

HINDSIGHT

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Jay Enoch's Column:

Isadore Finkelstein, O.D., Ph.D. (January 6, 1905 -March 13, 1965)
Optometric Scientist and Scholar, Inspirational Teacher,
and Stalwart of the Profession - A Tribute!



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Isadore S. Finkelstein

I met Isadore Finkelstein in a curious way. In the fall of 1948, I recently had been admitted to the Department of Optometry at Columbia University, and I was attending a school dance with my date. As I danced by, I heard a professor/teacher saying to someone, "I will pay \$1.00 per hour for experimental subjects for this research." Wow, \$1.00 per hour! I literally crashed my date into the gentleman (there

was no apparent damage to either party), and I volunteered on the spot. Thus, totally without realization of future implications, I had just entered into academic optometry, and met one of the most influential individuals I was to encounter throughout my career, the late Prof. Isadore Finkelstein. He was "Izzy" to some, and he became known as "Finky" to our group. He was indeed a very special person.

As a young man, he had very much wanted to be a forester, but he was discouraged from this pursuit for economic reasons. Many years later he took my wife and me on a drive from Rochester, NY, via Newark, NY, to see marvelous experimental gardens of the rose purveyor, Jackson and Perkins, and we then proceeded down along Lake Cayuga, where he led us to see hidden waterfalls, and more, until, later, we arrived in New York City. This was a memorable experience - all the more so because we were debating theories of color vision, the nature of retinal functions and more along with details of the local flora and fauna for fully 8 to 10 hours.

Finkelstein attended CCNY where he met his wife, Ethyl. He graduated from the Columbia Optometry program in 1926, and then served on its faculty continuously until it closed in June, 1956. Thus, he served the Department of Optometry at Columbia for fully thirty years and the profession for another decade. He established a highly professional private practice. His office was just above the marquee of the Paramount Theater on Times Square. I remember his equipment was rather sparse. He had an American Optical Corporation Phorometer with a built in trial frame on a modest stand (I used the same model some years later). He died of a heart attack while serving his very loyal patients on March 13, 1965.

When I met him, Finkelstein was working on his PhD dissertation in Physiology. He had started his graduate studies on the Main Campus of Columbia University under the tutelage of the renowned Prof. Selig Hecht. After Hecht's untimely death, Finkelstein transferred his studies to the College of Physicians and Surgeons on the Medical School Campus. There, in the Department of Ophthalmology, he served as a student of Prof. George Smelser, a fine anatomist. Across the hall or corridor was located the laboratory of Prof. Ludwig von Sallmann, next down the hall was Prof. Zacharias Diche, his laboratory was followed by that of Dr. de Roethe, etc. We subjects were "mothered" (the only applicable word!) by Prof. Smelser's long time assistant, "Minnie", as in Minnie Mouse, whose real name was Victoria Ozanics. Finky's able assistant (a lovely lady whose name, sadly, I forget) guided us effectively in order to achieve the quality result demanded by him. The group of subjects varied a bit with time, but was a loosely knit assembly of optometry students. In addition to myself, our group was composed of Bradford Wild and Bart Wild (identical twins), Herbert Korones, William (Bill) Ludlam, and the earlier student and sometimes participant, Benjamin Davis. Ben was already in optometric practice in the Western Tier of Upstate New York, but would visit Finky and the lab on occasion. With the exception of Bart Wild who took over his father's successful practice in Rhode Island, and Ben, the remainder of us entered academic optometry! Some years later, I discovered Ben was engaged in academic studies with his brother-in-law, Ira Hirsch, a highly-respected

auditory researcher in St. Louis. The transformation of our group into academics and researchers was not an accident!

