was kind enough to explain to me how to do so. I did it. Then I turned around to get gowned, and he moved from near the wall to the patient’s head to drape the patient. I get my gown on, I turn around, and there’s Dr. Laval without any gloves on his hands, draping the patient’s head. Well, I almost tackled him away from the head of the patient, and told him... I said, “Dr. Laval, you’re not wearing your gloves,” or “they didn’t put your gloves on.” That began a 15-minute discussion on how one operates and does not touch the instruments but at the handles, and that wearing gloves in ophthalmology is not... he said, “Things are changing, moving in the glove direction, but there are still many of us who have lots of experience in knowing how to use our hands properly in the operating room.” To say the least, he was the last person at Manhattan Eye and Ear not to operate with gloves.

EDWARD: I had that exact experience with him. He operated at Mount Sinai without gloves. It was almost a symphony to watch him. He was such a smooth surgeon and so precise in his movements, and, yes, he handled the instruments in a way that didn’t contaminate them. He didn’t let any of us or the rest of his attending staff work without gloves. It wasn’t about whether he let them. It was that the hospital would not let them.

NORMAN: Sure. Sure.

EDWARD: But he gave himself a waiver and he operated without gloves.

NORMAN: I'm chuckling because he would... at that time, in his hands, his technique required six-, seven-, eight-, nine preplaced sutures, and he'd have all of this 6-0 silk sutures preplaced methodically in a linear fashion.

EDWARD: Absolutely.

NORMAN: And then he'd move them out of the way, he'd make his entrance into the anterior chamber, he was...it was a symphony!

EDWARD: Joe Laval was not an academic chief. He was a practitioner, and you learned to practice ophthalmology. And one of the things he honored me with... well, two things: One is he gave me a tremendous amount of independent responsibility as a resident, especially as a third-year resident. And the other way was that he invited me to practice with him when I graduated. And it was a very attractive offer that I didn't accept because I never thought I would be able to get out from under his shadow. And my experience observing other junior people that he had with him bore that out. He was just too tough an act, so that you couldn't really feel independent.

I did go in as a relatively short-term commitment with another senior well-respected ophthalmologist in New York, and that was because when I finished my residency, I had thought I'd like to go into pediatric ophthalmology. There was only one program at the time, the Washington program, with Drs. Costenbader and Parks and Dan Albert, and that was filled. I needed something in the meantime, and so I practiced as a junior person for about two years, and then I went to fellowship. Dave Friendly, who was a high school classmate of mine and in the fellowship that year, introduced me to Dr. Parks and Dr. Costenbader, which probably facilitated things. It had become a supported fellowship under a Public Health Service grant, and I was the third recipient of that grant.

NORMAN: Well, I had not thought about pediatric ophthalmology when I was in my residency at all. I wasn't quite sure what I wanted to do, and then at the end of my second year, Charlie Kelman, who was one of our

attendings and was developing phacoemulsification at that time and had a little laboratory in the basement at Manhattan Eye and Ear that he was working at to develop this technique, which went through years of trying to put a bag around the lens completely and squash it inside the eye following by a variety of other intracamerall techniques to remove the lens. He told the story of sitting in the dental chair having his teeth cleaned with the cavitron unit, which moved back and forth 50- or 60,000 cycles per second, and then developing a probe to do the same thing for a cataract, namely break it up in an ultrasonic fashion. And when that came along and he had been working on that in my last year, he asked me to spend a year with him working in his office and working in a lab with him.

And that's what I did my first year when I completed my residency, from 1972 to 1973. I spent a year with Charlie, who was extraordinarily interesting because not only was I involved with the evolution of modern cataract surgical technique that is the standard for what we use in the world today, but I also met all of the most well-known ophthalmologists at the time because Charlie started his most famous courses that he gave at \$1,500 apiece in 1972, which was an extraordinarily dear amount of money. So he ran the courses every two weeks and all these people came and learned how to do phaco. Charlie would do three- or four- or five cases a day. I would get up at 4:30 in the morning the next morning. The patients all stayed in the hospital for five- to seven days. I'd see the patients at the slit lamp in the morning, see how they were doing prior to everybody who was in the course coming and looking at the patients, and those patients that had a little bit of extra redness or a little bit of corneal edema would get the appropriate medication to make them lessened, so that by 7:30 or 8:00 o'clock in the morning when rounds began and all of the course participants came, the eyes would look as favorable as they could look. But you can well imagine that sometimes 30-minute phaco time in 1972 caused the corneas to be irritated. But the eyes... the fact that the eye is the size of a quarter and has all of these tissues in it, it's an organ that has the great ability to sustain and to improve upon the trauma that man performs on it during surgery.

When I finished with Charlie, I started private practice in the community. I looked around, and I was thinking of going to California and I was thinking of going up to Connecticut where some practice opportunities became available, but I decided to open up my own practice in Manhattan and that's what I did at that time.

EDWARD: I described how I got into ophthalmology, but not why I went into pediatric ophthalmology. And I really want to backtrack to that because the impetus for that came from my wife who, as Norman knows well, said to me one day, “What about children? Isn’t there something special about children’s eyes that would make you want to do that?” And I had never considered that. And that was just before I was to go to the Lancaster course as part of this now revamped residency that had become three years, and instead of a long course at NYU or Penn we were to take the short Lancaster course. And in that Lancaster course, I was exposed to Dr. Parks for the first time, and his lectures were all in the pediatric ophthalmology range. Malcolm Ing happened to be at the same course and so was Fleet Maddox. They both went into the Washington fellowship before me. I don’t know if you know Fleet.

