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History of The New England College of Optometry documented:

Century of Vision: The New England College of Optometry—An Anecdotal History of the First Hundred Years, by Susan Watson Moline, Boston: The New England College of Optometry, 1994, 106 pages of text plus 19 pages of appendices.

This book is a history of The New England College of Optometry published in 1994 on the occasion of its centennial. In 1894 August Andreas Klein started the Klein School of Optics in Boston. August Klein was born in Germany in 1846, and came to the United States with his mother when he was 16 years old. Klein graduated from the Boston University School of Medicine in 1882. After studying ophthalmology in Germany, Klein opened an ophthalmology practice in Boston and started the Klein School of Optics. Klein lectured and served as President of the school until he died in 1936.

Initially the school offered a one-year program with courses in optics, dispensing, refraction, physics, mathematics, anatomy, and pathology. In the first few years, courses in ophthalmology, chemistry, and mechanical optics were added. The faculty initially was composed of seven persons including August Klein, and three of his children, Theodore F. Klein, Herman L. Klein, and Wilhelmina A Svendsen. Herman Klein was an 1897 graduate of the school. Edwin P. Wells, of the American Optical Company, started the mechanical optics program.

In 1901 the name of the school was changed to the Massachusetts School of Optometry. The 1905-06 school catalog pointed out the advantages of a career in clinical optics: "An optician has an elegant, delicate, scientific profession, his patrons are mostly ladies, he has less drudgery to do than the physician, he does less worrying than the lawyer, and is more independent than the minister, and one of the greatest advantages is that his profession is not overcrowded. There are good chances for all scientific Opticians."

In 1909 the academic program was lengthened to two years. At this time Theodore Klein became Director of the School with August Klein continuing as President. Theodore served as Director of the School from 1909 until his death in 1946. He was also President of the School from 1936 to 1946, even though he was blind the last few years of his life. His three daughters worked in his office at various times, and helped him with daily tasks as his vision declined. Theodore stopped teaching in 1940. Massachusetts established licensure of optometrists in 1912. The Massachusetts School of Optometry became a charter member of the International Federation of Optometry Schools in 1920. In 1921 tuition was \$175. In the early 1920s the first year courses were Algebra, Geometry, Trigonometry, Physics, Anatomy, Practical Optics, Theoretic Optometry, Physiology, Practical Optometry, and Clinics. The second year curriculum was Theoretic Optometry, Practical Optometry, Pathology, Clinics, Physiologic Optics, Theoretic Optics, and Hygiene. Theodore F. Sargent, who entered the school in 1922, noted in a 1979 interview that the School was ". . . run by dedicated men who could see a future, and that future was refraction."

Albert Sloane attended the school in the late 1920s. He recalled there being about 27 students in his class and that "... for the most part, you could divide them into three categories. First were the students whose parents or friends owned jewelry stores. They were convinced there was future for them. I think fully a quarter of my class fell into this category. The next group were those who found optometry to be an inexpensive *entrée* into a profession. Economics drove many of us, like myself, who wanted to be in a profession but could not afford medical school The third group of students was a number of boys who came from relatively well-to-do families and had gone to private schools and failed. They were not medical school caliber, but their parents wanted them to keep on trying."

The book contains many remembrances by graduates about faculty members at the School. Some of those mentioned most often were Ralph H. Green, Foster Namias, Otto Hochstadt, and Frank Kozol. Green graduated from the Massachusetts School of Optometry in 1927, and joined the faculty in 1930. He taught Theoretical and Applied Optometry, and was Dean of the School from 1946 to 1965. Foster Namias was the son of an optometrist and had worked for the American Optical Company. Namias enrolled in the Massachusetts School of Optometry in 1930, and after graduation joined the faculty. He taught mainly in the areas of Ophthalmic Optics and Fabrication, and was described as brilliant and very demanding. Otto Hochstadt was a physician from Austria, who came to the United States in about 1939. Hochstadt taught the biomedical sciences. He was recalled as generous, a fine teacher, and very loyal to optometry. Frank Kozol enrolled in the Massachusetts School of Optometry in 1942. After an interruption of his education due to his service as a combat medic in World War II, he graduated in 1948. Kozol served on the faculty for over 40 years starting in 1951.