One day we were working as a group on a tough problem which was frustrating us all. Finky asked us to stop what we were doing, and told us that we were going on an outing. We piled into his ancient black car, and he drove us up to one of the reservoirs in Westchester County. We found a place where they were making fresh apple cider, and a farm stand where they were selling freshly picked and roasted corn. We picnicked leisurely on the rim of the reservoir for a period of time. We then debated the problem for some hours until we resolved the issues, returned to the lab, and worked through the night until dawn when we had properly completed the job. This was science perhaps as it was meant to be. The extraordinarily rewarding experience of that day and additional special experiences led virtually all of us to seek careers in academic optometry and optics. Subsequently, Brad Wild became dean first at Pacific and later at Alabama, I was dean at Berkeley (after serving at Washington U. in St. Louis and U. Florida), Bill Ludlam served as an optometric researcher in the field of binocular vision and perception at Pacific (and earlier at the Optometric Center of New York), and Herb Korones became the Director of Research at Wollensak Optical Corp. in Rochester, NY. This is a fine record of inspiring others to seek academic pursuits. This achievement by Finkelstein compares favorably with Morgan and Fry, particularly because it was achieved over a brief span of years.

Finkelstein, 1952, was studying the biophysics and to some extent the biochemistry of corneal physiology in an effort to resolve the clouding of the cornea associated with then employed "fluid" scleral contact lenses. The associated syndrome was known as "Sattler's veil". That is, a scleral lens was filled with an artificial tear solution (various). Finkelstein systematically varied the parameters controlling pH, osmotic pressure, and chemical content of these solutions. Extremely good progress was made by Finkelstein and Smelser in their attempt to understand and address the issues associated with Sattler's veil. The program was sponsored by the U.S. Army. Note, a second group was working on the same problem at Harvard. That group was headed by Drs. V. Everett Kinsey and D. Donaldson. Finky precisely measured the clouding of the cornea, the brightness of diffraction halos seen about lights (two halos having separate sources), and analyzed the different effects resulting from varying the fluid contents of the fitted contact lenses. Finkelstein found that the clouding resulted from interference with normal corneal metabolism. This resulted from the combination of the scleral contact lens and the artificial insertion fluid. At first oxygen in the fluid provided metabolic support, then the stored glycogen in the cornea served to sustain corneal clarity. As a result of anaerobic metabolism, available glycogen in the cornea became exhausted, and characteristic corneal swelling resulted, corneal clouding occurred, and diffraction halos were seen. Also studied were the associated systematic and repetitive patterns of folds in Descemet's membrane, and changes in the flow occurring in aqueous veins while the scleral contact lenses were worn. The latter study was done in cooperation with Ascher. Animals were fitted with contact lenses and parallel studies were conducted on rabbits, guinea pigs, dogs, etc. As a result, we

subjects learned to fit contact lenses. And Finkelstein and Smelser used sealed goggles to allow selected flow of various gaseous contents across the corneas. Included selectively were, normal air flow, and varying contents of oxygen, no oxygen, carbon dioxide, nitrogen, water vapor, etc. These were employed in order to create defined environments for the cornea, and helped greatly to clarify the physiology. They could replicate the results obtained when wearing the contact lenses with a gaseous environment. In other experiments, the glycogen would be exhausted by a first wearing of the lens with fluid 1, then fluid 2 was inserted into the lens (the latter fluid usually had different properties). The goal was to alter corneal physiological response rapidly and effectively.

The U.S. Army's interest and support had origin in events occurring in World War II. Over one million men had been exempted for poor eyesight, and the Army hoped to retain some added proportion of inductees in future conflicts if Sattler's veil in contact lenses could be solved. In time, research on Sattler's veil by Smelser, Finkelstein, Kinsey and Donaldson was overtaken by development of scleral-vented lenses (Josep or Joseph Dallos [glass scleral contact lenses], Norman Bier and Theodore Obrig et al. [PMMA vented scleral contact lenses]). These newer lens forms allowed continuous and (fresh) replacement tear flow under the lens. Not much later, corneal PMMA hard contact lenses were introduced (Tuohy lenses) - see Goodlaw, 1978. None of these events diminished the value of advances made by these scientists on corneal physiology.