NORMAN: The name only.

EDWARD: And again, through the good auspices of Dave Friendly, I had an introduction and I was lucky to get the fellowship. And the interesting thing is I was offered the fellowship for the year beyond... remember now, I’m in private practice as a junior person. I was offered that fellowship for a year later than I actually took it because it was filled for... actually for the year I did end up taking it, but somebody had withdrawn, I got it on six weeks’ notice, and I had to saddle everything up, move my family, everything else. And it was certainly, the turning point in my career. And I have to give all the credit to my wife, who put the idea in my head in the first place. She’s the source of all of my good ideas, and Norman is nodding his head because he knows her and I think...

NORMAN: Knowing your wife...

EDWARD: He would agree.

NORMAN: Knowing your wife, I agree 100%.

EDWARD: So it’s your turn to say something now. And I know where I want to go after you do.

NORMAN: You were commenting about how you got into pediatric ophthalmology, and I'm going to comment in the same way, although the way it came to me was a lot different than the way it was for you. So I started out in private practice, having spent a year with Charlie, a very controversial period of time vis-à-vis cataract surgery. Most everybody thought that doing a little ultrasonic or hardly needing ultrasonics in kiddie cataracts would be okay. And kiddie cataracts lent themselves nicely to doing the small incision, irrigating aspirating technique of the phacoemulsification without the ultrasonics. So I sort of got very much interested in kiddie cataracts at the time and developed a small practice, a referral practice in pediatric cataracts at that time.

Manhattan Eye and Ear at the time was a hospital that had no full-time attendings. It was a voluntary hospital that had the chief rotating for a year or two or three during that time. All of a sudden we decided to hire a full time chairman. The story of how that came about is very much longer than this discussion can handle. But Fred Jakobiec, a well-known pathologist who still practices now at Mass Eye and Ear, came to Manhattan Eye and Ear as the full-time Chairman of Ophthalmology, with a primary interest in ocular pathology. He developed a wonderful academic program and started to develop subspecialty practices within the hospital. Comes along 1983, and he wants to develop a pediatric ophthalmology service. We had many fine pediatric ophthalmologists Abe Schlossman, Susan Veronneau-Troutman...

EDWARD: Renee Richards...

NORMAN: Renee Richards, absolutely. Fred asked me if I would assume the directorship of the service because I did things that the other people didn't quite do, namely cataracts, and also because of Dick Troutman being one of my teachers I took a great interest in doing corneal transplants in kids, as well. So I did what the other people didn't do and I wouldn't be as controversial to them as I might be if one of them was selected. I owe Fred a great deal in bringing me into the field of pediatric ophthalmology.

And then when I developed the practice of pediatric ophthalmology, little by little my adult practice dwindled and my childhood practice expanded, and that's how I got into pediatric ophthalmology. I did not do a fellowship in pediatric ophthalmology, but did a lot of it in an apprenticeship. You were very helpful in our strabismus conference. You remember those, I'm sure,

with great fondness. We had a wonderful meeting every month pre grand rounds. We had a strabismus conference, where some people would come, present strabismus cases, and all of the faculty from Manhattan would be invited to come and comment about the cases, argue about them, discuss them, and give their opinions. And that's how I entered pediatric ophthalmology.

EDWARD: Well, I'm interested to hear that story, Norman, because at the time I knew all of the people you mention much better than I knew you. I know you since then to be an organizational genius, and it now becomes obvious to me that you were the right guy to do that. I was there as a visitor and pretty much as a curmudgeon. I used to take on all of your distinguished faculty, in good fun. We were and remain friends. Oh, you didn't mention Richard Muchnick.

NORMAN: I did not...you're right.

EDWARD: ...who is also in that group. And we all remain on cordial terms. But that's how I really got to know you. And I did enjoy those conferences very much. I used to shorten my day in order to get there on time, and it always used to bother me that whatever was going on in that room beforehand always ran overtime, and I was hopeful that you would just kick them out of the room so we could get our full hour. And I must say you disappointed me a little in that because they always encroached on what should have been the time of that conference. But I forgive you for that...

NORMAN: I thank you.

EDWARD: ...because what we had was so high class. It was really very good.

NORMAN: It was very special. And it was something that unfortunately does not go on today. It would be nice if we could revive that.

EDWARD: Well, you and I could talk about that.

NORMAN: Okay.

EDWARD: We did briefly, but we haven't done anything, but I think we could revive that.

I didn't mention that during my military service, which was stateside in Washington, before my residency which I hadn't yet taken, I had the good fortune to be able to go to the Washington Hospital Center, which is now Washington National Medical Center, and they had a very fine lecture program for their residents on Saturdays, and Saturday morning rounds at the military hospital. Of course, my commanding officer used to let me go to them. We also had Walter Reed residents that came out to where I was working looking for surgical cases. I was working at a civilian facility that had three military officers, and Walter Reed used to take a lot of their surgery from our mostly retired enlisted people. So they came and did the ophthalmology, and I used to hang around them. So I had a pretty decent grounding before I ever went into residency.

