The Legend of Lawton

Jonathan D. Trobe, MD

For most of the second half of the 20th century, the best-known ophthalmologist in the world was J. Lawton Smith, MD. In his heyday, his medical argot and antics transfixed audiences. Even when the other “top dogs” of ophthalmology were gathered in the same room, no one took their eyes off the “simple country doctor” with the South Carolina twang. Soon everyone was describing patients in “Lawtonesque” (see “The Language of Lawton,” below). Mixing medicine with evangelism, he converted scores of medical students to ophthalmology, if not to Christianity. After completing his three-hour examination of patients, he would kneel down and pray for their health and their souls. On an old Smith-Corona typewriter, he was to hammer out definitive descriptions of ischemic optic neuropathy, internuclear ophthalmoplegia, skew deviation, opsinusis, optokinetic nystagmus, light-near dissociated pupils, and isolated homonymous hemianopsia. In addition to his journal articles and books, he produced nearly 100 audiotapes organized around interesting neuro-ophthalmic patients, which are still quoted as gospel. Retired from his post at the Bascom Palmer Eye Institute for nearly a decade now, the Elmer Gantry of ophthalmology still exudes an uncommon energy at the age of 73.

Born into a medical family in South Carolina, Smith attended college at Emory University and medical school at Duke University. He completed his ophthalmology residency at the Wilmer Institute, Johns Hopkins University, and his neuro-ophthalmology fellowship with David Cogan, MD, at Harvard. He signed on to the Duke faculty in ophthalmology in 1960 but was drawn away in 1962 by Edward Norton, MD, who was recasting the ophthalmology department at the University of Miami. On the basis of his reputation for being outrageous but breathtakingly innovative, Smith became Norton’s second faculty hire at the Bascom Palmer Eye Institute (after Victor Curtin, MD). Shortly after his arrival, he was joined by several other neuro-ophthalmologists. They made up the finest roster ever assembled in the field (see accompanying article in this issue by Joel S. Glaser, MD, and an interview with Noble J. David, MD).

This “high-powered interview” took place at Dr. Smith’s home in South Miami on February 25, 2002.

JDT: What got you started in medicine?

JLS: Well, I enjoyed chemistry in high school, but I decided if I studied chemistry, I’d have to live in some place like New Jersey or Delaware. I wanted to work with people, and my Daddy was a board-certified internist, so I thought about studying medicine. My Daddy kept trying to talk me out of it. When I asked him later why he did that, he said, “I knew if you really wanted to do it, you’d do it anyway.” I applied to two schools: Duke and Emory.

JDT: Why do you think Duke accepted you?

JLS: I happened to be interviewed by old Dr. Hetherington, the histology professor, who was keeping track of who smoked cigarettes, pipes, cigars, and what not. I was probably the first bird he’d seen who was smoking a big old cigar.

JDT: What do you recall of the medical school days at Duke?

JLS: They were some of the happiest days of my life. Only three things I did not like: psychiatry, the well-baby clinic, and orthopedics. I liked medicine, I liked surgery, I liked OB-GYN. I delivered about 75 babies, but I got tired of getting up at two in the morning, so I decided to go into internal medicine.

JDT: How did you get sidetracked into ophthalmology?

JLS: At Duke I used to go to the Tuesday night lectures in ophthalmology by Dr. Banks Anderson, Sr. One night he talked for two hours about diseases of the sclera. That really impressed me. I couldn’t imagine someone talking for two hours about the sclera! So I began to read about ophthalmology. Then I had my big dilemma. I didn’t know whether I should go into ophthalmology or neurology.

After a year of medical internship at Emory, I was still agonizing over what to do. So I volunteered for two years in the Air Force. After that, I still wasn’t sure, but I remember my Daddy saying, “If you’re having such a hard time making a decision, do either one and you’ll be happy.” I decided I’d take a year of ophthalmology and find out whether I liked it or not. I applied to the Wilmer Eye Institute and the Massachusetts Eye and Ear Infirmary.

JDT: How did you decide on those programs?

JLS: Very simple. I asked just about every ophthalmologist I met or knew, “What are the best residencies?” In short order, I found out the secret. Where they trained was always
number one. So I crossed that one off the list. The rest were always the same ones, and Wilmer and Mass Eye and Ear were among them. I got accepted to Wilmer right away. I didn’t hear from Mass Eye and Ear, so I accepted Dr. Alan Woods’ invitation at Wilmer. Three months later, I got a telegram from Mass Eye and Ear accepting me. I’d have gone there because it was only three years and Wilmer was five, but the Lord was directing me because the program at Wilmer was very good for someone who was leaning toward academic medicine.

**JDT:** And at Wilmer . . .

**JLS:** After one year I knew I loved ophthalmology. I was particularly impressed that Howard McCann (MD) and Harold Pierce (MD), who were board-certified internists, had given up medicine for ophthalmology.