The program was increased from two years to three years in 1934. In the 1930s and for many years thereafter most of the faculty were part-time faculty and were alumni of the school who were in practice. During World War II there were only about four or five students per class.

Theodore Klein died in 1946 at 68 years of age. The School became a nonprofit organization in 1946, with Herman Klein being elected President. Herman Klein was President until his death in 1951. The G.I. Bill increased the number of students after the war, with 98 entering the School in 1946. In 1947, the American Optometric Association's Council on Education and Professional Guidance granted the School accreditation. In 1950, the name of the school was changed to the Massachusetts College of Optometry, and the Massachusetts Board of Collegiate Authority granted it the right to award the Bachelor of Science in Optometry degree. The first Doctor of Optometry degree was conferred in 1953.

In the mid 1960s class sizes were about 50. In 1967, tuition was \$1,000. The faculty continued to be mostly a part-time faculty in the 1960s, with only three full-time faculty in 1969. Perhaps the most sweeping changes in the College came during the Presidency of William R. Baldwin (1969-1979). These changes included recruiting nationwide for faculty and students, adding alumni representative positions on the Board of Trustees, expanding the curriculum to put more emphasis on pharmacology and biomedical sciences, and increasing clinical training opportunities. In 1972 the accelerated two year O.D. program for students who held doctorate degrees in related fields was started with 12 students. The name of the school was changed to The New England College of Optometry in 1976 to reflect its regional emphasis.

F. Dow Smith was President of the College from 1979 to 1985. By 1985, the academic programs offered by the College included the four year O.D. program, the accelerated O.D. program, two year programs to train optometric technicians and optometric assistants, and a post-doctoral residency program. In 1985, the College had 30 full-time faculty, the tuition was \$10,650 per year, and the enrollment was about 350.

The author of this book holds a degree in journalism and is described as "an Editorial Consultant to nearly 30 colleges, universities, and hospitals, mainly in the Boston area." Interspersed throughout the book are a number of black and white photographs, some of which are labeled and many of which are not labeled. The inclusion of the phrase "anecdotal history" in the subtitle apparently derives from the book being based largely on interviews and from the numerous quotations from various individuals throughout the book. The book includes a short foreword by Joseph Bickford, the College's Chairman of the Board, and short afterword by Larry R. Clausen, the College's President. The 19 pages of appendices consist of a listing of various officials, the mission statement of the College, and a time line of events. The book does not have an index or reference citations.

D.A.G.

Babe Ruth did not have amblyopia when he played baseball:

Readers of the journal Optometry and Vision Science may recall seeing an article a couple years ago about the possibility that Babe Ruth had amblyopia (Voisin A, Elliott DB, Regan D. Babe Ruth: With vision like that, how could he hit the ball? Optom Vis Sci 1997; 74:144-146). The authors reported contacting Dr. Gerald Kara, who had practiced ophthalmology at the New York Ear and Eye Infirmary and had examined Babe Ruth in the Spring or Summer of 1946. Kara diagnosed amblyopia after finding visual acuities of 6/6 OD and 6/60 OS. Kara recalled that Ruth's eyes appeared healthy, he did not have strabismus, and had equal refractive errors of +1.00 D in the two eyes.

Late in the summer of 1946 Ruth started having blinding headaches, pain over his left eye, toothaches, and a hoarse throat. In 1948 Ruth died of nasopharyngeal carcinoma. Voisin et al. suggested that it is possible that Ruth's cancer may have affected his optic nerve at the time of Kara's examination enough to have reduced visual acuity, but not enough to have affected other ocular findings that would have indicated a pathological cause for the reduction in visual acuity. They also noted that amblyopia in the absence of strabismus or anisometropia would have been unlikely. Babe Ruth retired from baseball in 1935, at the age of 40, some years before the examination by Dr. Kara.

Henry Hofstetter recently shared with me a correspondence he conducted with Charles Letocha between June 16, 1997 and April 10, 1998 concerning Babe Ruth's vision. Their search for clarification culminated in a letter to Letocha dated March 27, 1998 from Alfred Lit, Emeritus Professor at Southern Illinois University. Lit enclosed a copy of an e-mail message that he had sent on September 18, 1997 to some members of a binocular vision e-mail exchange group, who were also discussing the question. The following are some excerpts from that message:

"... I believe that I am the unidentified New York City optometrist who examined Babe Ruth sometime between 1938 (upon receipt of my N.Y. State license to practice optometry) and early July of 1943 (when I was inducted into the Armed Services during WW II).