And another thing about my residency is this: There was one man in each year, and when I came on I was the third of that three-man group to all have military experience, not combat experience but experience in the military. And as I looked around at other departments and their residents it struck me that we somehow comported ourselves with a greater level of maturity than the guys just coming out of internship. The only reason to make that point is I think we were in a more receptive mode to learn. I think it prepared us better. We looked at things with a somewhat different eye.

I'll mention just one more anecdote. One of my residency experiences was that I got to assist on the cataract removal, both eyes, of Montgomery Clift, the actor. Do you remember Bob Coles?

NORMAN: Of course.

EDWARD: Bob Coles was his surgeon, and they were intracapsular removals, and actually I took those lenses, put them in formalin, put a label on them and said, "These are the lenses of Montgomery Clift." Bob Coles attested to it, and I had them in my attic for years and years. And when we moved out of our house and we were cleaning out the attic, I found these two bottles, and the things were shrunk-up like raisins, and I finally got rid of them. I thought they had no more value as a relic.

NORMAN: Wow. I'll have to go and look up the movies that Montgomery Clift was in. He was in a lot of great movies.

Bob Coles was extraordinarily nice to me when I started my practice. Bob had moved from Manhattan Eye and Ear to Lenox Hill to become the Chairman of Lenox Hill Hospital, was very nice to me as a resident, asked me to cover for him on many weekends when he would be away and when I was just beginning private practice, and I did so. And he was an extraordinarily nice chap, and a very good physician.

I was very fortunate. I trained at Manhattan Eye and Ear at the time that the hospital had great, great surgeons, wonderful people - Abe Schlossman, Adolph Posner, George Gorin, Richard Troutman, Herb Katzin, Sigmund Schutz, Charlie Kelman, Richard Troutman, Byron Smith - on and on and on, with a leading authority in subspecialty fields throughout the United States.

A great story. An anecdote: my senior year in ophthalmology, intraocular lenses were being done only in three places in the world: in Russia, in Great Britain, and in Holland. A couple of ophthalmologists in New York had gone to one of those three places to look and see how Jan Worst did them in Holland, and Fyodorov in Russia, and the other people in Great Britain. To the United States comes Fyodorov. He comes to Manhattan Eye and Ear. Our auditorium was over-packed with people. They put two microphones outside in the hall and one downstairs, so that people who couldn't get into the auditorium were at least able to listen to the communications back and forth between Dr. Fyodorov and the people sitting in the audience. Fyodorov presented his intraocular lens data, and how wonderful the procedure was. And Richard Troutman got up and he said, "Excuse me, Dr. Fyodorov, would you put these lenses in any of your family members, for example, in your mother?" And Fyodorov said, "No, Dr. Troutman, I would not put that in my mother, but I would certainly put it in your mother!"

EDWARD: That's funny. Well, Norman, I'll tell you something. One name you didn't mention was Cornelius Binkhorst. I actually went and spent a week in his little town on the north coast of Holland, watching him do the surgery, because I thought maybe this in some way was going to relate, and it was, as you say, very early. He did very nice surgery, by the way. They were mostly iris-support lenses, which nobody does anymore. But, as you

know, Holland is below sea level, and in his OR he had a great big picture window, and you could look at the picture window and four feet above the level of the OR you could see freighters going by.

NORMAN: It's interesting these little things that we've experienced along the way. Fyodorov, visiting Dr. Binkhorst, other things similar to that. Again, I've been very fortunate in my training, and in the people that I've had experience in getting to know, including yourself.

EDWARD: Thank you.

NORMAN: Talking about law - you mentioned that you're a lawyer, you know that I've always been interested in law. When I was at Manhattan Eye and Ear as a resident, I lived on East 65th Street in an apartment which was two apartments put together, and my three roommates were three guys going to law school that I had known in college. So they were in law school - two were at NYU; one was at Brooklyn law - and we lived together for four years. And once they started to work, you know, they never came home until midnight or 1 o'clock in the morning. And I was now maybe two years out of...two years out of my residency and my fellowship and I was in private practice, and one of the lawyers worked for a firm Dewey Ballantine. I told him I had an interest...I told Bob that I had an interest in maybe going to law school, and he said, "Well, you know, we don't have a division of medical-legal in our firm. Let me speak to my partner, my senior partner... my boss." So he spoke to his boss. The boss asked me to come down. I met with them a couple of times, and they made me an offer to send me to law school for three years. I would then pay them back two for one, two years for each year that I would have gone to law school, which meant that I would be practicing law for six years. I'd probably never go back to medicine again, never be practicing. I applied to law school, got into a couple of law schools, got not into a couple of other law schools, and at the last minute I decided I really did not want to practice law that way. I'm very pleased I didn't do law as a lawyer full-time, but rather do law from a medical-legal standpoint, reviewing medical-legal cases and going to court when it warranted. But I still love medicine and medicine is still something that's, I think, great.

EDWARD: Well, Norman, your experience is wide, and you and I and two of our colleagues will be doing an expert witness workshop here, giving tips to our colleagues who are interested in that work.