During the Korean War, the Army moved this research program to the U.S. Army Medical Research Laboratory (AMRL) in Fort Knox, KY. Finkelstein's equipment was provided to the Army for use in these studies. As the only knowledgeable (if junior) member of the original group in the Army at the time, I was assigned to the project under the leadership of Major James McGraw (a graduate of the ophthalmology program at Columbia University). Later, Jim served for many years as Chairman of the Department of Ophthalmology at Syracuse University in Upstate New York. He died recently. Our work complimented that of Smelser and Finkelstein. Publications of our studies are referenced under McGraw and Enoch, and Enoch and McGraw, 1952-1954.

Finkelstein received his Ph.D. in 1953. By then he had been appointed Assistant Professor of Optometry. Most readers will remember that shortly after Finkelstein receiving his Ph.D. events occurred which resulted in the closing of the Department of Optometry at Columbia University. This sad story is told in some detail by Harvey Jolt in a most interesting dissertation written for submission at New York University in 1973. There have been other discussions of this set of issues as well (cited by Jolt). On March 30, 1954, Columbia University announced the scheduled closing of the Department of Optometry in 1956. No new students were admitted in 1954, and the Columbia program was terminated on June 30, 1956. Finkelstein was one of a number of individuals who rallied to the School, the profession of optometry, and to the needs of the community and State when this series of events transpired. In this brief treatment, it is not possible to reproduce in abstract the two volume treatment provided by Jolt.

Quoting both Obituaries, 1965, of Isadore Finkelstein, "Realizing the need of an institution that would serve the needs formerly provided by Columbia's Department of Optometry, Dr. Finkelstein worked diligently and idealistically toward the goal of establishing the Optometric Center of New York (OCNY). In the words of other co-founders, 'Dr. Isadore Finkelstein was signally (? singularly) responsible for the drive and direction of the initiatory committee (chaired by Finkelstein who had been elected unanimously to fill this role) and relentlessly drove it towards its goal.' When the Center opened, Dr. Finkelstein became its executive director, a post he held until he was succeeded by Dr. Alden N. Haffner. Finkelstein continued to serve on the research staff of the Center until his death."

Quoting Harvey A. Jolt, 1973, volume I, page 138: " Drs. Ludlam and Finkelstein visualized the creation of a center that would be for the time being a repository of optometric education and knowledge until a new school could be established to which could be transferred anything which the conceived center had been able to create. It was especially essential that the proposed institution continue the clinical, research, postgraduate educational, and library activities of Columbia." Towards this end, they obtained some portion of the Department's laboratory and clinical equipment, the optometry library, and the patient records and addresses which had been held by the Columbia program. And they felt it incumbent upon themselves to play a meaningful role in behalf of the needy in the area where they practiced, and also to serve as a referral resource for the optometric community.

Finkelstein could be truly eloquent, and as Jolt noted, he was a master of the English language. He certainly could simplify concepts readily for the student or practitioner. He held himself to a high standard, and he would never compromise on principle.

There is a passage in Jolt, 1973, volume I, page 167, which should be quoted. This statement ably characterizes Isadore Finkelstein!

"Dr. Isadore Finkelstein was a leader who seemed to be a complete stranger to exhaustion, and at the same time appeared to be quiet and unassuming. He was the ideal picture of a gentleman and his actions fitted his image. He spoke softly, seldom displayed his anger, was considerate of the feelings of the people he dealt with, and displayed a paternal feeling towards the staff of the Center. He projected the image of a scientist taking on problems in the confines of the laboratory. Patient care and the image of the desire to attain the ideal professional optometric setting were his only standards."

I remember well one day, I was feeling poorly. Finky became concerned, took my pulse, felt my forehead, then kissed my forehead to see if I had a fever, and shipped me off home with words of encouragement. Paternal indeed! And, when at ease, he could be great fun.

I am indebted to this kind, gentle, and inspiring exemplar!

