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American Optometric Association Assists Cuban Optometrists in Exile

Emanuel Pushkin, O.D.
Coral Gables, FL

In the 1960's many Cuban refugees fled to Miami, Florida in order to free themselves from the Fidel Castro communist regime. Included were a large number of optometrists who had practiced their profession in Cuba after graduating from the optometry course at the University of Havana. Upon arrival in the United States of America, they faced many obstacles toward achieving a license to practice. In addition to the language problem, they faced state laws, including those of Florida, which required citizenship and graduation from a recognized college of optometry. As a result, some of these refugees sought employment in fields unrelated to their professional education, while others were able to work as assistants in optical and optometric locations. However, obtaining full Florida licensure was a paramount objective.

By 1968 a group of Cuban refugee optometrists had banded together to form the Cuban Optometric Association in Exile (COAE) with America Parla as President. Dr. Parla was a lady of dynamic personality and had a history of leadership in Cuba as one of the organizers of the "Colegio de Optometristas de Cuba" in the late 1940's. One of the first items on the COAE agenda was to contact the American Optometric Association (AOA) for assistance. AOA in turn notified the Florida Optometric Association (FOA) in Tallahassee, which passed on the request to its Immediate Past President Emanuel Pushkin, O.D., in Miami. That is how the Dade County Optometric Association became involved.

Optometry was not alone within the Cuban professional exiles. Others had also organized for the same purpose: medicine, dentistry, veterinary medicine, pharmacy, and nursing, as reported in research by Raul Moncarz on behalf the U.S. Department of Labor. He studied the adaptation of these occupations throughout the country and discussed the restrictions facing them between 1959 and 1969. He stated, "Cuban optometrists suffer in their professional adaptation because their Cuban training is deemed inferior, and probably is, when compared with their United States counterparts."

At the University of Miami the Department of Medicine established the Office of International Medical Education. Appointed to direct this program was Dr. Rafael Penalver, formerly of the University of Havana. This group understood the necessity of amending licensing laws governing the health care professions. Subsequently, on numerous occasions, America Parla led her contingent of lobbyists to Tallahassee where she met Edward Walker, O.D., a stalwart FOA leader, who shepherded them through the halls of the Florida Legislature. Their lobbying efforts were apparently successful as members of the Legislature were convinced of the importance of such

amendments in order to better care for the increasing numbers of foreign speaking residents. Governor Reubin Askew agreed and signed the laws in May, 1974.

Examples of changes in the Florida Statutes:

455.10 "No person shall be disqualified from practicing an occupation or profession regulated by the state solely because he is not a United States citizen.
455.11 (2) "Any person who has successfully completed, or is currently enrolled in an approved course of study …….shall be deemed qualified for examination and re-examination……..which shall be administered in the English language unless 15 or more such applicants request that said reexamination be administered in their native language."

So the stage was set for the establishment of continuing education courses for those who expected to take the State Board exams in optometry. Through the cooperation of the University of Miami's Department of Medicine and its Bascom Palmer Eye Institute, courses were given in Spanish as well as in English during the years of 1974 and 1975.

It is important to interject that while the above events were taking place in Miami, the Pacific University College of Optometry in Oregon offered courses leading to the O.D. degree, which appealed to a group of Cuban refugees in Miami. As a result, four attended classes there and were able to apply for licensure in Florida.

We have been assisted in gathering information for this report by one of the original group of Cuban optometrists in exile: Felix M. Mondejar, O.D., who now at the age of ninety-six has a fantastic memory of these events. Following is a segment of a treatise submitted by him:

"Instructors were Dr. Rosa Revuelta, who at the time was teaching at the Indiana U. School of Optometry, Dr. Saba Millares and Dr. Charles Pappas. This course was offered in Spanish. The above mentioned courses were offered at the University of Miami Bascom Palmer Eye Institute. They commenced in the summer of 1975 with 56 students. Four hours four times a week. Throughout the classes, as things became more challenging, several students dropped out. This was due to the fact that some had families to support, had full time jobs, and the course was very expensive. The class ended in September of 1976. At this time we were almost ready for the state board exams, but first we had a refresher course that was taught by Dr. Carreno, M.D., a teacher in Tallahassee, and other refresher courses by Dr. Pappas and Dr. Revuelta. All those that have had to take state board exams know that it is not always sufficient to pass. You must know how to take that type of exam.