One of the things that happened to me in law school, I'm sure I got in not because of brilliant legal aptitude test scores, but because of all my work experience. It was a very diverse class, the evening class. We had policemen, firemen, one of them who lost his wife in 9/11; we had engineers; we had all kinds of people. In the products liability course, one of the cases we read involved a rongeur that broke off in a patient's back because of what's called metal fatigue. Well, nobody else in the class, including the professor, knew what a rongeur was. They didn't ask me to do this. I went to the OR, I went to the neurosurgical scrub nurse, I said, "Can you lend me a rongeur overnight so I can take it to my law school class and show people what the case was about?" So they gave me a rongeur and I took it to class and showed them, "Here's what broke off in the patient's back." And the whole case took on a whole complete different significance, and I got a big thank you from the professor about it.

NORMAN: And an A in the course, I'm sure.

EDWARD: Yes, but not for that. I got an A the hard way. I earned it! That's just one of my anecdotes about it.

The other thing I'm proud of about law school is I went four years at night, and I went one summer because I thought maybe I would take a sabbatical and do days and get out in three years, rather than four. I ended up graduating with 95 credits instead of the 84 I needed, I captained two moot court teams and I wrote for a journal, and I did all of those things, including teaching courses at the Academy, without skipping any of my consult work, my surgical work, my teaching work, or my practice work. That I'm quite proud of...

NORMAN: Let me ask you a question: The reason you practice medicine, still, as a primary profession is because medicine is something you've done longer, medicine is closer to your heart?

EDWARD: Partially...

NORMAN: You could have given up medicine and done law.

EDWARD: You're correct, and I thought about doing that. The reason I didn't do it is that litigation is the part of law that I like, not transactional things. You can't be a good litigator without a lot more experience. By the time I came to realize I would like to do that, I felt I could never get to where I wanted to be. And I was offered a chance to do that, but just as I graduated law school that firm blew up so that opportunity never materialized. But, yes, I love medicine, I love it enough to keep doing it, but I seriously thought I could change.

[END PART I]

NORMAN: Yeah, what I would have been had I not been a doctor, I would have been a historian. There's no question about that. I liked history. I always liked history.

EDWARD: We give Norman the gears in New York because we have these dinner meetings and he always has some old fud with a beard who invented something-or-other in 1832, and he quizzes us to get the guy's name. No one ever gets it. He knows them all.

NORMAN: No, you guys...I have to admonish half the audience to please not yell out the answer because it's...I want to give them like five guesses.

EDWARD: It's very interesting. He comes up with some very interesting stuff.

NORMAN: Five clues about who it could be. And then from the background I hear, you know, "Fuchs!" or somebody with...

EDWARD: You have to understand many people are on their third round of drinks by then.

NORMAN: And this particular group is a very, very...

EDWARD: It's not a pediatric group.

NORMAN: No, it's the Manhattan Ophthalmological Society.

EDWARD: Norm, we're participating in this worthy project that the Academy is doing. I'd like to hear you say, and then I'll say, how we've been involved beyond just as members with the Academy, because I know in your case what you do and of course I know what I've done, and I think that that's probably a proper part of this oral history session. So why don't you go ahead and talk about what you've done.

NORMAN: Sure. Well, my main interest in the Academy revolves around the development of the Museum of Vision of the American Academy of Ophthalmology. I believe... David Noonan, who is sitting here with us, will correct me if I'm wrong. What is it, 25 years now, David? About 25-1/2 years ago, David Noonan and Bruce Spivey sat down and had a brainstorming session one day and talked about the preservation of artifacts and historical objects and books that the American Academy of Ophthalmology should think about preserving, and from that discussion developed the Museum of Vision, which I have been involved with soon after its inception.¹ And we have many, many thousands of artifacts that we have collected. We have a wonderful group of ophthalmologists who have an interest in the preservation of the history of ophthalmology, including the history of instrumentation, the history of books, the history of the American Academy of Ophthalmology, itself. And we have an archives that has collected all of this material, and one day in our fondest dreams perhaps will come true our ultimate goal, namely to have a museum that is not just theoretical and has some cabinets in the halls of the American Academy of Ophthalmology, but that has its own space, perhaps, in the floor of our building in San Francisco that houses the artifacts, that will allow people to walk by and see the Museum of Vision, and walk inside and look at these artifacts and remember and learn. That's another area of our interest, namely education, to keep us apprised of what we...what has been and where we came from. So that's been one of my main focuses. Thanks for asking.

EDWARD: Well, that's a wonderful project. I always love to see those exhibits as I go around and...and although we kid you a lot back in New York, Norman, it's very interesting to hear your historical reminiscences of

¹ The Museum of Vision was founded in 1980. Dr. Medow first became involved in 1982.

what are very famous names whom none of us would ever have any contact with, Fuchs and others.

NORMAN: No, you know all the people, Ed. I have to admonish you not to answer those questions too quickly.

EDWARD: I know them by name, but you bring them to life, and I think that's great.

NORMAN: Thank you.

EDWARD: I've been involved with the Academy in several ways. If I had to name my most meaningful experience it would have been that I gave the Marshall Parks Lecture at the Academy in 2005. My one regret is that it was the first Parks lecture he was too ill to attend. There were two reasons why that was particularly meaningful to me. One is you can call me a disciple and a devotee of Dr. Parks, who was also my personal friend. My wife and I are also friendly with his children, and we know several of his children's children, and I treasure that, of course. But the second reason is that I was among a small committee of Costenbader Alumni Society people who actually were able to convince the Academy to have this lecture for a named individual during his lifetime. There was a fair amount of discussion at the time because there were other very senior people - I won't mention their names - who others in our pediatric community group thought were equally deserving of such an honor. And so this small committee had to come up with a tie-breaker, and of course the tie-breaker was that of all of the several mentioned names he was the only one who had been an Academy president. The president at the time was Steve Obstbaum. His decision based on, I guess, conversation with the Board was that if AAPOS would approve it the Academy would install the lecture. And AAPOS did approve it because we had given them a substantial tiebreaking reason. I have to say I believe I was the one who thought about that reason, so that's been very big to me.