Acknowledgments:

A number of friends of Isadore Finkelstein, as well as his daughter, Ms. Natalie Markin, helped me gather the necessary background material to prepare this tribute. Norman Haffner was indeed forthcoming. Others who helped me included Harold Solan, Ernest Giglio, Ed Bechtold, and Tony Adams. Photograph of Prof. Isadore Finkelstein, courtesy of Dr. Harold Solan, and the SUNY College of Optometry, NY.

Note of Condolence:

Dr. Finkelstein's wife, Ethyl, recently passed away. We offer condolences to the family.

References:

Enoch JM, McGraw JL. Contact lenses: Some aspects of visual acuity and photophobia. Part I. Am J Optom Arch Am Acad Optom 1954; 31:1-27.

Enoch JM, McGraw JL. Contact lenses: Some aspects of visual acuity and photophobia, Part II. Am J Optom Arch Am Acad Optom 1954; 31:78-87.

Finkelstein IS. The biophysics of corneal scatter and diffraction of light induced by contact lenses. (Presented Dec. 8, 1951 at the American Academy of Optometry.) Am J Optom Arch Am Acad Optom 1952; 29(4):185-208; 29(5): 231-259. (This is the published form of the dissertation of Isadore S. Finkelstein which had been submitted to the Faculty of Pure Science, Columbia University. Most but not all references are located at the end of Part II, including citations of the work of Sattler, Kinsey, etc.)

Goodlaw EI. How corneal contacts were born. Contact Lens Forum, September, 1978; pp.31-35.

Jolt HA. Dissertation, The Optometric Center of New York: It's History, Organization, Development – A Case Study of the Impact of a Leadership Role and Analysis of It's Effects Upon a Segment of the Health Community. New York, Graduate School of Public Administration, New York University, 1973, in 2 volumes. SUNY College of Optometry Library RA 982 N3J6 1973, Vol. 1 and Vol. 2.

McGraw JL, Enoch JM. Contact lenses: An Evaluation Study. Report #99, Army Med. Research Labs., Fort Knox, Kentucky, October 10, 1952.

McGraw JL, Enoch JM. Contact lenses - An evaluating study. Trans Am Acad Ophthalmol Otolaryngol 1954; 58:561-575.

Obituary, Dr. Isadore S. Finkelstein. Optical J Review Optom April 1, 1965; 102: 69. (Note: this journal is sometimes referenced as the Review of Optometry. Contained in the School of Optometry Library, UC Berkeley. RE 1. O 7 v. 102).

Obituary, Dr. Isadore S. Finkelstein. Optom Weekly April 22, 1965; 56(16):42. (Note: Contained in storage, UC Berkeley Library, RE 1. O 78 v. 56:No.13-35).

J.M.E.

The Lewis and Clark expedition and Rush's eye wash:

William C. Frayer of the Department of Ophthalmology, Scheie Eye Institute, University of Pennsylvania, Philadelphia, contributed an interesting article entitled "Doctor Rush's Eye Water and the Opening of the American West" to the September-October, 2001 issue of Survey of Ophthalmology (volume 46, number 2, pages 185-189). Meriwether Lewis and William Clark set forth on their famous journey on May 14, 1804. Frayer notes that Lewis and Clark had complimentary skills not only for expedition, but also in caring for the health of their men and of people they encountered on trip. Lewis was an excellent botanist and zoologist and had learned about herbal remedies from his mother. Clark was noted as "tirelessly attending" to the health needs of people along their journey.

Before departing, Lewis met with three physicians in Philadelphia for medical advice: Benjamin Rush, Casper Wistar, and Benjamin Smith Barton. Of the three, Lewis spent the most time with Benjamin Rush, a personal friend and a signer of the Declaration of Independence. Among the supplies and items that Rush recommended that they take with them was the recipe for a lead acetate (sugar of lead) eye wash: one ounce of white vitriol and four scruple (one-sixth of an ounce) of sugar of lead infused in two quarts of spring water or melted snow.

