

HINDSIGHT

Newsletter of the
Optometric Historical Society
243 North Lindbergh Boulevard, St. Louis, Missouri 63141, USA

Volume 37

April 2006

Number 2

Jay Enoch's Column:

On Being Fitted with Scleral Fluid Hard Contact Lenses in the Office of Theodore Obrig in New York City

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I was the youngest member of my School of Optometry class. More than 130 of us entered the first year optometry class in 1948 at Columbia University in New York City, most all of the students were WWII veterans (I was not), there was one female in the class, a Puerto Rican young lady named Irma Pedrogo (who later married my good friend Robert Phillips, also a member of the class); 96 of us survived the cut at the beginning of the second year. Ours was the last two-year optometry class at Columbia University resulting in a B.S. degree in Optics and Optometry (two-years pre-optometry, two-years optometry). Luckily, I had a tuition scholarship, but money was very tight, and I very much needed a job! Previously, I noted I had entered research abruptly by physically bumping into the late Prof. Isidore Finkelstein at a Columbia dance where I heard he was offering the then rather princely sum of \$1.00/hour for research subjects to participate in experiments being conducted by him at Columbia-Presbyterian Medical Center in the laboratory of the late Prof. George Smelser (Anatomy) in the Department of Ophthalmology Research. Finkelstein had started his graduate studies in biophysics with the late Prof. Selig Hecht in Physiology on the 116th Street Campus, but following Hecht's untimely death, he had transferred to Prof. Smelser's program at the Medical Center. That program was funded by the U.S. Army. Since 1 million + men had been deferred because of vision problems during WWII, the Army sought to determine if, by fitting a number of these men with contact lenses, they could effectively serve in meaningful roles in the military in the future.

As selected subjects and assistants in the laboratory, we were refracted and screened for unsought complications. My memory is not clear on this point, but I believe this screening was performed by Dr. Finkelstein in his optometric office. Following this, we were fitted with now old-fashioned fluid (non-vented) scleral hard contact lenses made of molded Plexiglas (perspex). The molded lens was cut to size, and ground and polished as indicated. The very knowledgeable and gentle "Finky" and his PhD advisor, anatomist Prof. George Smelser, were studying the biophysics, biochemistry and physiology of the cornea and how it was affected by contact lens wear. Our contact lens fitting, per se, took place in the offices of the late Theodore Obrig in an elegant former mansion on a street off of Fifth Avenue near St. Patrick's Cathedral in New York City. Then quite elderly, Theodore Obrig molded my eyes, and the lenses and their fit was refined by a warm-hearted lady, Mrs. Bergman. The Salvatori brothers, Phil and Tony, played a role in the fitting as well and were also involved in the fabrication and modification of the lenses. At that time, I saw little of Anthony "Tony" Salvatori, but I got to know Phillip Salvatori quite well - he taught me a great deal, and was active in contact lens fitting at the Obrig establishment. While, I do not know Mrs. Bergman's background, both Obrig and the two Salvatori brothers were opticians. After being fitted and adapting to the lenses, I wore them quite regularly for about 8 years. Of course, "Sattler's veil" became evident after about two hours of wear. So saying we could readily wear the lenses for periods of time of say 6 hours or a bit more. True, things got somewhat cloudy, but we managed.

I should point out that coincident with this form of fitting (or shortly thereafter) the Obrig Labs began to fit "fluidless" vented contact lenses which had shallow corneal clearance. At that time their design featured an inverted narrow "U" slot which was located inferiorly in the molded lens. By this means tear fluid was admitted to the central lens area of the design, and that central area was surrounded by a blended clearance zone. In this lens design, the slotted cut facilitated passage in and out of tear fluid. On some occasions a second inverted "U" slot was ground into the lens.

However, for purposes of our research program at Columbia (University) College of Physicians and Surgeons, we were fitted with the older form of fluid contact lenses. Finky and Smelser were interested in corneal physiology and the factors influencing it, and sought to better understand the properties of Sattler's Veil and associated corneal clouding. Actually these lenses were not uncomfortable once they were properly fitted and a suitable wetting agent was applied (then Obrig Wetting solution..it was methyl-cellulose based). A stand-off edge would definitely irritate the lid(s). If the lens rotated, the plastic would deviate from the mold contours. One quickly learned that rotation was commonly encountered if there were two opposing tight areas or the effective sum of snug areas on the sclera acted as two-effective opposing tight areas. The effect was similar to throwing a curved ball in baseball.