The second biggest thing is that I chaired the BCSC Section 6 book. I wrote for it as a member through two major revisions for five years, and I was Chair of what is now the current revision, which will be again revised. I had a very excellent committee, and it was my job to steer them through what was really a very cordial and collegial experience. And we think we came

out with a fine book, and we've been told that by the Educational Secretariat.

I also served on the Academy Advisory Council as representative of AAPOS, and I really felt that pediatric ophthalmology was listened to when I had something to say. The benefit to me was that I got to meet and interact with and appreciate the abilities of a large number of very dedicated people who were doing this for the Academy in the same way I was, and that was a very enriching experience.

The Academy has a strict rule about when you serve your time on a committee that's it, you're out. So now I do some work on the Program Committee evaluating abstracts for their suitability for the annual meeting program.

And of course, I value my Lifetime Achievement Award, but that's sort of derivative from all these other things. I'm sure you've been involved with the Academy for all these many years as well. I really think the Academy has been a very good influence in my life. You get to meet some very fine accomplished people, not the least of whom is David Noonan, who is right here, whom I got to know better through that experience. So, David, I want to thank you for being part of that.

DAVID: You're welcome.

NORMAN: I would echo that. I know David for many, many years. And because of my involvement on the museum, I also had a seat at the table of the Foundation of the American Academy of Ophthalmology for a number of years, in which I was able through the museum to make my comments known to the Foundation, primarily as to the interest of the Museum of Vision, but also about other aspects of the Academy of Ophthalmology's involvement in all of our...in all of our interests: educational, outreach programs, international ophthalmology, as well. All very important components of what the Academy does.

EDWARD: I have a small Marshall Parks anecdote. It has nothing to do with ophthalmology. Shortly before he passed away I had occasion to visit him in what turned out to be our last time together, when he was quite ill. We reminisced for a while on all of the pleasant experiences we had shared

over the years, and then he asked me what was going on with my family and I told him we had just had our fourth grandchild. And he said, “Well, you should stop taking those hormones.” I thought that was a funny remark. And coming from him in his physical state at that time, it was a wonderful piece of awareness on his part, and he still had the ability to make a good joke.

At the break, David asked me to consider mentioning ORBIS International, which has been another great experience in my life. I’ve now done nine trips. Six of them have been to India, the most recent one being this past December. I went once to China, once to Uzbekistan and once to Uganda. And some of those trips, as you know, involve surgery on that DC-10. Other times you go as a volunteer at a local regional hospital medical set up where sometimes you literally have to walk around chickens and cows to get into the hospital. So I’ve done five of those and four on the plane, and they’ve been wonderful, too. You get to interact with colleagues whom you wouldn’t have another opportunity to know. You can do a lot of good with that organization. That’s not an Academy function, but I’m putting that in my reminiscence about the beneficial experiences in my career. That certainly ranks with them.

NORMAN: Yeah, I had wanted to go on those. I just haven’t had the opportunity, and maybe one day I’ll ask you to introduce me to the organization, and perhaps we can...

EDWARD: I’ll be happy to do that.

NORMAN: One of my greatest achievements and accomplishments in education is the fact that I’ve had a fellowship in pediatric ophthalmology for the past 23 years, and I have trained some 37 fellows in pediatric ophthalmology, all of whom have achieved a level of success that I can be proud of, and I’m pleased that I have played a role in that. Many of my fellows have become chairmen of their divisions of pediatric ophthalmology at various medical schools. They practice in such wide areas as Hawaii, Vermont, Florida, and California, so the whole country is covered. And I owe...I owe that to Fred Jakobiec having thought about making me the Chairman of the Division of Pediatric Ophthalmology at Manhattan Eye and Ear, and suggesting that we develop a program in pediatric ophthalmology where none existed in New York City on a formalized basis. I’m pleased that I have had the opportunity to participate in the training of these people

who have achieved in the field and I have played a role in that, and so have you, Ed, all of these people.

EDWARD: Well, Norman, what I know about you is that not only do you take fellows and train them, but you are square in their corner when it comes to placement after their fellowship. I know that firsthand. And I think that that's great credit to you. You are out there working for your fellows, and I've seen that on many occasions.

I haven't conducted a formal fellowship, except twice I've taken two fellows, and I'm proud of both of them. The reason I did not take other fellows is that I knew that from involvements including traveling, I really couldn't do justice to leaving a fellow with no other type of supervision hanging around until I got back. It also would have, to some degree, impacted on the residency...the volume of case material available to the residents. So those are my two reasons for not taking fellows.

I will say, though, as you have helped your fellows get employment, I've helped my residents to get fellowships in pediatric ophthalmology all around this country, and they've all done me proud. In fact, in a recent year, out of five...we only have four now, but out of five residents in one year several years ago, three of them were successfully placed in pediatric ophthalmology, and I think I hold the department record for how many residents got placed in fellowships even though none were with me. So that's something I'm also proud of.