**JDT:** When did you move toward neuro-ophthalmology?

**JLS:** Early in my residency, I began attending Dr. Frank Walsh’s Saturday morning neuro-ophthalmology conferences and Dr. Richard Lindenberg’s Monday night neuropathology conferences at the morgue of the Baltimore City Hospital. I’d be the only ophthalmology resident at the morgue. In fact, I introduced Dr. Lindenberg to Dr. Walsh. Walsh, you see, didn’t want anything to do with Lindenberg because Walsh hated Germans. As a corpsman in the Canadian Army, he’d been shot in the chest during World War I.

That’s a very interesting story in itself. Early one morning, Walsh went out to evacuate a buddy and he was hit by gunfire. Later that day, the Germans brought out mustard gas and killed hundreds of soldiers. So Walsh figured that that German soldier who shot him actually saved his life.

Anyway, Lindenberg was a big Nazi—the chief pathologist for the German Air Force—and an expert in the
pathology of hypoxia and trauma. Right after the war, the Americans persuaded him to come to America. But he didn’t like the American Air Force because they didn’t have enough brains—dead brains. So he came to Maryland, where there was a plentiful supply of dead brains. In due time, Walsh and Lindenberg became great friends and wrote papers together.

JDT: When you became interested in neuro-ophthalmology, who were the leaders in the field?
JLS: (Frank) Walsh in Baltimore, (Alfred) Kestenbaum in New York, (David) Cogan in Boston, (Robert) Hollenhorst, (Thomas) Hedges, and (Wilbur) Rucker at the Mayo Clinic, and (David) Harrington on the West Coast. In place of my fourth year of residency at Wilmer, I chose to spend a year’s fellowship with Dr. Cogan in Boston.

JDT: What do you remember of that period?
JLS: Well, Dr. Cogan had cut his neuro-ophthalmology consults to a modest number. The neurologists didn’t want to send somebody with a fresh stroke over to another building in a wheelchair. So I started making rounds with the neurologists and neurosurgeons, and the number of consults picked up. We would see every admission to their services. They would automatically call Cogan’s office and tell us the names. I got a big kit up: a binocular indirect, a Risley rotary prism, a Projecto-light for fields. And with all this stuff, I’d go over there. The neurosurgeons would love it because they could get an eye consult with the patient staying in his own bed! We were seeing stroke patients with the “King Fish”—C. Miller Fisher (MD). When the patients died, he would cut the old brains and make the correlations. There was tremendous material. I wrote 13 papers that year with Dr. Cogan.

JDT: You are famous for doing your own typing of consultations. Did you do that during your fellowship?
JLS: Yes. My Daddy had me take typing lessons when I was ten years old, and I won a typing contest—66 words per minute, as I recall. When I was in medical school at Duke, I would go to lectures and write as fast as I could. I’d take those notes home at night and type them out as fast as I could. I found out later that some people got a copy of my notes and sold them to medical students all over the South. In Boston, I would see the patient, take out my typewriter, type out the consult, put the top sheet in the chart, and keep the carbons for our records. And I kept that up until I retired.

JDT: How did Cogan and Walsh differ in their approach to patients?
JLS: Walsh worked up every patient completely himself. Cogan concentrated on the pertinent parts. So I learned from Walsh how to do the whole examination and from Cogan how to get to the problem the patient is referred for.

JDT: When you returned to Wilmer for your final residency year, what were the highlights?
JLS: Well, there was Dr. Walsh’s Saturday conference. Old Dr. Ford (Franklin Ford, MD, chairman of neurology) was always there. Ford was very shy—never would say anything. But he was the final arbiter of neurologic diagnoses. Everyone knew that. One Saturday, they had this about 10-year-old child, very ill, and they were all arguing about what was wrong with this child. Dr. Walsh turned to Dr. Ford and said, “Dr. Ford, you haven’t said anything. What’s wrong with this child?” Very quietly, Ford said, “Measles encephalitis.” In his booming voice, Walsh said, “Well, Dr. Ford says it’s measles encephalitis. That settles it. Next case.”

The BPEI “Founding Five” (from left): Smith, John Flynn, MD; Donald Gass, MD; Ed Norton, MD; and Victor Curtin, MD, 1963. (Courtesy of Bascom Palmer Eye Institute.)
Ford never drove a car. He never left Baltimore. The story goes that a very wealthy dowager lady in Chicago once sent a telegram to Ford offering him $10,000 to come to Chicago and consult on a neurologically ill child. Ford declined the offer but told the lady he’d see the child in Baltimore for his usual fee of $25!

**JDT:** Why didn’t you stay on at Wilmer when you finished your ophthalmology residency?

**JLS:** Dr. Maumenee wasn’t offering anything at Wilmer, and I didn’t care that much about Baltimore. Besides, at Duke they had a deal where you could make a salary and then keep 50% of what you earned. So I went to Duke. And I had no intention of leaving there. But in 1962, I came down to Miami for a meeting of the Association for Research in Ophthalmology (the predecessor of ARVO), and I met Ed Norton, whom I had known from his visits to Wilmer. Norton picked me up at the Americana Hotel and took me over to the newly built Bascom Palmer Eye Institute.