"During my examination, Mr. Ruth's only visual complaint was his inability to clearly see a golfball when teeing off, and to a lesser degree, when putting. This distressed him because he was about to leave for vacation or establish residency in Florida . . . but in either case he was looking forward to an active golf schedule. Mr. Ruth hoped that I could provide a pair of glasses that would improve his vision for objects located at nearby ground distances, thereby improving his golf score.

"My optometric examination revealed near-emmetropia with about 20/20 VA in each eye. Also, no signs of ocular pathology were detected ophthalmoscopically and no binocular insufficiencies were noted. Mr. Ruth's visual problem was essentially a case of incipient presbyopia. If I had examined his eyes in, say, 1941, Mr. Ruth would have been about 46 years of age at that time. A diagnosis of monocular 'amblyopia' would be false, even an absurd diagnosis. Mr. Ruth was provided with a pair of golf/near vision lenses (about +1.00 Dptr, O.U.) as I remember it now, more than 55 years later. Mr. Ruth departed for Florida and I received no negative feedback from him before I entered the Armed Services in 1943.

"Dr. Gerald B. Kara, an ophthalmologist at the N.Y. Eye and Ear Infirmary, had examined Babe Ruth in 1947, a year before he died of cancer of the larynx. In a letter

to ARGUS in July, 1990, Dr. Kara reported Ruth's VA for the right eye as 20/15 and a VA of 20/200 for the left. His brief letter did not provide data to resolve the question of whether Babe Ruth's poor vision in the left eye was also present during his baseball playing years or whether the loss of vision occurred only in his late years in association with his bout with terminal cancer.

"In conclusion, on the basis of the findings of my examination in the early '40s, Babe Ruth was not an 'amblyope' during his baseball playing years. He more likely suffered a monocular loss of vision only in later life due to his cancer and/or another systemic disorder or disease."

D.A.G.

Accomplishments of Thomas Young noted:

I have always been amazed at the breadth of the accomplishments and the intellect of the English physician Thomas Young. A recent article documenting his achievements (Gauger GE. The great mind of Thomas Young (1773-1829). Documenta Ophthalmologica 1997; 94: 113-121) gave me even greater wonder for the breadth and depth of his abilities.

Thomas Young was born of Quaker parents on June 13, 1773, at Milverton, Somersetshire, England. He was very precocious and was said to have started reading at the age of two and had read the Bible from front to back twice by the age of four. He studied medicine in London, Edinburgh, and Göttingen, and received the M.D. degree at Cambridge in 1808. He completed a thesis in which he developed a phonetic alphabet, based on the analysis of the sounds produced in speech. He studied linguistics and languages extensively, and knew many languages, among them Latin, Greek, Hebrew, French, German, Italian, Arabic, Chaldean, Aramaic, and Persian.

Young's contributions to vision science are among the most important in the field, including his studies of the mechanism of accommodation in which he showed that the crystalline lens was responsible for accommodation, the first description of astigmatism, and the first description of a trichromatic theory of color vision. Young published extensively in the area of clinical medicine. Some of his writings were a comprehensive medical bibliography, a textbook on consumption, an analysis of motions of the heart and arteries, and various contributions to therapeutic methods, such as Young's rule for pediatric doses.

Young is noted for his textbook on physics, entitled *Lectures in Natural Philosophy and the Mechanical Arts,* first published in 1807. It contained physical explanations and engineering principles for numerous machines, structures, and natural phenomena. Some of the major contributions to science in the book were Young's modulus of elasticity, his experiments on interference, and his development of a wave theory of light.

Young made extensive contributions to *Encyclopedia Britannica*. He wrote essays on topics in physics, mathematics, languages, optics, engineering, economics, and geography. He also wrote 45 biographical pieces.

Around 1812 Young became interested in the Rosetta stone, the tablet discovered in Egypt in 1799 that contained writing in Greek, Egyptian demotics, and Egyptian hieroglyphics. By insight gained from his studies on the varying structures of languages he was able to provide the first translation of Egyptian hieroglyphics. Young published various writings on hieroglyphics, and was working on an Egyptian dictionary when he died in May of 1829 a few weeks short of his 56th birthday.

D.A.G.

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