Lewis and Clark noted eye problems much more frequently on the western side of the Rocky Mountains than on the first part of their journey. Most of the Nez Perce and Flathead Indians had "sore eyes," and blindness was common. The cause of the blindness is unknown, but Rush's eye water provided a very popular relief for the sore eyes. Frayer notes that it was so popular that "the explorers were able to make good use of it as diplomatic currency."

D.A.G.

Evolution of optometric education in the United States:

The December, 2001, issue of Optometry, published by the American Optometric Association, included an article by Christopher E. Woodruff entitled "The Evolution of Optometric Education in America" (volume 72, number 12, pages 779-786). Woodruff mentions that early training in optometry was by apprenticeship. Then, as in other professions, proprietary schools arose. Some of these proprietary schools developed into some of the present-day schools and colleges of optometry.

The first university optometry program started in 1910 at Columbia University. The oldest university optometry program still in operation began in 1914 at The Ohio State University. Woodruff briefly outlines the origins of each of the existing optometry schools.

The author then discusses development of educational standards for optometry schools. These developments included a 1922 conference held in St. Louis to establish optometric standards, the appointment in 1934 of a Council of Education by the American Optometric Association to conduct a study of optometric education, and then the establishment of accreditation procedures. In the latter part of the paper the author gives an overview of the development of optometry school curricula.

D.A.G.

A 13th century medical eye book:

The September, 2001, issue of *Documenta Ophthalmologica* contains an article entitled "The Eye Book of Master Peter of Spain - a glimpse of diagnosis and treatment of eye disease in the Middle Ages" (volume 103, number 2, pages 119-153). The authors are Walter J. Daly and Robert D. Yee of the Indiana University School of Medicine in Indianapolis. Pages 119 to 124 provide background and information on Master Peter and his Eye Book. Pages 124 to 145 are a translation of the book. This is the first English translation of this book. In a discussion starting on page 145, the authors interpret what some of Peter's diagnostic terms might have meant and place the book in the context of the times.

Master Peter was Petrus Hispanus, a person of some prominence in the 13th century. He was born in the early 13th century in either Spain or Portugal. He studied at the University of Paris, and later wrote a noted book on logic. Peter established himself as a physician and cleric, and became Pope John XXI in September of 1276. He died in May of 1277.

Peter's Eye Book (*De Oculis*) must have been a widely used book in its time. A *Catalogue of Medieval and Renaissance Manuscripts* compiled in 1975 by Lindberg lists 220 manuscripts, 36 of which are copies of Peter's Eye Book. Daly and Yee's translation was based on 14th, 15th, and 16th century Latin manuscripts and a 19th century German translation. The book was not a scholarly treatise, but rather a clinical manual for physicians.

In the opening paragraphs Peter noted that "the human body is naturally and originally subject to the planets and signs," and that as a "searcher for truth," he "assembled this book from many books, from reason, and from experience." He also observed that "vision is the bridegroom of the soul coming from the eyes as from a candelabra," an apparent reference to an extramission theory of vision. He then describes the diseases of the eye, and following that he explains the medical treatment of these diseases with diverse concoctions of combinations of various herbal materials, animal parts, wine, powders, milks, urine, animal droppings, etc. Various nutritional and behavioral suggestions were made, including an admonition against sleeping with

shoes on. There is no obvious mention of refractive conditions or optics, although there are the observations that "Another passion is decreased fineness of vision in which the spirit of vision is lost with bright light and strengthened in the shadows," and later that "diminished vision whenever it occurs, is caused by weakness in the Spirit of Vision." A listing of things that are "harmful to the eyes" included "to read for long times through new books." Surgical treatments are not mentioned often. Daly and Yee suggest that this may have been due to a 1215 prohibition by the Church of clerics from performing surgery.

Peter's learning was probably largely based on Greek and Arab writings, in which anatomical knowledge came from the study of animals. Physicians in the Middle Ages were confined by limited knowledge of ocular anatomy and pathophysiology, by belief in astrology, and by dependence on the authority of ancient philosophers. Daly and Yee suggested that Peter's Eye Book "reflects medieval medicine."

D.A.G.