He asked me what it would take to get me down there. “Well,” I said, “I’d have to have five things: a resident assigned to me full time, and four rooms—an examining room for me and one for the resident, an office for me and one for a secretary. Norton said fine. But I said I didn’t have the Florida Boards. Norton handed me some old exams to practice on. So I said, “I hate to wait to get on a golf course.” And he said, “I belong to a few private courses here I could get you on.” A few days after I got home, I received a letter from Norton offering me everything in writing. I figured if somebody offers you all that in writing and you don’t take it, you’re a fool.

**JDT:** Why was Norton interested in you?

**JLS:** Norton knew Cogan, and I had published all those papers with Cogan. Besides, anyone doing anything in neuro-ophthalmology would have been recognized. Bill Hoyt (MD) and I were probably the only residents in the country interested in the field.

**JDT:** But why would Norton want to hire a neuro-ophthalmologist when the only faculty member he had hired was an ophthalmic pathologist (Victor Curtin, MD)?

**JLS:** Norton loved neuro-ophthalmology. He had had a year of neurology. And he wanted to move over to administration. He knew he needed somebody in neuro-ophthalmology full time.

**JDT:** So you were persuaded to leave Duke, a medical powerhouse, for the University of Miami, which wasn’t even on the medical map . . .

**JLS:** Yes, I was unhappy with ophthalmology at Duke because it was a division of surgery. It’s very hard to hire ophthalmologists when there are only five general surgeons. I tried to get them to hire Don Gass (MD), who was a year behind me in medical school at Duke, and who subsequently became “the king of the macula.” They wouldn’t do it. So I went to the Dean and I said, “I want you to make ophthalmology a separate department.” He said he’d take it under advisement. I took (and passed) the Florida Medical Board just for insurance. Then the Dean at Duke called me in and said, “We’ve decided not to make ophthalmology a department just yet.” I resigned on the spot. Actually, I think I did Duke a big favor by leaving, because they had to make ophthalmology a department soon after that to hire the next guy.

**JDT:** When you came down to Miami, what did you find?

**JLS:** A sparkling new institute. Good facilities. Anything I wanted. In the whole 52 years I spent at Bascom Palmer, Norton never turned me down. Duke was an entrenched bureaucracy. Miami was brand new.

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Smith playing the piano to the singing of Gaby Kressly, BPEI administrator, 1966. (Courtesy of Bascom Palmer Eye Institute.)
And Norton was terrific. Some chairmen are fearful of having people underneath them who are better than they are. Norton was the exact opposite. If he needed a pediatric ophthalmologist, he wanted someone like John Flynn (MD) who was better than he was. Norton looked at ophthalmology like a garden. He was the gardener tending the beds. All I wanted was for neuro-ophthalmology to be one of the flowerbeds in his garden.

**JDT:** How did you get going at Bascom Palmer?

**JLS:** I started to make rounds at 7 a.m. every Monday morning with Dr. David Reynolds (chief of neurosurgery) and his team with my penlight and direct ophthalmoscope. They loved it because they had neuro-ophthalmology coming right to them. They weren’t going to send postop craniotomy patients across the street to the Bascom Palmer. But I would go with them and see their patients for nothing. What that did was build a relationship with the neurosurgeons and neurologists so they would call me when they needed help. I decided you only needed two neurosurgeons and one neurologist, and they will refer you all the patients you could ever want.

I’d go on Tuesday mornings to the neurology ward on West Wing 11 and make rounds with the ophthalmology residents and medical students. I copied Walsh’s Saturday clinic. Everyone would come to that. The ophthalmology residents could learn most of neuro-ophthalmology just by attending that conference once a week for three years.

**JDT:** How would you describe your style of examining outpatients?

**JLS:** I’d spend two to three hours on each patient. I did everything myself—including color fields and peripheral fields. Everyone else would farm this out.

**JDT:** Why didn’t you farm out visual fields?

**JLS:** Because the way I was taught by Dr. Walsh was to do your own fields. I took my own history. I didn’t have a checksheet.

**JDT:** Didn’t the residents take histories?

**JLS:** The residents would do them first and then present them to me. And then I would repeat everything. I had to double check. I extended and refined their observations. I did things routinely that other doctors didn’t do.

For instance, I would do a refraction—a retinoscopy—on nearly every patient. Patients would be sent in with visual loss. The neurologist couldn’t find anything wrong, and the ophthalmologist might have done a manifest refraction. But you retinoscope them and the guy has a big 3.75 cylinder at 100 degrees and you put that up and he has 20/20. In motility cases, I’d measure their horizontal and vertical phorias. Very frequently someone would be complaining “my eyes are not comfortable,” and I learned to put maybe one base up in one spectacle and one base down in the other. I learned that it was very important if somebody had a headache and you measured him in the distance, say 3 prisms of eso, and then the guy would come back six weeks later and have 10 prisms of eso. Well, that guy was getting increasing intracranial pressure with an increasing sixth (nerve palsy) and once he got out of his fusional range he’d be seeing double and have limited abduction. So by quantitating their phorias, I could pick up a lot of motility disturbances while they were preclinical. Same way with fields. You could take a red button (Bill Hoyt used to use a red jigger stick) and have the patients compare that color on both sides of the visual field, and you could pick up a lot of defects just by color confrontation that an ordinary perimetrist might miss.