But you've been great with your fellows, and, yes, they've worked out fine. We know them now on the national stage, and they are fine.

NORMAN: Well, yeah, thank you. Well, you're to be commended, obviously, because if a program of residents has a number of people that go into a particular subspecialty some of that interest has to come from the people who teach them during their residency program, so you're to be commended on that, as well.

EDWARD: Well, thank you for that.

NORMAN: You know both our academic careers have gone parallel in a way. I mean, I've taught at Cornell and Manhattan Eye and Ear. You've

taught...I think, most of your academic career has been at Mount Sinai, if I'm not mistaken.

EDWARD: Yes.

NORMAN: And you've taught...you've lectured to medical students along the way. You've had students come from other medical schools to do clerkships during your tenure there. You've written letters of recommendation for residents not only going into pediatric ophthalmology but other subspecialties, and supported them strongly, as you have. I know that directly. I've gotten letters from you in the past from some of your residents that were interested in looking at our program. So our paths have somewhat paralleled, although not been quite exactly the same.

What's gone on in ophthalmology that we're pleased with and that we're not pleased with in medicine or ophthalmology in our careers?

EDWARD: Do you mean as they hit us personally?

NORMAN: Well, I think generally. I mean, I know that I personally have found the intrusion of rules, regulations, laws, to be bothersome. Not as it applies to doing good medical care, but that it interferes with medical care. There are a lot of things that we see in medicine, that I see in medicine today that is, I think, intrusive in a negative sense, and it has...that has not been helpful. Whereas, the fact that we now require residents to learn specific aspects of ophthalmology, for example, the book, I mean, the BCSC book that you guided. When you were kind enough to come and give us grand rounds, I think, about two months ago or three months ago, I mentioned to the residents and faculty that you were coming by, and then I opened up the front page of the book to show them that you were the editor of...or the overseer of the basic book on pediatric ophthalmology.

EDWARD: Chair.

NORMAN: ...Chair of that committee, and I told them that you were going to grill them on everything that was in this book, jokingly. They were concerned.

EDWARD: Oh, well.

NORMAN: But the fact that that...those books exist is a tribute to how ophthalmology, for example, and particularly the American Academy of Ophthalmology has guided education, and you...as well as the other people who put those books together.

EDWARD: Well, I experienced that firsthand, Norman, because not only do we work within the committee that's doing a book, but as Chair you sit on a committee of chairs with the various members of the Educational Secretariat. And it's obvious in those meetings, if it isn't obvious any other way, that's a very vital concern to the Academy. There are 13 or 14 such books. And for all of that to come together with the idea of not just adding pages to the book, but of bringing them up-to-date, avoiding duplication across volumes, it's a very difficult thing to do. One of the reasons it is difficult because the renewal cycle, where you actually do a major revision, is not constant from volume to volume, so that there's sort of a leapfrogging - one book will be up-to-date while the other is a little behind. So it's very hard to cross-talk with another chair about what should we...what subjects should we keep in this book and take out of yours or take out of mine or whatever. It's very hard to accomplish that because everything is not in phase. And the effort to do that is really tremendous, and no one person can accomplish that. You would think if you appointed a czar who would say, "We're going...this is how we're going to reorder the books," it would work. And it wouldn't work. It makes the effort that much harder, but everybody tries their best to do that, and you get terrific guidance from the senior people in the Educational Secretariat as to that. That's been one of my finest professional experiences. I've said that before.

NORMAN: You know, the evolution of Academy is...I remember, specifically, the first meeting I attended ophthalmology and otolaryngology were still together. And it was a Chicago meeting, it must have been '71 or '72, because I think '73 or '74 was when they divided...is when they separated.

EDWARD: Something like that.

NORMAN: In that neighborhood. But I remember talking to Abe Schlossman way back about his experiences in his first meetings, and he was always proud of the fact that he went to every meeting since he had

completed his residency. And he knew all of the names of all the presidents and what they did. And he would talk about the meeting being almost in the small section of the hotel, all of the people who came. And how education has grown from...and I think the American Academy of Ophthalmology was the originator or thought originator, at least, of the fact that this organization should be educational, and how it started out in a very small way to produce these 13 volumes now and provide them worldwide, and to be, if you will... the Academy is the leader of ophthalmological education in the world from that standpoint, is one of the roles that the Academy has tried to pursue.

EDWARD: I'm going to digress to give you an Abe Schlossman anecdote. For years before he passed away, I thought to myself, 'I want something that I'm going to remember Abe by.' I kept asking him...and, typically, it would be at your monthly meetings, "Abe, when are you going to give me something of yours that I can keep as a memento? You pick it, but I want it." He'd always say, "Yes, I'll do it. Yes, I'll do it. Yes, I'll do it." And if it wasn't at your meeting, I would get him at the Greater New York Pediatric Ophthalmology dinner meetings, but it was always the same story. Finally, maybe a year before he died, he presented me with a signed reprint of the original article on Posner-Schlossman Syndrome.

NORMAN: Wow.