After taking a case history, step one in the Obrig office when fitting the individual with a fluid contact lens was to utilize the information or resources provided by the referring eye care practitioner, ophthalmologist, optometrist, or optician. A visual acuity was taken, with and without a refractive correction. If an ophthalmologist accompanied

his patient, he was asked to administer the necessary drops when the eye was molded. A drop or two of anesthesia was applied to the cornea, this secondarily resulted in softening the corneal epithelium, and after molding the eye, when applying fluorescein enhanced corneal staining was noted. Both the anesthesia, and the molding resulted in conjunctival injection. The conjunctiva was blanched just before molding in order to obtain a satisfactory mold of both cornea and sclera. A multiply fenestrated molding shell was selected for eye/orbit size and applied to the eye. Ophtho Ophthalmic Moldite material was injected through the handle of the eye-cup-like mold frame into the space between the eye and the molding shell. As the Moldite compound set, one noted the familiar small mushroom-like extrusions of molding compound oozing through fenestrations in the shell. These served to hold the Moldite to the shell. To remove the mold, it was necessary to depress gently the eye about the edge of the mold in order to break/release the modest vacuum which had developed and which effectively held the mold to the eye. The shell was then gently removed. After allowing the mold to harden a bit, a fine dental cement was pored into the mold, and this cement-transfer mold (now a positive-shaped mold of the cornea and sclera) served as the pattern in a small hydraulic press. A thin, solid flat sheet of heat-softened Plexiglas (perspex) plastic was then pressed to shape in order to create the outlines of the lens used to fit the eye. Obviously, the fluid chamber and blend zone were built up and shaped. And one did not want to support the lens too closely at the limbus. It was the sclera which was really fitted. Among the many lenses I wore was one with the cornea removed to see if part of corneal effects noted could be ascribed to the scleral fit alone. While this donut-shaped lens was not particularly comfortable, the cornea remained clear.

At the second and third visits, the lenses were inserted in my eyes and checked for fit. The proper orientation of the lens was determined by locating partially drilled holes which were filled with red dye. These were located inferiorly. Tight spots were loosened by either grinding away areas within the shell or warping out the scleral section locally by using heated spatulas (variously shaped). Power adjustments were made to the corneal area. The writer found he was particularly sensitive in areas of the blend zone where it repeatedly contacted the limbus.

The real challenge (demanding great patience) was inserting the fluid along with the lens onto the eye. I wonder how many times the fluid ran down my arm before I learned the necessary tricks - namely the need to bend way down, keep level, expect to lose some fluid, set the insertion angle with care, etc. And a good bit of patient time was absorbed in finding the most comfortable insertion fluid medium. Most of us found some combination of 1.5-2.0% of bicarbonate of soda in triple distilled water from small bottles or containers seemed to work best. The inserting fluid would last 2-4 days in a well stoppered bottle if kept in the refrigerator between uses. The insertion fluid working best was one which had a slightly basic pH (to match tears), had some buffering capacity, and which came in small bottles with little air space above the fluid line in the stoppered bottle. That is, in time, the fluid absorbed carbon dioxide from the air and formed carbonic acid, lowering the pH and altering comfort. By keeping air away from the solution, the batch lasted considerably longer, and by utilizing bicarbonate of soda

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mixtures some buffering was achieved. One did not want to use distilled water from a large carboy standing for some time in the lab, open (or not) to the atmosphere.

The author previously has discussed some details of the research performed on this fascinating set of topics at Columbia by Finkelstein and Smelser; and separately by David Cogan, V. Everett Kinsey and D. Donaldson at Harvard (I was given opportunity to spend time working in Cambridge, MA, one summer with that group). Interested parties should read Finkelstein's fine dissertation which appeared largely the American Journal of Optometry and Archives of the American Academy of Optometry in two sections within the same volume (see References). Subject JME is one of the faithful subjects in these studies. Others included as subjects were the Wild twins from Rhode Island, Brad and Bart, Herbert Korones, Benjamin Davis, and Bill Ludlam. All of us ended up as academics and/or researchers, except for Bart Wild who took over his dad's practice in Newport, and Ben Davis who had already been in practice before serving as subject.

Finally, one of my many tasks with Smelser and Finkelstein was to fit scleral fluid contact lenses to many experimental animals employed in their studies. Included were hamsters (many), cats (few), dogs (few), monkeys (few), rabbits (many). Thus, I learned contact lens fitting and much useful knowledge. These were wonderful people with whom to work. I remember those rich experiences fondly!