I look at it this way: the difference between a general practitioner and a superb internist is spending another hour with the patient. Same difference between a general ophthalmologist and a neuro-ophthalmologist—you can be more meticulous in an extra hour. There’s no magic to it—it’s just doing hard work, doing the job instead of sloughing it off and finessing half of it. And that’s what concerns me about the medicine of today. With the pressure to see so many patients, you’ve got to cut corners, and you’re going to miss things.

**JDT:** Didn’t you feel any pressure to see a certain volume of patients?

**JLS:** No, Norton encouraged me in every way. I asked him when I first started, “Now what do you want me to do? How much time do you want me seeing patients? How much time doing surgery? Teaching? Research? Going out of town giving lectures? And I can remember his answer right now. He said, “I don’t care what you do, just go home tired at night.” So he was smart enough to know that if he let his faculty do what they wanted to do, they would do their best.

**JDT:** What was your greatest joy in going to work?

Smith performing a “subaquatic” examination on a patient, 1975 (for explanation of “subaquatic,” see “Language by Lawton” below).
JLS: Finding some condition that something could be done about, teaching the residents about that, and helping that patient. This was one of the things about ophthalmology that was better than neurology. In neurology you could make a nice diagnosis but it might be an untreatable condition. But if the guy had diplopia, I could give him prism glasses. If he had poor vision, I could give him a better prescription. If you saw a guy that they thought had sinus headaches and you found out it was migraine, why you could put him on Imferal and prevent a lot of those recurrences.

JDT: I know that your religious conversion played a large role in your life. What about that?

JLS: I went to church as a young kid every Sunday with my family because in South Carolina that was the thing to do. I was baptized in a Baptist church when I was ten, but when I came up out of that water, the only difference was that I was wet. I was not changed one iota.

At the age of 33, I became what you call “born again.” If you’d have asked me then if I believed in God and Jesus, I’d have said yes, but it was the difference between having the Lord in your head and in your heart. In 1963, I went out to the Academy (American Academy of Ophthalmology Annual Meeting) in Chicago, and I saw Jack Cooper (MD) who had been a resident with me at Wilmer. We had been good friends, but I hadn’t seen him for five years. I went to all the lectures and exhibits with him, and he was totally different. I couldn’t put my finger on it. Then he invited me to a supper of the Christian Medical Society. The speakers talked about how they did 125 cataracts a day in these camps in Pakistan and India. Very interesting. Afterwards, we were sitting in the Palmer House in Chicago and just talking and I said, “Jack, something’s different about you, and I want to know what it is.” And he said, “Well, I’ve just turned my life over to Jesus.” And I said, “Now what do you mean?” He said, “I get up in the morning and I read the Bible and I go through the day trusting the Lord, praying for my patients. Since I’ve gotten into the Bible, my practice goes better, my surgery goes better, my relationships with my family go better.” And that’s all he said. He didn’t try to get me to join anything or say anything.

Well, I came back to Miami and I knew Jack had something that I didn’t have. I just knew that. So I told my Sunday School teacher, Albert Warren, about what I’d noticed about Jack Cooper. And Warren tells me, “Well, I used to be a professional atheist. I loved to ask people questions about their faith that they couldn’t answer. I’d love to get them all shook up to destroy their faith. One day a guy asked me three questions that changed my thinking. The first one was this: ‘Will you believe that a man named Jesus Christ ever lived?’ I said ‘Well, yes, there are records.’ The second question was ‘Will you accept the fact that he was crucified?’ I said, ‘Yes, that’s a common way the Romans executed people; many Jewish people were crucified.’ So he said, ‘All right, then here’s the third question: will you accept the fact that that tomb was empty on the third day?’ I said ‘Yes, that’s the way the story goes.’ ‘All right,’ he says, ‘if you believe that, then by horse sense there are only three ways that body could have gotten out of there. One way is he could have been raised from the dead. But that’s supernatural; you don’t believe that; we’ll table that; we’ll set that over here. Only two other possibilities: either his friends or his enemies took him out. If his enemies took him, why didn’t they produce the body to discount the idea of a resurrection? It couldn’t have been his friends who took him out of there, because most of the early believers were Jews, and they had no reason to deny the resurrection.’”

So Warren said, “I got to thinking about those points, and I got down on my knees. I don’t guess I ever had prayed, and I said, “If You are real, I want to know the truth. There’s a lot of weirdo stuff out there, but if You’re true, I want you to come into my life, forgive me my sins, and give me some peace.”