EDWARD: And I have that among my treasured recollections of all the good people that I've met...it goes with a signed copy of the pre-published but submitted AOS thesis on mono-fixation syndrome of Marshall Parks. I'm particularly proud of that one because I was a fellow while he was writing that thesis, and although it isn't mentioned anywhere, I did some of the work on binocular perimetry that he was doing as part of that thesis. So that's the kind of thing I like to collect, and Abe's signed Posner-Schlossman reprint is in there with them. That's my Abe Schlossman anecdote.

NORMAN: I have lots of things from Abe that he was kind enough to give me, but I do not have a copy of that particular thing, and perhaps you and I can discuss it one of these days.

EDWARD: Well, I'll be happy to fax one to you, but it will only have a copy of his signature.

NORMAN: I'd like that.

EDWARD: All right.

NORMAN: Interesting, indirectly, an Abe Schlossman story. So I come to ophthalmology, I'm a resident, maybe a month into residency. I knew nothing about ophthalmology beforehand, except I had read about the faculty at the hospital and I had read about the syndrome that Abe Schlossman and Adolph Posner had described. I read a little bit about it, I mean, a very little bit about it. I'm on call maybe a month or two into my residency, a 40...35- or a 40-year-old guy comes in complaining about mild ocular discomfort. I thought I saw a little activity in the anterior chamber. I wasn't quite sure. His pressure was 40s, mid-40s. I said to myself, "Self, this might be an example of a Posner-Schlossman Syndrome." So I got on the horn and I called...it was in the evening. I called the resident on-call, who was sleeping in the hospital at that time for three months or so, and I said, "You know, Doctor..." I don't know who it was. I said, "I think I have a patient down here who has Posner Schlossman Syndrome." And he said, "Really?" And I said, "Yeah, I think so. I'm not sure." He came down and he looked at the patient, and I...of the residents, I knew the least of all the residents. He said, "You know, I think you're absolutely right." From that moment on he considered me to be smarter than he had before that day thought I really was. And it was only because...I wouldn't have known anything about Posner Schlossman Syndrome, except I had just recently read about it, and...which brings me to another interesting thing.

I get to medical school, I'm in medical school for about six months, and I meet some professors and they're always saying, "Medow. Oh, yeah, Medow. Oh, I know your family." I never asked any of them why they know my family, why they think they knew my family, until I ask one...I said, "How come you folks have asked me about my family and that you know my family?" He said, "Well, Gary Medow must be your cousin or your brother, graduated from the medical school two years ago, and he was the President of the AOA chapter and the brightest guy we've had, and you must be his cousin or his brother." I said, "No, I don't even know who Gary Medow is." So they thought I belonged to Gary Medow, who was an extraordinarily bright chap. I get out into practice, five years, six years later. Gary Medow is a pediatrician practicing in the Lower East Side in

Manhattan. He and I have the same answering service. One night I get a phone call from an irate mother, “Dr. Medow, Dr. Medow, I’ve done what you suggested.” And in the background I hear [sound effects]. It’s a little baby that she’s carrying and baby’s got asthma, and she’s in the shower with the water running, and the hot water, trying to get the baby to stop wheezing. I spoke to Gary, the first time I’d ever spoken to him...I called him on the phone and I said, “Do you think we can come up with different answering services?” I didn’t want to get called again at 2 o’clock in the morning with a mother irate.

EDWARD: I have another one that has nothing to do with the Academy, as long as we’re talking about experiences in our life. I was at a meeting once. It was in an auditorium. I forget who was sitting next to me, but it was just before the meeting started, and somehow the discussion got on to Goldenhar Syndrome. And we were talking about the dermoids, and this, that and the other, and whomever I was talking to, we had a difference of opinion about what actually constituted this syndrome. From the row behind me I feel a tap on my shoulder, and the voice behind me says, ‘I think I can clarify this for you. I’m Dr. Goldenhar.’

NORMAN: The diseases to come up and the guy to be sitting behind you!

EDWARD: Sitting right behind me! I thought that was one of the funnier experiences I’d ever had.

I’d like to say something about where pediatric ophthalmology and associated disciplines fit in the overall scheme. I’ve served since 1982 on the American Orthoptic Council and I’m one of the several past presidents of that organization. Orthoptics is practiced by people we value very highly, and it comes to no national attention. They don’t have a license, and if you talk about orthoptics to, for example, a legislative group, the spoken or unspoken question is “What’s an orthoptist?” You can’t convince a state legislator that it is a cause that he or she should support. One of the anomalies is we have a group of people who are very dedicated, who do a lot of important work, and...on the Orthoptic Council, which is supposed to regulate and nurture, certify them, we can’t get them formal recognition very well. They don’t come to public attention. That’s one thing that has always been sort of a frustration for me.

Another is as pediatric ophthalmologists, we deal with some very important conditions that nevertheless hit very few individuals, the consequences of which could be lifetime, but they're simply not high on the radar screen. The best example I know is retinopathy of prematurity - a huge concern to neonatologists, a huge concern to those of us doing pediatric ophthalmology, I do most of the so-called screening at Mount Sinai. It's a tremendous amount of effort and research effort for a very small yield, because so few of those kids who actually even get the disease go on to blindness, but when they do it's devastating. And so we're in the anomalous position of expending tons of effort on small-yield things, whose importance you can't deny, and that's one of the things that I think is peculiar. It isn't like diabetic retinopathy or stroke, where...you know, millions of people. If it weren't for private foundation efforts for some things, like Sturge Weber Syndrome and things of that sort, rare occurrences, there would be very little opportunity for governmental or public recognition of the need to support those things, and yet to us they're crucial.

