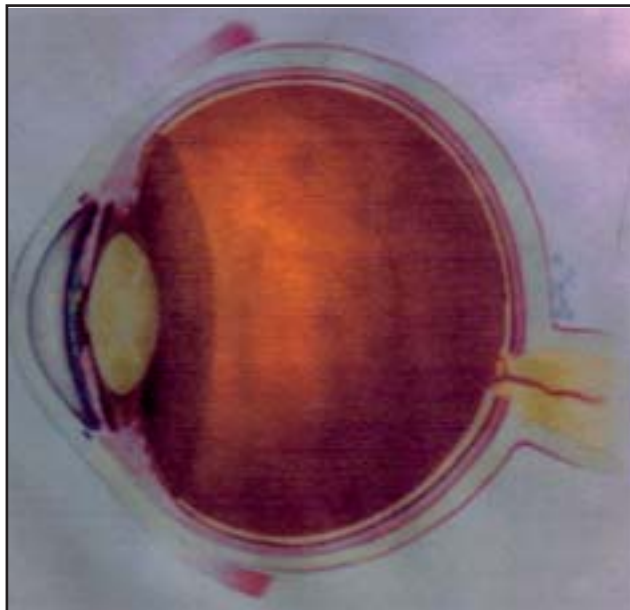


**Apologia pro vita Ophthalmologica—**  
*the 2010 Snyder Lecture.*

Ira Eliasoph, M.D.



Ira Eliasoph, M.D.  
21 Branch Brook Road  
White Plains, NY 10605

Clinical Professor of Ophthalmology, The Icahn School of Medicine at Mount Sinai Hospital. Attending Ophthalmic Surgeon, Mount Sinai Hospital and J.J.Peters Veterans Affairs Hospital. Emeritus Chief of Ophthalmology, Jewish Home and Hospital for the Aged.

Life fellow: New York Academy of Medicine and Cogan Ophthalmic History Society.

Charles Snyder was the Librarian of the Howe Library, the Dean of Ophthalmic Librarians, appointed by David Cogan. His book, *“Our Ophthalmic Heritage”* (1967) recounts, in 162 pages, many important moments in our history. Dan Albert and Diane Edwards in, *“The History of Ophthalmology”* in their preface included an awesome quote from Virchow (1821- 1902) (*Fig.1*)



Fig.1

“It is one of the worst aspects of our present developmental stage of medicine that the historical knowledge of things diminishes with each generation of students. Even independent young researchers can normally be assumed to have a historical knowledge of no more than three to five years at a maximum. Anything published more than five years ago does not exist.”

“The longer you can look back, the further you can see forward” said Winston Churchill, when addressing the Royal College of Physicians in March 1944. How did we get here? We have touched many lives. We have links to the past, and synthesized from many influences, with our talents and chance opportunity, contributed to Ophthalmology in practice, research, and teaching.

I hope that what follows will resonate with you, and whether just for your grandchildren or for a broader group, you too must document your own “Apologia pro vita Ophthalmologica”, or “Meaning of a Life in Ophthalmology”.

As a child my eyes were examined by Edward Bassen, young associate of Charles May. I remember the spooky black-walled room, the light chimney, the amazing equipment, and the glare when I stepped outside with dilated pupils.

First among words in childhood, “LOOK!” was my watchword from early in life. We live in a visually oriented society. A great gift was a pocket flashlight and with a Cracker Jacks box magnifying glass: I had my first investigative tools. An occasional look through my father’s microscope was intriguing. I acquired an easel and jars of paints, and a bit later spent many hours sketching at the Metropolitan Museum of Art. Years later I exhibited a painting at the New York Academy of Medicine Art show, which was reproduced and reviewed in the county society bulletin. Cezanne said, “Keep good company, go to the Louvre. Optics developing in us through study, teach us to see.”

Voltaire knew that diseases differed and each disease was new and different in each patient. I learned about Pierre Louis (1787-1872) and his labors to record the minute details of patient histories, examinations, and post mortems. He began medical statistics and the critical examination of data. When in Paris, William Osler made a special visit with other American physicians to place a wreath at his burial place. I teach young residents to LOOK HARDER! Good enough is not good enough! No one wants a pretty good egg for breakfast.

Dr. Seuss called doctors “Oglers”, and with Helmholtz’s Augenspiegel we peer, gaze, spy, inspect, scan, scrutinize, size up and simply LOOK!