References

Isidore S. Finkelstein. The biophysics of corneal scatter and diffraction of light induced by contact lenses. (Presented Dec. 8, 1951 at the American Academy of Optometry.) American J. of Optometry and Archives of the American Academy of Optometry 29(4 [April], 5 [May]): Part I, April, 1952, pp. 185-208; Part II, May, 1952, pp. 231-259.

J.M.E.

Bob Boynton's Talk at OHS meeting in San Diego, December, 2005:

Editor's Note: This is a text of Bob Boynton's talk at the OHS meeting held In December during the American Academy of Optometry meeting in San Diego.

Fifty Years of Viewing Optometry as an Outsider

1. An article in The Reader's Digest

If it happened, it would have been more than fifty years ago. What I vaguely remembered was being in an attic surrounded by piles of old magazines. I was leafing through an ancient copy of the Reader's Digest¹ when I happened upon a nasty piece -- obviously planted by ophthalmologists -- warning the public to beware of optometrists.

My hazy memory of this long-forgotten event was revived by the need to prepare this talk.

I decided to look for it. A reference librarian at the UCSD library helped me locate a listing that looked promising. In the stacks, I removed a fat 1937 volume of Reader's Digest from the shelf and found an article with the provocative title "Optometry on Trial".² The following paragraph reveals that some of the article was, as I had remembered, nasty indeed.

"When Dr. W. E. Lambert was chairman of the eye Section of the Academy of Medicine of New York he personally collected evidence of more than 50 cases of glaucoma, brain tumor and other diseases which had been overlooked by optometrists ...to the optometrist, impaired vision is merely a matter of giving the customer 'relief' by hanging lenses on his nose, usually without taking the slightest medical history or making even the shallowest physical examination. As a result, a long caravan winds into the eye clinic or ophthalmologist's office suffering from advanced cases of glaucoma, syphilis, diabetes and kidney trouble which the lenses prescribed by optometrists have had no power to retard or avert. Worse yet, the patients have had no warning of their impending fate."

To be sure, there were many badly-trained optometrists practicing seventy years ago. On the other hand, less than thirty years earlier -- at the time of the Flexner Report³ -- even larger stones could have been hurled at the house of medicine.

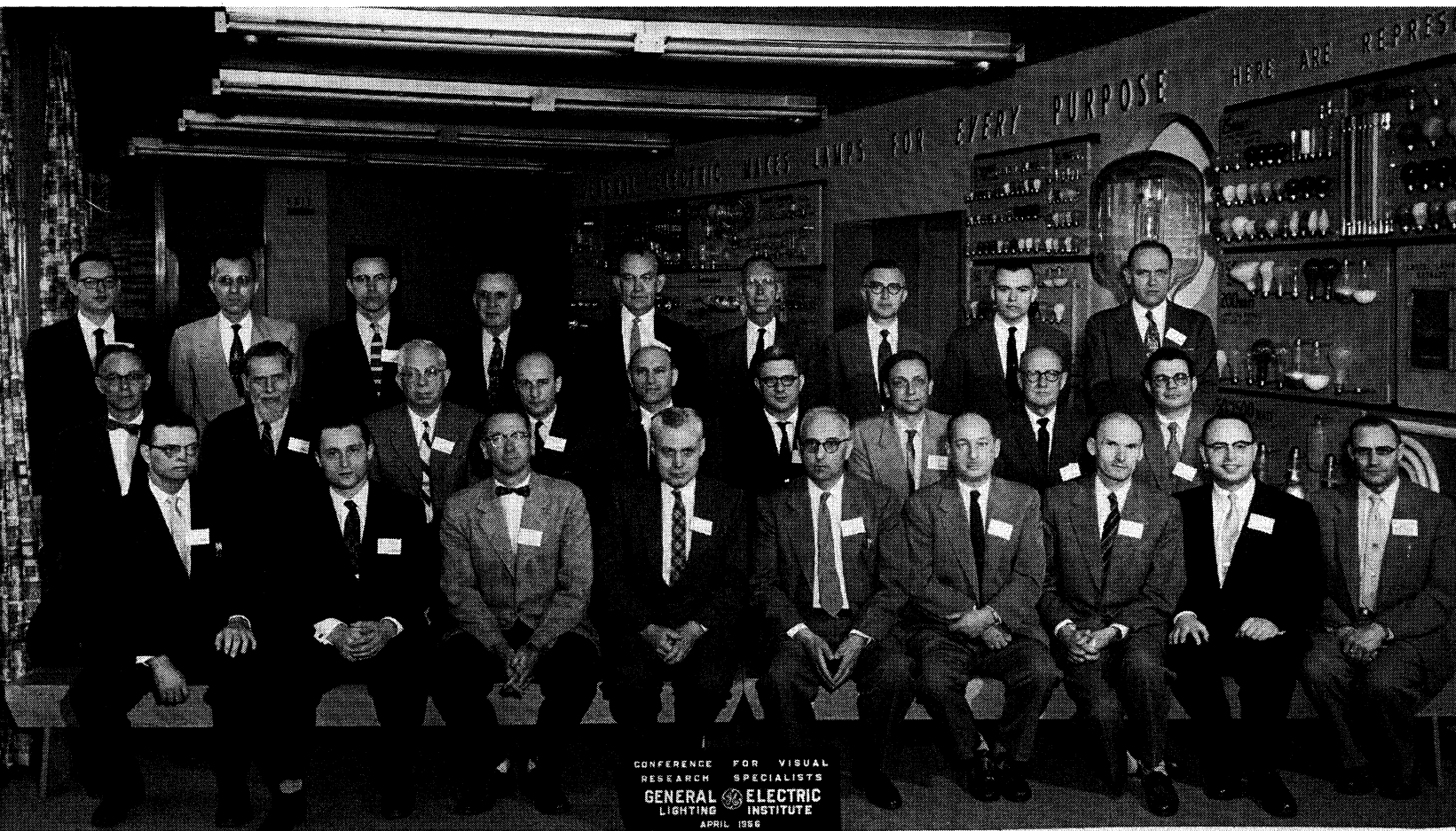
Fortunately, the article was not entirely negative. It ended as follows:

"Is there a remedy? Clearly the standards of optometrists -- both in education and practice -- must be raised. The optometrists must clean their own shop if they expect to enjoy the continued confidence of the public. There are, within the ranks of the optometrists themselves, a considerable body of men who wish to raise the standards of their craft, to root out flagrant commercialism and unethical practices. In the high councils of optometry these men, aware of their responsibilities, are advocating reforms which will be discussed in the succeeding article."

It was pointed out to me at our meeting that the American Academy of Optometry has housed the "high councils of optometry" that have subsequently been very successful in elevating the profession.

2. Glenn A. Fry

Readers of Hindsight will have no trouble recognizing Glenn Fry in the accompanying photograph, which was taken in 1956 at Nela Park in Cleveland at a "Conference for Research Specialists". Glenn is standing tall at the upper right, fronting what looks like the World's largest light bulb, and I am next to him. In this photo, Glenn is in his late forties and I am a mere 32.



Conference for Visual Research Specialists, General Electric Lighting Institute
Nela Park Cleveland, Ohio, April 23-25, 1956

Front row (left to right): C.W. Melton, David G. Fleming, Leonard C. Mead, Kenneth N. Ogle, Harry Nelson, R.M. Hall, G.A. Brecher, Gerald Westheimer, Arthur A. Eastman.

Middle row: Sylvester Guth, Warren S. McCulloch, Forrest L. Dimmick, Edgar Auerbach, David Volk, Mathew Alpern, Werner K. Noell, Sam Renshaw, R. Binder.

Back row: J.F. McNelis, Merrill J. Allen, Chas. S. Bridgman, Miles A. Tinker, Meredith W. Morgan, Deane B. Judd, Ralph G. Hopkinson, Robert M. Boynton, Glenn A. Fry.

I had previously known Glenn, but I probably met Merrill Allen and Meredith Morgan for the first time at this conference. This meeting also provided an opportunity for me to interact with two of my contemporaries, Mat Alpern and Gerald Westheimer, both of whom had recently earned their doctorates with Fry.⁴

Of the many times I interacted with Glenn Fry over the years -- at conferences, committee meetings, and so on -- two events stand out in memory. In 1953, only a year out of graduate school, I was an assistant professor at the University of Rochester. In the 1950s, the Office of Naval Research (ONR) had a "resident representative" on campus to monitor its projects, including my \$5000 contract. From him I learned of equipment from a completed project at Rochester that was slated for transfer to The Ohio State University. I had wanted to visit Fry's lab, so I volunteered to drive the ONR stuff to Columbus in exchange for partial reimbursement of my travel expenses.