"Here we go. February of 1977 approximately 44 of us went to take the Florida State Board Exam. It was impressive because there were over 250 candidates to take the exams. To us the exam was offered in Spanish, but the translation was so poor that many of us opted to take the exam in English. A month and a half later we got the

news: Of the initial 44 only 14 passed the exam. There was another exam in the summer of the same year. Four of them passed it then. Another exam was offered in February 1978, by this time we had 26 Cuban OD's that had gone to the Florida State Board and were licensed to practice the profession in the State of Florida."

Dr. Mondejar continues by noting that an additional four passed the Boards at a later date, making a total of 30. He further comments, "It is a great pleasure of the writer to mention that of those 30, six of them were women."

These newly licensed optometrists immediately became active in organized optometry by joining the Dade County Optometric Association, FOA and AOA. Within a short time, three of their leaders were elected to the presidency of DCOA: Drs. Gerardo Palmeiro (1980), Mario Perez, and Felix Mondejar (1992). They and their Cuban colleagues joined with the FOA Legislative Committee in trips to the State Capitol to influence the legislators and defend our profession upon the proposal of new legislation.

Acknowledgements

Thanks to Raul Moncarz, Ph.D., for access to his study "Effects of Professional Restrictions on Cuban Refugees in Selected Health Professions in the United States 1959-1969".

Thanks to Felix M. Mondejar, O.D., for his personal reflections: "The Exodus and Saga of Cuban ODs After Communism".

The Rise and Fall of Caecanometry

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Abstract
Caecanometry was a short-lived visual fields examination technique first described by Ingwold Davidsen, O.D. in 1949. The technique was based upon the unusual premise that the blind spot constricted in size when certain types of infection were present above the level of the shoulder blades. The Davidsen-Wottring caecanometer was patented as a device for plotting blind spot size and shape. Caecanometry was practiced mainly in the southern U.S., dying out in the middle 1970s.

Key words: *Caecanometry, caecanometer, visual fields, blind spot.*

Introduction

Over the years optometrists have developed many techniques for diagnosing and treating vision problems. Some have proven useful, but others have been based more upon wishful thinking than hard data and were eventually abandoned. Caecanometry is one of the latter. Caecanometry is an interesting topic if for no reason other than its history within optometry, but it also had an unusual main premise, namely, that vision is present within the physiological blind spot and can be used as an indicator of disease outside the eye. Practitioners of caecanometry tried to develop theories to justify their central premise, but the technique was doomed from the start. Our purpose is to present a short history of caecanometry.

What is Caecanometry?

Caecanometry, a term coined by Charles McQuarrie, a Florida optometrist, literally means to measure the blind.[1-3] Caecanometry was originally developed by Ingwold (or Ingwald) Davidsen, O.D., and he published a description of the technique in *The Optometric Weekly* in 1949.[4] (The term caecanometry was not used in that paper.) According to an editor's note at the beginning of the paper, Davidsen was a graduate of the Los Angeles School of Optometry, or LACO (now Southern California College of Optometry, or SCCO), and he practiced first in Pasadena, California, then later in Laguna Beach. (Davidsen eventually moved to St. Petersburg, Florida.[5]) For a while he was a research assistant at the Smithsonian Institution, and he also was said to have studied with Ray Morse Peckham, an early author of books on optometry.[6]

Davidsen's original caecanometry paper describes his conclusions regarding roughly 2000 patients for whom he had measured the size and shape of their blind spots. He made a number of rather extraordinary claims. First, Davidsen stated that the blind spot as measured during a monocular visual field examination could be

smaller in size than what is considered a “normal” value in the literature, and that a small blind spot occurred in the presence of certain types of infections. This statement implied that vision was present within the blind spot, and he termed the phenomenon a “constriction” of the blind spot. Second, Davidsen stated that a constricted blind spot regained its normal size once the source of the infection was removed. Third, Davidsen claimed that a constricted blind spot was an indicator of disease above the level of the shoulder blades (clavicles). The type of disease was what he termed a “draining infection” of the teeth, sinuses and/or tonsils. In fact, in the case reports he presented, the size and shape of the constricted blind spot was used to pinpoint the source of the infection. Finally, Davidsen suggested that decreases in visual acuity and visual performance were related to blind spot constrictions.