Arthur Ignatius Conan Doyle, as an ophthalmologist, trained with Joseph Bell to find the telltale signs. Before Doyle, Voltaire created a character he named Zadig. This came from the Arabic sadiq or the Hebrew tsadek, meaning wise one. Zadig, in a tale, by his observations of evidence describes a dog and a horse, neither of which he had seen.

My Dad, Benjamin Eliasoph, MDCM McGill 1921 (1899-1970) (*Figure 2, p.355*), was a conscientious physician and (in 1923) studied pathology and expanded his observational



Fig.2 Benjamin Eliasoph  
(1899-1970)

skills with the great Ludwig Aschoff (1866-1942) (*Figure 3*), successor to Virchow. On his return, writing from Edinburgh, he said that among the memorabilia he carried was something no one was supposed to know about: a gift from Aschoff to Emanuel Libman (1872-1946); a piece of Napoleon's stomach cancer. Dad examined evidence starting from his medical student days at McGill, where he be-



Fig.3 Ludwig Aschoff  
(1866-1942)

came a devotee of Osler. Dad was enthralled with what he saw through the microscope. He looked with wonder at the beginning of life, as a small pulsing vessel in a hen's egg, developed from a soup of chemicals. "The most beautiful thing we can experience is the mysterious. It is the source of all true art and science", wrote Albert Einstein.

Dad, Benjamin Eliasoph, in 1919, during the great influenza pandemic saw the suffering from lung congestion and consequent hypoxia. He carried this in his mind and it gave him the spark to be the inventor (in 1921) of the oxygen tent. When some biochemistry began to appear in the medical journals, he had vivid memories of scooping the cholesterol off some fat Germans' aortas. He concluded, in the mid 1930s, that eating that stuff was a bad idea. We, and many of his patients, went on a no egg low-fat diet at home.

My greatest inspiration came from my father. Doctor H. M. Marvin (1893-1977), President of the American Heart Association, after a consultation, wrote to my father,

"... I was deeply impressed... (by ) your attitude toward your patient that elicited my whole-hearted admiration... your great gentleness and sweetness toward her, and your skillful use of all possible medical resources made me very happy."

What a role model I had!

When I was still a child, one evening my father came home overjoyed and excited. He had come from a patient with meningococcus meningitis who was going to be OK. One of the very first cures, with sulfadiazine. Years later I fully appreciated what Dad was jumping up and down about! He had seen and realized fully the onset of a new era in treatment of disease. Another time, as he came in the door, for my benefit, he was patting himself on the back. He had seen "Mrs. S. ", a certified hypochondriac for over twenty years. Dad was proud that he had properly examined her and found something wrong. Even hypochondriacs get sick and the doctor is supposed to LOOK.

I was fifteen, in 1944, when my father got a copy of "The Eye in Anatomical

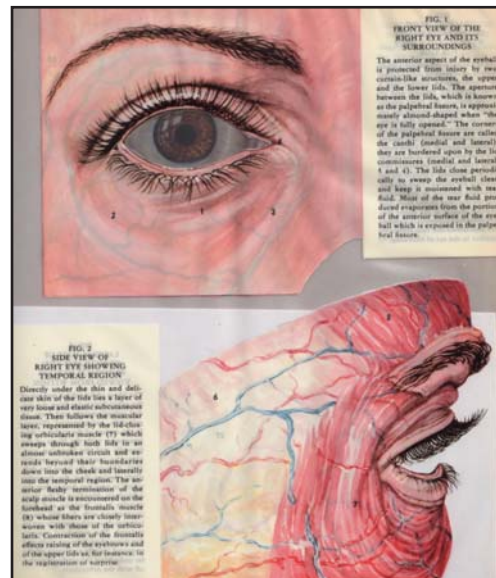
Transparencies". This book, sponsored by Bausch and Lomb, fascinated me. It has text by Peter Kronfeld and Stephen Polyak and superb artwork by Gladys McHugh (*Figures 4 and 5*). It was the magnificent modern, sectioned depiction of ocular anatomy, as done, in primitive 'layer by layer' fashion, in 1583, by Georg Bartisch. I still look at it.

Our college histology course was detailed and we prepared our own tissues and slides. (I have great respect for the invention of the Auto Technicon, invented by my Dad's good friend, the pathologist, Louis Gross (1895-1937), which automatically processes path specimens). My college professor was very fussy and picky, but he pushed us to LOOK thoroughly.