Now, I’d never heard the Gospel presented where intellectually I couldn’t knock a hole in it. But all this made sense to me. We had an old South Carolina preacher preaching in Miami one Sunday afternoon in October ’63, and he said, “Anyone who wants to re dedicate his life to Christ, come on down here.” So I did. And I said a prayer. I didn’t see a lightning bolt go shooting by, but my life began to change very dramatically after that.

JDT: In what way?

SPIROCHETES IN LATE SERONEGATIVE SYPHILIS, PENICILLIN NOTWITHSTANDING

By

J. LAWTON SMITH, M.D.
Associate Professor of Ophthalmology
Associate Professor of Neurosurgery
University of Miami School of Medicine
Miami, Florida

CHARLES C THOMAS * PUBLISHER
Springfield, Illinois, U.S.A.

Frontispiece of Smith’s book on syphilis, published in 1969. (Courtesy of Bascom Palmer Eye Institute.)
JLS: The first difference I noticed was down at the Coral Reef Golf Course where I’d go play golf. I’d hear all these men cursing and blaspheming and taking God’s name in vain and telling dirty jokes and all, and I was not comfortable. I don’t think they had changed their language, just the ears hearing it were different. I used to like doing all that junk—run around, smoking, drinking. I gave it all up.

The next year at the Academy Meeting, a guy came up to me at the meeting of the Christian Medical Society, and he said, “What are you doing here? I took the Lancaster Course from you in 1960 or 1961, and you were the most profane instructor I ever set eyes on. You couldn’t say a sentence without at least two four-letter words in them. I said, “Who you talking about? Me?” And he said, “Yeah, you.” So I suppose I used to curse like a sailor, and blaspheme, and embarrass people. If you’d asked me before if I wanted to go down to the burle-Q and see some strippers and drink some beers, I’d have said sure. If you’d said, do you want to go to a Bible study, I’d have said no.

JDT: How do you account for that change in psychological terms?

JLS: I can’t. All I know is the Lord flew in my heart and just changed me. Frequently after somebody has a conversion, their old hell-raising buddies fall away. But there’s an exception that I call the “supernatural friendliness sign.” And that is my relationship with Nobby David (Noble David, MD, professor of neurology, University of Miami; see accompanying interview of him in this issue). He was my buddy when I was getting drunk with him, and he is my buddy when I’m playing cello and bassoon duets with him now.

JDT: So Nobby knows the Lawton Smith B.C.—“before conversion.”

JLS: Yes, and here’s a story you’ll enjoy. There were two carousing buddies in England, and one of them came to know the Lord and became a well-known Bible expositor. The two friends found themselves in a cathedral in France. The Bible expositor goes up to the pulpit to address the congregants, and someone passes him a note written by his old carousing buddy that says, “If you get up and talk about Jesus, I’m going to get up and tell the audience about all the things you used to do.” That’s the kind of note you don’t want to get before you start preaching, right? So the expositor gets up and says, “I just got a note from an old friend of mine in the audience, and he says that if I talk about Jesus, he’s going to tell about all the things we used to do together. I just want you to know that he hasn’t heard the half of it!”

Any story you might have heard about me, I could come up with one that’s worse. I did everything rotten that a person could do and never thought anything about it. I was terrific on Sunday morning from 10 a.m. to 12 noon, but I was like the biggest playboy you want the rest of the time. I had fun. But since my conversion, no question I’ve been able to give better patient care. Somebody said you can’t care for the patient unless you care about the patient.

JDT: Did religion enter your medical practice?

JLS: I started praying for patients after the examination. Let’s say a woman had a four-year-old child with a chiasmal glioma. And the mother would be very distraught. They’d get ready to leave my office, and I would say, “Would you mind if I said a prayer for your daughter?” Their eyes would get big as saucers. Speechless. And I interpreted speechless as being “yes.” Or they’d say, “Please do.” I don’t recall but once or twice in my 32 years somebody saying, “No, I don’t want you to pray for me.” In which case, when they left, I’d pray for them. I’d say, “Dear Lord, I pray for little Sally. If she has to be operated on, that the surgery will go well, that the anesthesia will go well, that there won’t be any postoperative complications. Body and soul, financial and social, in every way I’m praying for you.” That’s take about 20 seconds. Many times they would weep. And God would answer that prayer and the surgery would go well.

For Jewish patients, I would pray to the God of Abraham, Isaac, and Jacob. Once I prayed for an old Jewish man from Miami Beach. He came back a year later for a follow-up, and when the examination was over he wouldn’t leave. I said, “Is there anything else I can do for you?” And he said, “Doctor, last year you prayed for me. Aren’t you going to pray for me again?” He just wanted that brocha, that blessing.

I got hundreds of thank-you notes over the years of how much they appreciated that I’d said a little prayer. Everybody talks about treating the whole patient—body, soul, and spirit. In neurology, neurosurgery, and neuro-ophthalmology, you see patients who are frightened. They may not tell you, but they are terribly frightened. Daddy’s aphasic now, or mother’s getting Alzheimer’s now and she can’t remember her own daughter’s name—all these kinds of things. I didn’t try to tell them to join this church or go to that; I just wanted to pray for them that God would minister a little bit of compassion.