On the telephone, after saying that he would be happy to have me come, Glenn mentioned that a small vision conference was scheduled near the time of my visit, and he invited me to sit in. This turned out to be one of the annual vision meetings named for Sam Renshaw (middle row in the photograph), a psychologist with strong ties to optometry. I attended, and was invited back in subsequent years. There were usually about twenty papers presented. At the conclusion of these meetings, which were interdisciplinary and very worthwhile, a mysterious man named Skeffington⁵ gave each of us a \$50 bill. I met many more research optometrists at Renshaw conferences. An especially vivid memory is driving up to Cleveland with Gordon Walls after one of these gatherings, which provided a wonderful opportunity to spend two or three hours with one of vision science's outstanding "characters".⁶

The second Fry-related incident occurred in 1962. About three years earlier, after moving from Michigan, Dick Blackwell had established his Vision Research Institute at Ohio State. He and Glenn wanted me to join them at OSU, and I accepted their invitation to visit and be interviewed for a possible position. After a long day chatting with deans and vice presidents, followed by a "job talk" in the evening, I found myself with Glenn eating Wheaties at about four o'clock in the morning. I was getting very sleepy when Glenn told me that he planned to retire as Director of the School of Optometry in a couple of years and return to full-time research and teaching. Then he jolted me wide awake by saying he had me in mind to succeed him as Director! Although I probably didn't say so at the time, I did not think this was a good idea.

I let the wheels turn and soon received a formal offer as professor in the School of Optometry. I turned it down because I could not imagine how anyone without optometric training could possibly succeed in Glenn's job. Moreover, I did not want to be involved in the ophthalmology-optometry wars.⁷

3. Precocious collaborators

My collaborators Jay Enoch and William Baron had similar backgrounds including their precocity: Jay was the youngest optometrist in the U.S. Army during the Korean War, and Bill was at one time the youngest licensed optometrist in the State of New York. I enjoyed productive associations with these outstanding researchers, and I benefited from their strong optometric backgrounds.

Jay Enoch needs no introduction but most Hindsight readers probably don't know that he and I were co-authors of a pair of publications more than sixty years ago.⁸ Jay had come to Rochester in 1952-53, expecting to work with Brian O'Brien in the Institute of Optics. Unexpectedly, O'Brien left the university during that year, leading Jay to transfer to the graduate program at Ohio State in the fall of 1953. In the spring of 1953, Jay came my office, saying that he'd like to work in my lab during the summer before he left Rochester. I explained, truthfully, that I had no funds for his support, but that didn't deter him: "I'd be willing to work for nothing," he said, and he did. It was a productive summer, resulting in two papers that were published the following year in the Journal of the Optical Society of America, each co-authored with graduate student Bill Bush. One of these was a study of stray light in excised steer eyes. It was Jay's idea to do this work, which required the use of a sensitive photomultiplier unit. I had no funds to buy one, but Jay -- who always seems to find a way -- was able to borrow one⁹ and we were off and running.

In the early '70s, after completing his Ph.D. at Berkeley with Gerald Westheimer, Bill Baron came to Rochester to assist in the study of receptor potentials. When I moved to UCSD in 1974, Bill took our lab equipment with him to the Stanford Research Institute in Menlo Park, where I visited frequently as we continued our collaboration for six more years.¹⁰

4. A "Cool" conference

Brian Tansley, a Canadian who was perhaps the most talented of my graduate students, came with me from Rochester to La Jolla after completing course requirements for the doctorate. He did his dissertation research at UCSD and received a Rochester Ph.D. He then went to the School of Optometry at Waterloo to work as a postdoc with Jack Moreland. The equipment that he had used for his two dissertation projects became available, and I decided to make use of it.

Not since doing my doctoral research had I been the laboratory working alone, doing everything with my own two hands, and I felt a strong desire to do this for a while. Using what Brian had left behind, and a bit more, I built and calibrated an apparatus, arranged it so that a experimenter was not necessary, and served as the only subject in a new experiment on chromatic discrimination. This turned out to be the foundation for several years of collaborative work on this subject that would follow.

I had not intended to publish this preliminary study, but in 1977 the University of Houston celebrated the opening of its new Optometry building by staging a huge conference to which I was invited to contribute. The write-up of my preliminary solo experiment was one of 70 papers that were published in a thick book titled "Frontiers of Visual Science". The editors were S.J.Cool and E.L. Smith.¹¹

For summer reading before I started graduate work at Brown, Lorrin Riggs had recommended two books.¹² One of these was written by Ragnar Granit, the other by Howard Bartley. Both gave papers at this "Cool" meeting. Bartley, like Renshaw, was a psychologist who was heavily involved with optometry and this was the only time I would ever see him. Although there were, of course, a great many research optometrists at this meeting, researchers from many backgrounds were represented.