The anatomy lab was where many of us realized the direction of our lives. Henry Gray, before his grand Anatomy opus, won the triennial prize of the Royal College of Surgeons in 1848 for his research paper on "The Origin, Connexions and Distribution of Nerves to the Human Eye and its appendages, illustrated by comparative dissections of the eye in other vertebrate animals". A noble place to start!

One morning, our lecturer in pharmacology was introduced, Professor Otto Loewi (1873-1961) (*Figure 6*). He was quite old, frail, and hunched over. As he spoke, he seemed to grow in size and his voice stronger. There was a sparkle in his eyes as he told of his inspired experiment demonstrating acetylcholine action with the frog gastrocnemius muscles. To me, as I looked at this Nobelist, there was almost a visible aura around him. Life other than that of a doctor was unthinkable.

The clinician-scientist, a term of recent origin, was epitomized by Doctors Ernest Spencer Breed and Cecil F. (Barney) Baxter, two young surgeons who were studying renal function in surgery, in shock, and in acute renal failure. They had no money and worked incredibly hard on their research projects. For several months, as a medical student (1951), I worked with them and learned their meticulous methods, data recording, and analysis of results. Helping Baxter in the dog lab doing lumbar sympathectomies (as he had done with Doctor



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Fig.4 & 5  
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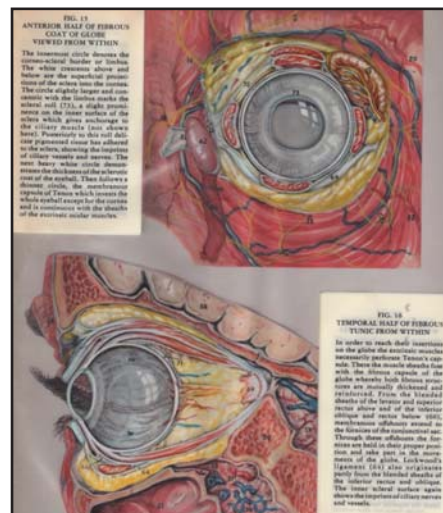


Fig. 6 Otto Loewi (1873-1961)



Fig.7 Isidore Snapper  
(1881-1973)

Smithwick) he let me do the delicate surgery involved. I was naturally cautious and teasing me he said, “Doctor, could... you...operate... a little faster, the fibroblasts are catching up with you.”

For my medical clerkship at NYU, I arranged to spend three months at Mount Sinai Hospital (1951) with Doctor Isidore Snapper (1881-1973) (*Figure 7*). He was a remarkable teacher. One day on rounds, he asked if anyone knew of Lao Tse, only I raised my hand (timidly), and said that he was a Chinese philosopher who wrote about “The Golden Middle Road”. This was Snapper’s point in regard to appropriate dosage of medication. After a detailed and complex case presentation, Snapper asked the Attendings and House Staff one by one for a diagnosis. They all gave some response. When he called on me I said I did not know, and like Robert Benchley “drawing on my fine command of the English language, I said nothing”. Then Snapper put his long arm around my shoulder and drew me aside, and to the group said, “Eliasoph and I don’t know”. He asked one day for his little mirror indirect ophthalmoscope, saying that miliary tubercles were more likely to be in the retinal periphery, which could be seen better with the indirect than the direct scope. He referred to the ancient blind poet, Homer, who said to look at how a cow kicks sideways and a horse backward, to teach a naïve doctor not to stand in front of a coughing patient as he placed his stethoscope on the man’s chest.

Doctor Snapper was a world-renowned physician who spent some years at

Peking Union Medical College and wrote extensively on many subjects. His small book called “Chinese Lessons to Western Medicine” (1941), I read before I was in the U.S. Navy (1953-55). When I was the ship’s doctor and we took aboard three thousand Turkish soldiers (to take to Korea for the UN), I had some mental preparation. Not everyone grew up in New York with fresh orange juice for breakfast. Confronted with a young soldier with a fever of 104, and a pulse of 70, something did not add up. I went back to basics and by examining several other Turkish soldiers, determined that their resting pulse was in the 50’s. Now it made more sense. (This fellow had right middle lobe pneumonia, an interlobar effusion and tuberculous bronchitis). Another soldier carried into sickbay among the many seasick ones, was somehow different. He was stuporous and unresponsive. His pupils were widely dilated. (I had not yet studied ophthalmology). I did suspect atropine poisoning. Playing Sherlock, I sent someone for his belongings and found the empty package of the seasick remedy he had taken, consisting of belladonna alkaloids. He was fine in a day or two. Look again and look harder.