Donations to ILAMO welcomed:

OHS member Robert Koetting wrote in the February 25, 2002 issue of the American Optometric Association News ("Preserving optometric heritage yields personal rewards," volume 40, number 16, page 19) about the fund raising efforts of the International Library, Archives and Museum of Optometry (ILAMO) in St. Louis. The American Optometric Association Endowment Fund Advisory Committee has identified ILAMO as a recipient of funds in its future fund-raising programs. Benefactors can contribute toward various naming and gifting opportunities depending upon the size of the donation and the wishes of the contributors.

Koetting talks about the services offered by ILAMO and about hopes and plans for future development. He also mentions examples of the materials to be found in the E. LeRoy Ryer Memorial Museum at ILAMO:

"They include early instruments, invented and patented by optometrists. There are memorabilia associated with individual achievements and events that have shaped the history of optometry, the AOA, and many other professional organizations....

"Among [the early optometric instruments] are a Ryer retinoscope and a Leland refractor, of which only three are believed to have ever been produced.

"The museum also houses the personal possessions of Charles Prentice, the American 'father of optometry,' and personal papers of John McAllister, Jr., dating from 1822, which confirm his prescribing cylindrical lenses at that early date.

"A prized collection of eyeglasses shows many rare types, antique spectacles, and some specimens of more recent vintage. The contact lens exhibit even includes Prof.

Otto Wichterle's original spin-casting equipment, with which he made the world's first soft contact lens."

D.A.G.

New book on ocular optics incorporates history chapter:

A new book, published by Butterworth-Heinemann, entitled "Introduction to the Optics of the Eye," contains a chapter on related history. The authors of the book are David A. Goss of Indiana University (please forgive me for a little shameless self promotion) and Roger W. West of Northeastern State University in Oklahoma. The title of the tenth and final chapter in the book is "Developments in Visual Optics and Some of the People Who Made Them Possible." The chapter consists of six sections, of one to eight pages each: Image formation by the eye, Spectacles, Astigmatism, Accommodation, Optics of the eye and patient care, and Biographical sketches. The persons discussed in the biographical sketches section are Johannes Kepler, Christoph Scheiner, Thomas Young, Jan Evangelista Purkinje, Hermann von Helmholtz, Frans Cornelis Donders, Allvar Gullstrand, and Glenn Ansel Fry. The chapter includes previously unpublished photographs of commemorative medals from the collection of Jay M. Galst, depicting Kepler, Purkinje, Helmholtz, Donders, and Gullstrand. Each individual chapter in the book is prefaced by at least one topical historical epigram.

D.A.G.

Historical marker for Michigan optometry:

On the internet (<http://www.michmarkers.com/Pages/L1408.htm>), I found that Michigan has placed a historical marker in Lansing commemorating the Michigan Optometric Association. The short text on the web site reads as follows:

"The state's professional optometry association was founded as the Michigan Optical Society in Muskegon in 1896. Benson W. Hardy, Jay W. Gould, Ernst Elmer, Nelson K. Standart, Emil H. Arnold were its first directors. In 1904 the group was incorporated as the Michigan Society of Optometrists. It became the Michigan Optometric Association in 1945. The group moved its headquarters to Detroit in 1944 and to Lansing in 1956. Ninety years after its founding, the association included 670 practitioners of optometry."

D.A.G.

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It is with sadness that we report the passing of Dr. Henry Hofstetter in Bloomington, Indiana on Friday, May 10. He died peacefully in his favorite chair in his apartment at Meadowood Retirement Community with his daughters at his side. He was 87 years old.