JDT: Did your religious zeal ever get you into trouble with patients?

JLS: I had complaints less than you can put on one hand, but sometimes I used zeal when I wasn’t very wise. I’ll give you the outstanding case.

During the Vietnam War, there was a young captain who began to have headaches. They thought he had papilledema, and he got evacuated all the back to Walter Reed (Army Medical Center, Washington, DC). Every time they did his fields, they got smaller. Walsh saw him at Walter Reed and thought he had optic nerve drusen. He was about to get 100% disability and discharge from the military because of field loss associated with drusen, but they sent him down to see me for another opinion. Well, he did have optic
nerve drusen—looked like rock wool candy on both discs—but his color peripheral fields were bigger than his white fields. And it was obvious that this was functional. So I got Alan Bird (MD, London, England), who was here at the time to do the fields, and he said they were functional. John McCrary (MD) did them too, and he said they were functional.

So I sat down with the captain and said I thought this was a self-limited condition, that it would improve, and that he didn’t need to be fearful that he was going blind. Then I told him he should cast his troubles on the Lord, and I prayed for him and I gave him the Van Dusen letter, which is a Christian apologetic that the Campus Crusade for Christ uses. He went back to his congressman, showed him the literature I was giving out, and convinced him that I had gone crazy. (At least the congressman got to read the Van Dusen Letter!)

Well, the complaint came down from the congressman to the Dade County Medical Society and to the Dean of the Medical School, who passed it on to Norton. Norton called me in, and you’ll see Norton’s wisdom here. I told him the story and that Alan Bird and John McCrary had confirmed the diagnosis. Norton’s comment was “Well, I might have known it.” What had knocked the case over the center field fence was the fact that Bird and McCrary had both found the same thing. That was the end of it. It’s like old Dr. Walsh said years ago when some doctors complained that he was showing their patients at his Saturday conferences. “Doctor,” he said, “this is how I practice. I like to use these cases for teaching medical students. If you don’t want me to show them, then don’t refer them to me in the first place.” Bill Hoyt used to say that whenever a head pops up above the crowd, there’s always a thousand people with baseball bats to knock it back down. That’s the way I’ve remained all along.

JDT: As you look back, which of your professional contributions are you proudest of?
JLS: Well, this weekend (at the Bascom Palmer 40th anniversary celebration), several doctors have come up to me and said, “I want to thank you for what you taught me 25 years ago. It’s influenced my practice all these years.” Now that’s very meaningful. Scientifically, one of the biggest things I did was to get ophthalmologists to recognize that patients could have late ocular and neurosyphilis despite a nonreactive serum VDRL. And they would start doing the FTA-Abs test and find many, many patients with reactive FTAs and negative VDRLs.

JDT: How did you get into the syphilis work?
JLS: Well, that is interesting. At Wilmer, they had a guy named Bob Nelson who came down to do a medical residency, but he had six months’ spare time before his residency was to start. So he began doing experimental syphilis research with Tommy Turner, who was subsequently the

Smith delivering a diagnostic “pearl” (or maybe a “gem”) in 1990. (See “Language by Lawton” below.)

Smith with neuro-ophthalmology fellow Mitchell Strominger, MD (Brooklyn, New York), in 1993. (Courtesy of Bascom Palmer Eye Institute.)
dean at Hopkins. And one night, he looked under the dark field microscope at a slide of virulent *T. pallidum* swimming and moving like mad. He put a drop of normal rabbit serum on there, and they’d keep spinning. But when he put a drop of rabbit serum from an animal that had been infected with syphilis, in short order the *T. pallidum* would be immobilized. So he invented the Treponemal Immobilization Test (TPI). It was called the Nelson Test.

I was a rube-like eye resident seeing optic atrophy and retinitis pigmentosa-like fundi, and dislocated lenses, and right-left dissociated pupils, and I’d get a VDRL or RPR and it’d be negative. So I’d draw some serum and send it over to Nelson, and it’d come back positive. Then I’d talk to the patient, and he’d admit he’d had gonorrhea three times or he’d been treated with hip and arm shots of Salvarsan or bismuth back up and down the road, and I’d realize that the guy had had syphilis.

So I set up a lab and did experimental syphilis research with monkeys and rabbits for years, and wrote that book in 1969 on “Spirochetes and Late Sero-negative Syphilis—Penicillin Notwithstanding.” We found people who had been treated with penicillin who still had spirochetes. Those spirochetes could be in a dormant state, but give that patient steroids and it’s like vitamins—the organisms become clinically active.

**JDT:** What other contributions stand out?

**JLS:** Well, I’ve studied a lot of different things. Gordon Miller (MD) and I wrote the first paper in the English literature on ischemic optic neuropathy. We sent it to the AJO (*American Journal of Ophthalmology*) with the title of “Ischemic Optic Neuritis.” They didn’t like that title; they said we don’t know it’s a neuritis. Call it a neuropathy, they said. So we did. I think I was the first person to use the term “bull’s-eye maculopathy.” That was in a paper on chloroquine retinopathy.