I had my moment of fame, appearing on the front page of the New York Sunday News (*Figure 8*) after a February adventure in the North Atlantic. A ship had a boiler explo-



Fig.8

sion, which killed several men and left others with burns. I crossed from my ship, in a motor launch, in forty foot seas, and brought back one man who had inhaled steam and had rough breath sounds and burns of his hands. I looked before I leaped from the rope

ladder into the launch, or could have dropped forty feet as the boat rose and dropped away.

I had had a rotating internship (1952-53), which turned into a surgical residency and gave me the chance to assist or perform operations in many divisions except eye and ENT. I scrubbed on twenty craniotomies, chest cases, cholecystectomies, other abdominal procedures, early mitral valve operations, performed amputations, and did hip pinnings and three artificial hips. In the emergency room I was working on a badly burned, ten-year old boy. A priest appeared and was intent on administering last rites. He told me to leave as he performed "God's work" and was mightily upset when I refused and told him what I was doing was in the same category. The boy survived and I learned much about skin grafts from a master plastic surgeon, Bernard Simon (1912-1999). Young doctors now have no such benefit or opportunity to carry with them techniques of other specialties. While in the Navy, looking out at the sea and the sky, I decided to go into ophthalmology. Young William Osler decided to go into ophthalmology, but changed his path on learning that there were a couple of ophthalmologists newly in practice in Montreal. Who knows what might have been? My choice was probably the best decision I ever made. My last Navy duty was at the Armed Forces Examining Station, on Whitehall Street. There I had the good fortune to meet Emanuel Krimsky (1898-1992). He was a civilian consultant and would send for me to make sure I saw all the interesting eyes of the young men going through. I learned a lot of ophthalmoscopy and also refraction from him. He helped me look harder.

My formal ophthalmology training began with the full academic year at NYU Postgraduate Medical School (September 1955-June 1956). The faculty was a "Who's Who" of ophthalmology at that time. In no special order were Kestenbaum, Linksz, DeVoe, Breinin, Fonda, Behrens, Fedukowicz, Castroviejo, Wise, Katzin, Berliner, Fox, Bonnacolto, Faye, Kornzweig, and others. The curriculum was complete and demanding. The days were full and the nights not long enough to do it all. It was an incomparable basis for what came later. Those ophthalmologists of widely diverse backgrounds and points of view never stopped their own looking. Philip Hench (1896-1965) said that the young doctor of today never meets the greatest of his teachers in person. I met some.

I then went to Mount Sinai Hospital, where a long line of ophthalmologists, starting with Emil Gruening in the 1870's, had built a small but excellent clinical service. William Wilmer trained there (and then went to Washington and then to Baltimore). The tradition of Carl Koller, Charles May, Percy Fridenberg, Henry Minsky, Isadore Goldstein, and numerous others was still in the air. Observers all! As Osler taught, "the art of medicine is in observation. The whole art of medicine is in observation."

In July of 1956, I assisted my chief, Joe Laval (1902-1992), as he performed a Ziegler cautery procedure for entropion. I can still recall the sound and the smell, as the little red hot metal projection, after heating over an alcohol lamp, went into the patient's eyelid, and my thinking "What have I gotten into? This isn't the delicate and precise surgery I expected!" LOOK what has happened since!

In 1957, I started my senior residency year at \$137 a month. We had a couple of cases of post cataract endophthalmitis. I looked, as I put my operating shoes back in my designated cubbyhole in the dressing room and saw that most of the shoes had drippings and splotches on them as they waited in the cabinet resting upon the radiator. From that day on, I, and my assistant wore freshly laundered canvas "ether boots" that tied below the knee. Soon after that the disposable OR Booties appeared, that we have all used for years. Yogi Berra said, "You can observe a lot just by watching."