5. SCCO

During the 1980s, I served for three or four years as an outside judge of fourth-year student research papers at the Southern California School of Optometry. Some of these papers were very good. This also gave me an opportunity to learn something of their curriculum and I was very favorably impressed. From the internet I have concluded that the other fifteen U.S. schools in the Association of Schools and Colleges of Optometry enjoy equally rigorous programs. Later I was asked to serve on a committee at SCCO, the purpose of which was to think of ways that the research effort at the school could be increased and outside funding attracted to support it. We found this to be an impossible task for a private school whose primary mission was not to do research, but to train future practitioners of optometry. I was reminded of what Brian Tansley had told me about his experience at Waterloo. Much as Jay Enoch had been abandoned by Brian O'Brien, Tansley was abandoned by Jack Moreland, who returned to England not long after Tansley arrived. Tansley made arrangements to take a postoc at Dalhousie with David Regan beginning a few months later, but in the interim he decided to sit in on some optometry classes. Being squelched whenever he corrected an instructor or attempted to expand on an issue, Brian quickly discovered that instruction there was a one-way street. This is not the kind of environment that is compatible with innovative research.

6. Some final thoughts

Optometry has come a very long way indeed since that nasty Reader's Digest article was published in 1937, despite obstructions put in its path by the medical profession, which seems to have placed economic considerations above concerns for the health of the public. A prime example was making it illegal for optometrists to use a drug to dilate the pupil. I can almost believe that the medics would have made it illegal for optometrists to use an ophthalmoscope, had they been able to find a basis for doing so. Optometry arose as a profession because there never were anywhere near enough ophthalmologists to provide eye care for the public. In my opinion, It is immoral for the medical profession to have prevented optometrists from doing their best work.

No one has prevented ophthalmologists from receiving rigorous training in refraction: they have managed to avoid such training on their own. While at Rochester, I was shocked to learn how little instruction in refraction was provided to ophthalmic residents there, and I am told that they get even less at UCSD. A Reader's Digest piece entitled "Medical Refractionists on Trial" could be published today.

Endnotes

1. I remembered this as an event that took place in the Winchester, Massachusetts home where my first wife grew up. We visited there often while I was finishing my undergraduate education at Amherst and during the four years I was a graduate student at Brown. My mother-in-law was the pack-rat responsible for this disorganized cache of old magazines.
2. Riis RW. Optometry on trial. The Reader's Digest 1937;31: 77-85. Two articles quickly followed in successive issues. The second, which had not originally been planned, was needed to discuss an outpouring of letters that the Digest had received in reaction to the first article. The third article -- originally intended as the second -- added little to what had already been written. All that I can surmise about R.W. Riis, who authored these articles, is that he could not have been a medical doctor because he was referred to as "Mr. Riis" in a prefatory section that introduced the second article.
3. Flexner A. Medical Education in the United States and Canada. New York, NY: Carnegie Foundation for the Advancement of Teaching, 1910.
4. Others at this meeting who would soon play important roles in my career included Deane Judd and Ken Ogle, senior figures who reviewed some of my early papers favorably. R.M. Hall was a local practitioner who happened to be my father's optometrist. I remember Dad telling me, long before I began to study vision, how impressed he was with the fancy equipment in Dr. Hall's office.
5. According to what Jay Enoch told me at dinner before the meeting, A.M. Skeffington was the prime mover in the Optometric Extension Program, about which there was a great deal of controversy. Although I don't remember it, Jay said that Skeffington always appeared in a white suit at these meetings.
6. Gordon Walls was not trained as an optometrist, but ended his career at the School of Optometry in Berkeley. His book *The Vertebrate Eye and its Adaptive Radiation* (Haftner, 1963) is a classic. Possibly as a result of our conversation on that drive, I obtained a copy of book-length notes that he had assembled for his students. These made for lively reading.
7. The idea of creating a Center for Visual Science at Rochester arose shortly after my visit to Columbus. I reasoned that if I were capable of being a director of something, I would prefer to lead an organization compatible with my training and interests.