NORMAN: Well, to speak to both of those things that you just mentioned, recently, you know, a year ago, I came full-time into academic practice at Albert Einstein, Montefiore, and our orthoptist left after...she retired after being there 15- or 18 years. I went to our administrator to try to get a replacement for her. So she went to her people to try to find a line, a financial line that an orthoptist would fit into. There is no such thing.

EDWARD: You're right. I've had the same experience.

NORMAN: There is no such thing. And if I would...I gathered various amounts of income that an orthoptist would get by speaking to colleagues of mine and also giving them my own experience at my own salary that I paid my orthoptist when I was in my other life, and we have still yet now, six months after this has occurred, we have still (a) to get the university to acknowledge what they would pay an orthoptist, because they, too, can't find a group of people in the world of labor to indicate what an orthoptist should earn. So, you're right, that is a problem with orthoptists.

The ROP issue is another great issue, and you're 100% correct. But we have diseases that are also very rare that have foundations that have been formed and that have private people throwing in lots of money to them - the Cornelia de Lange Foundation, the Marfan Syndrome...

EDWARD: How many Cornelia de Langes are there walking around?

NORMAN: Not very many, but they have...some person who had a child who had that disorder, or has that disorder, took it upon themselves to put together an organization to try to find the cause, to try to find the treatment, to try to help children who have this problem. ROP has not yet, to my knowledge, developed that kind of...although there are lots of kids that, unfortunately, have suffered from ROP, they don't have an advocacy group...I mean, they do amongst the pediatric ophthalmologists who are trying to develop tele-medicine help and other treatment helps - Avastin versus lasers - but they don't...and it's a small group of people.

EDWARD: And the interesting thing is that although so few of prematures who get any degree of ROP go on to blindness, although there are so few of those, they outnumber the Cornelia de Langes, they outnumber the Sturge Webers, they outnumber whatever else you want to talk about.

NORMAN: By far, yes.

EDWARD: I don't quite know how to address that, but that's what I think is a major issue for us.

NORMAN: But one of the things that we've observed in our field of pediatric ophthalmology, the evolution of pediatric ophthalmology, is a treatment for this disorder that when you first started practicing and I first started practicing there wasn't any treatment for ROP. And then the study came out, the study was broken because of the results of...halfway through the study that laser treatment...that cryotreatment is wonderful, is good, and then lasers came in. Now, we're talking about anti VEGF treatments, potentially, for that disorder. So that's come in.

Treatment of kiddie cataracts has improved greatly from the time that we began treating kids in ophthalmology to today, with the infant aphakia treatment study going even further to try to help decide whether IOLs in the first six months of life is better than not putting IOLs in it.

Glaucoma treatment, of which you are greatly involved in, is...has seen the evolution of tube shunts as a secondary procedure, not generally as a

primary procedure, but we're still doing the same procedures that we've done for years - trabeculectomies, goniotomies, we're using antimetabolites that we've developed along the way.

Corneal transplants in kids is about the same, with the exception of people now trying to consider doing DSEK and other technically difficult procedures to do in a teeny-tiny little eyeball.

But those are the things that...strabismus you can talk to better than I can.

EDWARD: Well, we've come a long way in strabismus, I would say.

The personal challenge to me at this point in my career is that the more I've concentrated in pediatric ophthalmology, the more I've become remote from other areas of ophthalmology, and that hit me just this week. We have comprehensive ophthalmologists on our faculty, and one of them is leaving, and we've been asked, until they get a replacement can we pitch in and take some general patients. And the answer for me is I wouldn't know what to do with a diabetic with heart disease on anticoagulants and whatever else. I mean, it's not that I wouldn't know what to do, but I'd feel very uncomfortable in doing anything. So I've confined my offer to take some of the more routine patients that walk in, but it emphasizes a dilemma that the more you get into our discipline...I don't know whether you feel this, but I feel it keenly...you don't have the opportunity to keep up as you would like, especially with the technological advancements. We have a photography department with cameras and devices all over the place. You trip going past them. And all of the ones doing adult work - the retina people, the cornea people - are using all this stuff. And we have very little high tech in pediatric ophthalmology, so I wouldn't know even how to work the on/off switch in a lot of these things.

NORMAN: How many field tests do you do on 3-year-olds?

EDWARD: Not too many.

NORMAN: How many OCTs do you get on little children?

EDWARD: Well, what limits you there is that you need general anesthesia for some of those things and you don't want to put a kid through that for what may be just curiosity.

NORMAN: We do ultrasounds...

EDWARD: B-scans...

NORMAN: We do them quite frequently.

EDWARD: Absolutely. So I don't know if that bothers you, but that's been a source of concern for me.

NORMAN: It bothers me, but what we've done for the good is we've created subspecialties in ophthalmology and all of medicine...where we have developed people who are so good at one particular area...

EDWARD: Right. But we are the ones who are most out of touch with the rest of the disciplines.

NORMAN: Yes, but that just goes to show you, there's a difference between kids and adults.

EDWARD: Yes, which is what Dr. Costenbader said years and years ago. That's a wonderful wrap-up comment. That's exactly right.

NORMAN: Right. Great, thank you.