Later I got interested in histoplasmosis in the retina of pigeons. I tried to dilate pigeons’ pupils with neosynephrine, tropicamide, and scopolamine, and never could dilate them. I read that pigeons have striated muscle, not smooth muscle, in the iris. So we made up some drops of curare, and that dilated the pupils beautifully. I reported that with Danny B. Jones (MD). Here’s something interesting about histo. Chickens don’t get it because their body temperature is too high. But if we would inject histoplasma intracarotid into chickens and put them in the icebox, they’d come down with beautiful granulomas in the iris, the choroid, and the retina. We reproduced the fundus picture that you see in humans.

**JDT:** What about other clinical work?

**JLS:** We did a lot on ophthalmodynamometry. They’d be putting a clamp on some guy’s carotid artery for treatment of a giant intracranial aneurysm. They’d start tightening the clamp, and we’d check for pulsations; after a certain number of turns—whammo! The pulsations would appear, so we’d tell them to back off. Then they knew they had to make that last turn very carefully—say an eighth of a turn at a time.

Another paper I’m proud of is the one on skew deviation I did years ago with Nobby David (MD). Prior to that, skew deviation was an ill-defined condition. We found that there were three groups: 1) fully comitant (same degree of vertical misalignment in all gaze positions), 2) laterally comitant (same degree of vertical misalignment only in one lateral gaze position and ortho in the other), and 3) simulating an isolated extraocular muscle weakness. So I think we made a contribution by showing the things skew could look like.

**JDT:** How have you occupied your time since you retired in 1994 from Bascom Palmer?

**JLS:** I teach a Bible study class of 15 or 20 people every Tuesday night at home (which I’ve done for over 25 years). I spend a lot of time preparing those lessons on Monday and Tuesdays. Every Saturday morning we have a men’s prayer meeting in this room—maybe 8 to 10 men. I’ve been going to Fort Lauderdale once a month to work with a black pastor, and we take out inner-city boys 6 to 16 years of age to a

Smith just before his retirement after a 32-year career at the BPEI, 1993. (Courtesy of Bascom Palmer Eye Institute.)
coffee and then show Christian videos and testimonies of successful black people.

JDT: Are the boys receptive to you?

JLS: Well, when I first started going out there, it was a rough group, and I was the only white face. They naturally wanted to know where I’m coming from. They had not encountered a white senior man interested in them. But after I kept coming, and paying for all their meals, they came to trust me. I stay busy. I walk an hour a day.

JDT: In the middle of the summer too?

JLS: Sure, I was going to the house every day from May to October. I took up the bassoon in 1996. I’ve got a great teacher, the second bassoonist of the Florida Philharmonic.

JDT: You have three children?

JLS: Two boys and a girl. The oldest, Lawton Jr., is a pilot for Executive Jet, which is one of these private charter companies. He lives in Leesburg, Florida. My daughter, Polly, is married and lives in Lakeland, Florida, and my younger son, Coleman, is a pilot with Continental and lives in New Jersey.

JDT: Two pilots? How’d that happen?

JLS: The guy across the street is an old retired Eastern Airlines captain; two houses back there is an old Pan American captain. These guys would fly for two days and be here for four or five days playing volleyball. I was gone at work all day long. The children saw that the pilots were making good money and were home a lot.

JDT: What about the famous J. Lawton Smith neuro-ophthalmology audiotapes?

JLS: I did one every month for 20 years. American Board of Ophthalmology examiners have told me that, in the past, virtually every candidate had prepared for the neuro-ophthalmology part of the Board with those tapes. One doctor told me “yours are the only medical tapes my wife will let me listen to in the car because she likes to laugh at the stories.”

JDT: Looking back, how would you summarize your career in neuro-ophthalmology?

JLS: I don’t think I smashed the atom into 64 equal parts. I just did careful ophthalmologic examination on sick neurologic patients by going to the wards. That is how Walsh got started on his book. He would go out to Baltimore City Hospital and make rounds with Ford on these wards filled with people who were permanently hospitalized. He’d keep a copy of his notes, a copy of the x-rays, and he’d bind it all in a notebook and put that together and that was his first edition of the book. I did the same thing, except I had access to more refined instrumentation—indirect ophthalmoscope, rovary prisms, ophthalmodynamometry, Projecto-light pointer.

Now the tools are better. But a lot of ophthalmologists don’t see sick neurologic patients. So when a guy trains in neuro-ophthalmology, he should not only be in your private office with you; he should go over and see those patients on the ward.

**LANGUAGE BY LAWTON**

A JLS lexicon compiled by Joel S. Glaser, MD

Acey case. An interesting or unusual clinical case. Material for a potentially reportable publication. Sometimes preceded by this statement to the patient: “Lady, it is my duty to inform you that everything you are about to say or do is going to appear in the Archives of Ophthalmology.”

Ace, Big. Anyone who gets anything right, anytime (as in “you Big Ace!”).