8. Boynton RM, Bush WR, Enoch JM. Rapid changes in foveal sensitivity resulting from direct and indirect adapting stimuli. J Opt Soc Am 1954; 44:56-60; Boynton RM, Enoch JM, Bush WR. Physical measures of stray light in excised eyes. J Opt Soc Am 1954; 44:879-896.
9. The photomultiplier unit was borrowed from Professor George Smelser of the College of Physicians and Surgeons at Columbia University where Jay had earned his O.D. degree in the soon-to-be-defunct School of Optometry.
10. Our last publication together: Boynton RM, Baron WS. Field sensitivity of the "red" mechanism derived from primate local electroretinogram. Vision Res 1982; 22:869-878.
11. Seventy papers based on talks at the conference were published in Cool SJ, Smith EL, eds. Frontiers in Visual Science. Springer-Verlag, 1978. My paper was titled "Discriminations that depend upon blue cones" (pp. 154-163).
12. The books were Granit R. Sensory Mechanisms of the Retina. Oxford University Press, 1947; and Bartley SH. Vision, A Study of its Basis. Van Nostrand, 1941.

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On the Rochester School of Optometry (RSO) and Reuben Greenspoon:

The following was written by OHS member Morton K. Greenspoon (4326 Park Paloma, Calabasas, California 91302; drmort@mac.com)

I read with interest the two part essay by Professor Jay Enoch on the Optometry Program at the University of Rochester. He writes "It is important to point out that there was a second, non University affiliated optometry educational program located in Rochester. It was called Rochester School of Optometry." My father, Reuben Greenspoon, was a graduate of that program. I think it would be of interest to share his story and what I know of RSO from reading his 1921 yearbook.

My father was an immigrant from the Ukraine in Czarist Russia. His father brought the family to New York to escape the oppression of the Czar when my father was five. My father was plagued by poor eyesight. He was hyperopic, astigmatic and hyperphoric. One summer he went to a summer camp for poor lower east side children sponsored by comedian Eddie Cantor. The camp provided health care and he was seen by an optometrist who provided glasses. The glasses changed his life. He became an excellent student and decided that he was going to dedicate his life to providing vision care to others.

After graduation from high school he was accepted at Rochester School of Optometry. Optometry was then a two year course and he paid his way through college working as a street car conductor at night. I was fortunate to find his 1921 yearbook in my attic and started looking through it. I was amazed. The school was housed in a beautiful three story ivy covered brick building. The class of 1921 had a football team, a basketball team and a track team. There were two fraternities on campus Mu Delta and Chi Delta. Among the social activities were six dances, several Banquets and field trips to the Bausch and Lomb plant and the Geneva Lens plant.

On March 21, 1921, they held the Twelfth annual Banquet of the Rochester School of Optometry Alumni Association, which would mean the school was founded in 1909. In attendance were the President of the University of Rochester, and a representative of the Bausch and Lomb Co. Several selections were played by the student body orchestra. The school had an Alma Mater sung to the tune of "Juanita." The Dean of the school was Ernest Petry with whom my father formed a lifelong friendship.

On page 60 of the yearbook appears an essay by Henry Bestor, a New York optometrist, that is quite prophetic for its time. He writes, "Optometry is not and never should become a branch of medicine, and while we, as Optometrists should have more education along the so-called medical lines, so that we may be able to co-operate more fully with the medical practitioner in cases which show ocular manifestations of pathological conditions, our strictly optometric work is better accomplished along the purely physical and physiological lines upon which Optometry is based." After graduation my father opened a practice in Brooklyn, New York. He developed an interest in low vision aids and keratoconus. In an effort to learn more about contact lenses he studied with William Feinbloom. Several years later, his brother, William Greenspoon, also an RSO graduate, joined him in practice in Brooklyn, New York.

In 1927, while ice skating at Lake George in upper New York State, my father met my mother, Stella Blum, daughter of a well-known jeweler, Harry Blum. They were married at the Park Manor in Brooklyn and took the train to Los Angeles for their honeymoon. They were absolutely fascinated by Los Angeles and in 1932 my father sold his half of his Brooklyn practice to his brother William and moved with his wife and young son Morton (me) to Los Angeles. Dean Petry introduced my father to his friend Ernest Hutchinson, Dean of the Los Angeles College of Optometry (LACO). It was determined that in order to qualify for the California State Board, he would have to go back to school for one year. He combined his studies with teaching the course in Low Vision at LACO.

After receiving his license to practice in California my father formed an association with Arthur Hoare and they practice together for several years in downtown Los Angeles. One fateful day my mother and father took a drive down Wilshire Boulevard out to the country. They came to the corner of Beverly Drive where they had just erected a new office building. My father said, "What is this place called because this is where I am going to move my practice." My mother replied, "This is a new area

called Beverly Hills.” The building my father had decided to move office to, 9439 Wilshire Blvd., housed a veritable “Who Is Who” of the movie business. He was the only optometrist in town. He was well on his way to becoming the Optometrist to the Stars.