In the days when cataract patients stayed in the hospital for five to seven days (1957) we saw a number of postoperative hyphemas. My senior resident and I watched and noted what differed. Isaac Asimov (1920-1992) wrote, "the most exciting phrase to hear in Science, the one that heralds new discoveries is not Eureka, but, 'that's funny'." The patients who complained of severe pain postoperatively were given morphine or Demerol. The ones with just a bit of headache were given Aspirin. The latter group had many more bleeds! We stopped giving any aspirin and the number of hyphemas went way down! It was almost a decade later that Armand Quick and others elucidated the salicylate effect on the clotting mechanism. We

must be careful observers and believe what we see, and often let someone else figure out why! The great internist, Emanuel Libman said, "The physician, as of old, is the student, and even when he becomes the teacher, still remains the student."

My first real teaching started when I was a resident. (My father, Benjamin Elia-soph, had given lectures in Medicine at the Mount Sinai School of Nursing for twenty years). Following his example, I gave lectures to the nursing students on Ophthalmology, 6 to 8 hours each year, for about nine years until the nursing school was closed.

The visual system accounts for a major percentage of the weight of the central nervous system. Now many medical schools have no Ophthalmology in their curricula. How blind!

I have tried to teach by saying, "Look Harder!" Osler once told a young doctor that he was correct in starting by inspecting the patient, "But first ask Doctor Lambert to step out of the light."

Observations:

Why did many people complain about their left eye some years ago? Very simple Watson, they drove with the car window down. How did the man get a painful keratitis in one eye after a visit to the barbershop? Obvious, Watson, the man in the next chair was getting a sunlamp treatment. Why did some student nurses wake up with lids of one eye very swollen? A simple one, Watson, they stayed up all night when put on the midnight to eight AM shift, and slept deeply, lying on that side of their face. I saw that my son's seven year old shirtless friend, one summer day, had intercostal retraction with each breath he took, walking up a small hill. He had the largest tonsils I ever saw, with a slit between them, as subsequently I looked over the shoulder of my ENT colleague in the OR.

Recently my resident was struggling incising the eyelids for a simple blepharoplasty. I too found the tissues very tough. When we were finished, I said to the patient, "Tell me about your boxing!" His response was, "Oh, yes, I did that for a few years." Watson, they didn't take a proper history.

The eight-year-old girl presented with a cluster of lesions on her lids. My Navy experience, giving hundreds of vaccinations, gave me instant recognition of vaccinia. I asked where her mother was and was told she was in the surgical clinic to have an abscess on her cheek opened. I phoned and said Stop! The mother had a classical primary vaccination. Both had close contact with the recently vaccinated new baby. LOOK before you leap!

An elderly lady sent to me for a temporal artery biopsy because of headache, visual symptoms, and dizziness, had undergone cataract surgery on her second eye, back in the days before lens implants. Already on high dose steroids, I cured her by refracting her for those dreadful aphakic spectacles. Her elite surgeon was above such menial tasks.

A young woman fainted and lay with her face against the radiator. The plastic surgeon didn't understand why the resulting burn was so deep and severe until I reminded him that compression impeded the local circulation which otherwise would have carried away much of the heat. We observe and we remember and thus can have roses in December.

The Ophthalmology Boards were always an awesome hurdle for young budding hopefuls. At the Wills Eye Hospital, Doctor Edmund Spaeth, for the surgery section, spent most of the time as an inquisitor determining that I knew very little about radiotherapy. He went on saying, "You are now in the OR doing your first Kronlein procedure, looking for a tumor in the orbit. Your fingertip has found two firm rounded tissue masses. One is quite likely the tumor and the other is certainly the optic nerve. You are handed a long skinny alligator biopsy forceps. What do you do?" I said that I would close and with a neurosurgeon look from above with clear exposure of the orbital apex. He reached out and shook my hand and said that I was the first of fifty to give the proper answer. I had done a Kronlein and had assisted at a number of craniotomies, and I had looked and remembered.

My examination time with Doctor Paul Chandler was totally different (*Fig.9*). Do you recall classmates saying, "I really enjoyed that exam". I hated hearing that! Chandler found

out in twenty minutes of friendly conversation that I knew something about the retina and how to look with the ophthalmoscope, and made me feel comfortable, not stupid, and that my study and effort had been rewarded. I really enjoyed that exam!



Fig.9 Paul Chandler

One day, at Mount Sinai Hospital, I stepped off the elevator on one of the private floors, and was taken aback by the newly re-done décor. The glare and the bad lighting were abominable. Somehow, I got one of the administrators and the senior site planner architect to look. I pointed out a number of flaws. I asked this experienced high level architect what I missed and he said, "Nothing!" In the elevator going down he jokingly asked if I wanted to work for him. The hospital director's memo said,

"Dr. Eliasoph has promulgated a set of recommendations which correspond to the most modern concepts of well-planned lighting design, they are endorsed by Mr. Blumenkranz as well. I recommend that they be adopted as a guide to standard procedure when planning future changes anywhere in the hospital." All I did was LOOK.