Dr. Hofstetter, of course, had a great fondness for the Optometric Historical Society. He was one of the founders of the organization, and he served as the president of OHS for the first several years. He was variously sole editor, co-editor, and contributing editor for the entire life to date of the society's newsletter. He felt very strongly about the importance of knowing about the history of the profession, and he often expressed his disappointment with the ignorance of many optometrists concerning optometric history. In July, 1996 issue of Hindsight (volume 27, number 3, pages 17-18), he wrote about how he came to realize that he was "in a discipline with as noble and pervasive a heritage as any that I had learned about in my preoptometric cultural studies," and about how historical study shows "optometry's centuries-long existence and emergence from a prestigious and sophisticated handicraft to its present academic stature, a truly proud history which includes many prominent and accomplished personalities." In 1987, the Executive Board of the Optometric Historical Society established the Henry W Hofstetter Recognition Award to be given to persons who have made outstanding contributions toward the acquisition of better knowledge of optometry's heritage.

The following is from Dr. Hofstetter's obituary published in the Bloomington Hoosier Times of Sunday, May 12, 2002 (page B2):

Henry W Hofstetter was born in Windsor Mills, Ohio on September 10, 1914, to immigrant parents, Kaspar Hofstetter from Switzerland, and Augusta Kresin Hofstetter from Germany. The eighth of eleven children raised on a farm near Huntsburg, Ohio, he attended Western Reserve University, Kent State University, and The Ohio State University. He obtained his B.S. in Optometry as well as his M.S. and Ph.D. from Ohio State, and it was there that he met Frances Jane Elder, whom he married on July 5, 1941.

After two years at Western Reserve, and needing to earn money for his education, Hofstetter got a job teaching all eight grades in a one-room school, with extra pay for janitor duties. It was there that he discovered the importance of student interaction, and the need to keep education personal. With only a few students in each grade, they had to help each other, reinforcing individual skills and sense of

responsibility. He lived with an older sister and her husband, a jeweler in Middlefield, Ohio, and it was they who encouraged him to look into Optometry. His Ph.D. in Physiological Optics was the first such granted in the United States.

He began his university career at Ohio State, where he taught almost all professional courses as the result of faculty shortages during WWII. In 1948 he was offered the position of Dean of the Los Angeles College of Optometry (now Southern California College of Optometry). Given his background in optometry curriculum development, he was invited in 1952 to Indiana University, to direct the new Optometry program established as a division within the College of Arts and Sciences. Under his guidance, the program expanded in 1955 to include the PhD degree. In 1975 the division officially became the School of Optometry.

He was known by optometrists worldwide, as a result of his interest in international Optometry, and his focus on optometric practice and education throughout much of the world. In 1991 he was recognized as the International Optometrist of the Year by the International Optometric and Optical League, for his "profound influence upon the visual welfare of mankind". In April 1999, at an international symposium held in his honor at IU, he received the Distinguished Service Award from the World Council of Optometry.

Hofstetter himself considered his most significant achievement to have been his influence on optometric curriculum, where he introduced much of his own personal philosophy into courses, including cultural and broad-based scientific background rather than a purely clinical approach.

He authored four textbooks and over 500 papers, and co-authored the Dictionary of Visual Science and Related Clinical Terms, including the 5th Edition published in 2000. He is a Past President of the Association of Schools and Colleges of Optometry, the Optometric Historical Society, and the American Optometric Association. He has received five honorary doctorates, the Prentice medal, the Apollo Award, the AOA Distinguished Service Award, the Indiana Optometric Association's Distinguished Service Award, and the Orion Award, the highest award of the Armed Forces Optometric Society. One of his most cherished honors was his appointment in 1974 to the distinguished rank of Rudy Professor of Optometry at IU. He served on the Bloomington Hospital Board for six years, was a member of Rotary International for more than 40 years, and Past President of the Bloomington Rotary Club.

* Dr. Hofstetter was preceded in death by his beloved wife, Jane. He is survived by his daughter Ann Delaney of San Francisco; his daughter Susan Mohme and her husband Bill, of Slidell, LA; two grandchildren, Katherine Delaney and Christopher Mohme; his brothers Carl and Edwin Hofstetter, and sisters Edna Savoy and Edith Conway.

Memorial contributions may be made to the Indiana University Foundation, the American Optometric Foundation, the Optometric Historical Society, the Bloomington Rotary Foundation, or the Parkinson's Disease Foundation.