In 1939 one of his friends and patients, Ben Nye, head of the makeup department at 20th Century Fox Studio, asked my father if he could use the new invisible spectacles, as contact lenses were called, to change the color of an actor’s eye from brown to blue. My father accomplished this by fusing a blue ring of ceramic material onto a glass Zeiss scleral lens. This was the first use of a contact lens in the movie industry to effect an eye color change. The name of the movie was “Miracles for Sale” starring actor Robert Young. The contact lenses and their removal to expose the killer’s eye color change in the movie were a sensation. Soon after Paramount asked my father to make a popular science color short subject film about contact lenses. This film was distributed around the world and was the first introduction to the public about the existence of contact lenses.

I graduated from Los Angeles College of Optometry, later to become Southern California College of Optometry, in 1951. The school had a dream faculty headed by Henry Hofstetter and Monroe Hirsch. They became my idols.

I joined my father in his Beverly Hills practice and soon took over the special effect contact lens part of the practice. I have been in practice for 54 years and have done special effect contact lenses for over 200 films and received an Academy Award for my work on “Dracula” and an Emmy Award for my work on the “Star Trek” series. I am now 77 and practice three days a week. The practice now known as “Professional Visioncare Associates” has four partners and a full time cosmetic contact lens department.

Optometry has come a long way in 84 years. I passed the exams in therapeutics and got my license and am still amazed every time I write a Therapeutics prescription.

Morton K. Greenspoon

One hundred years ago:

I noticed several ads for schools in the February 1 (volume 17, number 6) issue of *The Optical Journal*. On page 248, there was an ad for the Rochester School of Optometry, “a thorough and practical optical school.” A.H. Bowen was given as the president, and B.B. Clark as the secretary of the school. On page 286, it was announced that either ophthalmology or neuropathy (including chiropractic) could be studied at the Rowley Ophthalmological College of St. Louis. The ad noted that Dr. A.P. Davis was the originator of the school and one of its faculty.

On page 290 of the February 1, 1906, issue there were three advertisements for schools of various types. One was a brief ad from the Los Angeles School of Ophthalmology and Optometry in Los Angeles, California, that said "The California State Board of Optometry gives a stiff examination for everyone. We can qualify you. Send for Announcement." An ad from the Horological Department, Bradley Polytechnic Institute (Formerly Parson's Horological Institute), Peoria, Illinois claimed that it was the "Largest and Best Watch School in America. We teach Watch Work, Jewelry Engraving, Clock Work, Optics. Tuition reasonable. Board and rooms near school at moderate rates. Send for catalog of information." A slightly larger advertisement from the De Selms Watch School, 101 Perry Street, Attica, Indiana, exhorted the reader to "Learn Watchmaking at Home – By the DeSelms Chart System, Copyrighted and Pat'd, The most simple, practical and up to the minute method of learning..."

On page 308 of the February 1, 1906 issue there was a full page ad for the Northern Illinois College of Ophthalmology and Otology. This is almost the same as the ad that we reproduced in the July, 2005 issue of *Hindsight* from the June 29, 1905, issue of *The Optical Journal*, except that the 1906 ad announced a Feb. 12th to 16th alumni gathering and George A. Rogers, Oph. D., was not listed as a member of the faculty in 1906. J.B. McFatrigh, M.S., M.D., Geo. Wilbur McFatrigh, M.D., Henry S. Tucker, A.M., M.D., E.G. Trowbridge, M.D., Chalmers Prentice, M.D., Hon. Lawrence Y. Sherman, LL.D., and James J. Lewis, Oph. D., were listed as faculty both in June, 1905 and in February, 1906.

Page 378 of the February 1, 1906 issue featured a full-page ad from The South Bend College of Optics, No. 2 McDonald Building, South Bend, Indiana. The heading of their ad proclaimed that "We settle the question of prisms. Our course in optics tells you just when and how to prescribe prisms and when to let them alone." After several lines about how their rules for prescribing prisms have "never been known to fail," the ad mentions teaching correction of astigmatism and use of the ophthalmoscope, retinoscope, and trial set. The ad also says that the school's "64-page prospectus, 'How to Become a Good Optician,'...tells all about the most thorough and painstaking optical college in America."

D.A.G.

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