Action totalis. Doing an examination of a neuro-ophthalmologic patient (as in “swing into action totalis”).

Avogadro’s number $(6 \times 10^{23})$. A large amount, but usually used as the reciprocal to express the extreme rarity of a condition or manifestation (as in “that case is a one over Avogadro’s number”).

Big boss of the cosmos. Ed Norton, first chair of ophthalmology department, BPEI.
Big Dog. An expert whose opinion carries weight—more weight than a Big Ace. (See also Heavy Hitter, below.)

Big ignore. What a baby or child gives you, the examining physician, after your first attempt to get the patient’s attention.

Blind dog in a meat house. Chaos among doctors working up a medical case (as in “they were runnin’ around like a blind dog in a meat house”).

Careful refraction. One that starts with retinoscopy, takes a long time, and usually ends with the discovery that the previous refraction was incorrect.

Club. A collection of experts in other specialty groups (as in “the Retina Club,” “the Strabismus Club”).

Cyclops with rotary nystagmus. A very rare case. (See Glass cage, below.)

Dead hog in the sunshine. Ultimate state of bliss (as in “Happy as a dead hog in the sunshine”).

DKAs. Doctor-killing abbreviations. Annoying, elusive medical acronyms used by other authors (not including FTA-Abs, TPI, RPR, or other Smith favorites).

Diagnosing pregnancy with the placenta in your hand. Making a diagnosis long after it was obvious.

Dockey. Affectionate greeting of another physician whose name is beyond immediate recall. Frequently used with “Now you’re talkin’, Dockey.”

Down in the country. Always applied to the practice of medicine, meaning a simpler, better way, where “treatin’ doctors,” rather than “high-powered, underwater physicians,” hold sway.

Door. Used to denote where patients go when they see a doctor who has frightened or hurt them, as after one or more lumbar punctures (as in “when you come in the front door, the patient goes out the back door”).

Eating into your brain like a rat. A preoccupying thought; a troubling idea or obsession as you are working through a medical case.

Examination. Used in this classic remark: “The doctor is interested in the first two hours of the examination; the patient is interested in the last five minutes.”

Gems. Critical and practical teaching points. Used interchangeably with Pearls; see below (as in “now this here is the germ of this case”).

Glass cage in London. Where an extremely rare condition may be found.

Heavy Hitter. Respected physician. Used interchangeably with Big Dog; see above.

Homemade sin. Always follows “Rare as . . . ” to denote a very uncommon condition.

Hot seat. The ophthalmic examination chair.

Joe. Exemplar (as in “Joe Cool” or “Joe Retina”).

Knock it out of the ballpark. Get it right.

Malignants. Extremely advanced (as in “nystagmus malignans”).

Massage. A thorough workup, usually excessive, expensive, and largely unnecessary (as in “she got the neurosurgical massage”).

Midnight in a coal mine. Utter darkness, used to denote very poor vision (as in “he couldn’t tell the difference between midnight in a coal mine and an atomic blast”).

Moment of truth. The instant when the diagnosis is about to be revealed.

Mmmmmmmmmmmm. A sound elaborated by Smith in wide vibrato through closed lips to indicate that something interesting about a medical case has, or is about to be, revealed.

Now you’re talkin’. You finally got the answer.

Smith with his wife, Elizabeth, outside their home in Miami, 2002.
**Nux vomica.** Superannuated therapy or tradition (as in “that went out with nux vomica and high button shoes”).

**On the hoof.** A live encounter, raw data.

**O.V.** An office visit. The ultimate truth-revealing clinical encounter; a gold standard against which all other high tech procedures pale in significance; a careful and mutually exhausting history-taking session.

**Pearls.** Critical, practical teaching points. Used interchangeably with Gems; see above.

**Rube.** An unsophisticated physician. “Rube-like” behavior is what you do when you haven’t learned . . .

**Serum rhubarb.** Any obscure serologic test ordered by someone else.

**Smoke cleared.** Always used with “when the smoke cleared” to mean the denouement, the residue, the outcome after a series of clinical events. Usually used when a clinical disaster has followed mistakes (by others).

**Subaquatic workup.** One characterized by excessive and usually unnecessary use of high-tech studies. Sometimes used synonymously with “underwater.” Often associated with a walletectomy, see below.

**Toughy.** A doctor who knows something. Used especially in reference to William Hoyt, MD (as in “Toughy Hoyt”).

**Twin Smitties.** High-tech equipment. (The origin is a brand of hotrod exhaust mufflers.)

**Walletectomy.** Part of an expensive, usually unnecessary treatment or workup.

**Wheel rolled off.** Desperate medical straits; a disaster, usually occurring elsewhere (as in “when the wheel rolled off, she was blind”).

**Wowser.** A doubter, a skeptic. Anyone demanding rigorous data before accepting a diagnosis. A “wowser malignans” doesn’t believe anything, anytime.

**Zygote.** Lowest rung on scale of educable individuals (as in “this is ocular motility for zygotes”).

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