Dry eyes have been a hot topic recently, but when I started in practice I had many patients with the problem, missed by big professors. An attractive young woman got contact lenses from me and soon married her guy. Not too long thereafter she complained that she could not tolerate the lenses. I found of course, she had dry eyes through her pregnancy, and was fine two weeks after the baby was born. Not generally known in 1960. This wasn't scientific enough and there was no surgery to be gleaned, so who looked? Heinrich Meibom (1638-1700) described the

glands that bear his name, but little attention was paid until very recently. John "Angus" MacPherson (1876-1955) was the widely acclaimed Mystery Chef on Radio (The Blue Network) in the 1930s and 40s. He gave me one of his books after I did his cataract surgery. His instructions for cooking pasta or rice included painting a wide stripe of cooking oil a couple of inches down inside the big pot. This would keep the foam from creeping up and over the edge. An observation that told me what the Meibomian secretions did along the lid margin: prevented spillover! I'm glad I looked and thought.

A woman came in one day apologizing for not having been to me for three years. She said she had not been well, but her problem not defined. She gave a very clear history, after which I told her that I thought she had scleroderma. A few days later she called to say that the biopsy I advised was positive, and she was in touch with the scleroderma study group. Soon after at a doctor's get-together a pediatrician said to me, "Congratulations on that terrific diagnosis you made." The patient lived in the same building as he, and had told him about it. He told me that, in the two years prior to the visit to my office she had been seen by seven internists, who had no clue. If I believed in such things, if I had missed that diagnosis, my father's ghost would have appeared and verbally spanked me. He said many times that a specialist should be a doctor first and always. Those doctors did not LOOK.

Though not a glaucoma specialist, some patients not doing well on four medications, came to me after seeing experts. I had them show me how they used their drops, and then showed them the proper way. Soon they were down to two kinds of drops with good pressure readings. No one had looked (and it took so little time).

Wendell Hughes (1900-1994) and Byron Smith (1908-1990) were world-renowned experts and leaders with legendary experience. I told them about one of my patients with myasthenia gravis. George had a very good result after my ptosis surgery, but said months afterward that he had a serious complication. When I asked what was wrong he said, "I'm bald"! For many years, his raised face compensating for the drooping of his lids,



hid the top of his head. The two Giants laughed and said they had not had that complication. We have not seen it all! We do keep on LOOKING!

We may be the last who revere books as such, and hold in our hands old tomes pored over by scholars seeking guidance and truth. In the 13th century someone wrote, "One should ever be on his guard to hold books in proper honor and respect... nor should one use a book to shade oneself from the sun nor to protect oneself from smoke, nor as a cover for any object. Nor to hide anything placed under it." Further he quotes from an earlier scribe, "Never refuse to lend books to anyone who has not the means to purchase books for himself."

In the world to come, computers will be our libraries and serve for storage of all images, voices, music, and text. We already have, with our door keys, a little doodad that contains more than we read through four years of medical school.

One of the benefits of partial retirement is contemplation. George Washington, after leaving public office wrote, in 1784, to Lafayette, quoting a much older source, My Dear Marquis, I am become a private citizen on the banks of the Potomac and under the shadow of my own Vine and my own Fig tree."

And so I end my tale to my patient listeners and readers, hoping that you spent the time pleasantly and found a bit of yourself in the narrative. Paul Broca (1824-1880) studied the human brain and his brain ended up in a jar in his institute. Looking at this specimen years later, Carl Sagan (1934-1996) wondered, "Is he still in there?" Maybe you learned something, and perhaps will string together events in your own chronology, ophthalmic and otherwise, for others to understand how you were formed, and how you did really LOOK at the world. Scientific productivity has been like an accelerated atomic reaction since the day the Manhattan Project people created the first self-sustaining atomic pile reactor, closed it down, and went to lunch. We must look and think. This is, "The Meaning of a Life in Ophthalmology." Yet we can aspire to no better than what Albert Schweitzer (1875-1965) posted at his hospital

"Here at whatever hour you come, you will find light and help and human kindness".

Ira Eliasoph

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