The Davidsen technique of plotting the blind spot differed from standard visual field plotting methods. The limits of the blind spot (and the visual field in general) are typically plotted by moving the target from non-seeing to seeing retina.[7,8] Davidsen claimed that more repeatable results could be obtained when the target was moved in the opposite direction (seeing to non-seeing), and this method of plotting blind spots became the standard for caecanometry.

Figure 1 shows two examples of blind spots “charted” (the caecanometrists’ term) by Davidsen, as reported in his original paper. The instrument used for the charting was either a stereocampimeter or an early version of the caecanometer. Both of these instruments had a viewing distance of 20 cm, and, according to Davidsen, a “normal” blind spot plotted at this distance was an oval measuring 25 mm vertically by 17 mm horizontally. In each drawing the normal blind spot is the large oval (for reference purposes) while the actual constricted blind spots plotted by caecanometry are indicated by the shaded areas. Davidsen calculated blind spot area very simply by multiplying the length of the blind spot by its width, essentially determining the area of the smallest rectangle into which the blind spot would fit.[9] A normal blind spot thus had an area of 17 x 25, or 425 square millimeters. Constricted blind spots had smaller areas, calculated in the same manner, and from this number Davidsen calculated a percentage constriction relative to the area of the normal blind spot.

The upper drawing of Figure 1 shows blind spots constricted by 92% right eye and 82% left eye. This patient was reported to have a sinus infection. Once the infection cleared up, the blind spots were reported to have returned to normal size. The lower drawing of Figure 1, with the truncated or flattened base, was reported to be associated with infections of the tonsils and that the blind spots returned to normal size after a tonsillectomy.

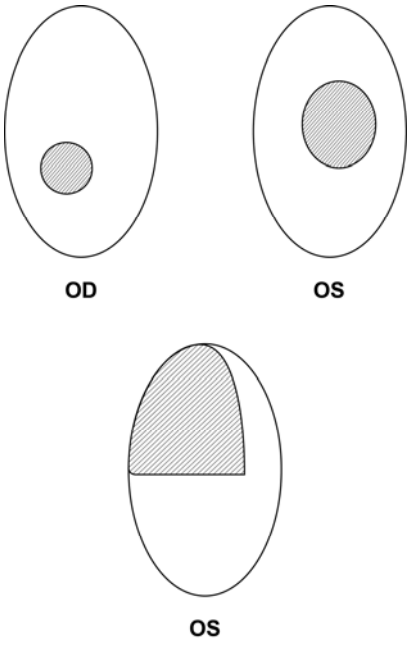

Figure 1. Constricted blind spots, re-drawn from Figure 1 of Davidsen.[4]

The drawings of Figure 1 represent what caecanometrists considered to be typical caecanometry findings.[10,11] In general, sinus infections tended to cause constrictions that were approximately equal in each eye. In addition, the amount of constriction tended to vary from day to day and with exercise. Dental involvement tended to create constrictions that were unequal for the two eyes, and the amount of constriction was less variable over time. Irregularities or bumps in the plotted blind spot were also supposedly to be related to dental problems. Some caecanometrists claimed to be able to use these irregularities to identify specific quadrants of the mouth where a dental problem was located.[12] Finally, flattening of the sides, top or bottom of the blind spot was said to be associated with tonsillitis. The side of the throat having more infection coincided with the blind spot showing more constriction.

Davidsen recognized that accurate measurement of the blind spot required good fixation by the patient, with minimal distraction. He eventually developed, along with inventor LeRoy (or Le Roy) Wottring, a new instrument, the caecanometer.[11,13] The caecanometer was distributed by the Diagnostic Instrument Company (DICO) of Muskogee, Oklahoma, and this company was apparently owned by Lin Moore, O.D., an early advocate of caecanometry. The company was incorporated in 1965, its registered agent was Therese O. Moore, and Lin Moore's office address was listed as the company's business address.[14,15] Figure 2 shows a caecanometer. This particular instrument belonged to Chester Pheiffer, Ph.D., O.D., a faculty member of the University of Houston College of Optometry (UHCO) from 1954 to 1978 and dean from 1961 to 1978.[18,19] The caecanometer had two unique features. One, the fixation target consisted of a small light source at the end of a long, narrow tube. This allowed for relatively repeatable alignment of the patient's line of sight within the device. Two, the

target used for plotting the blind spot was a small steel ball, the position of which was controlled by a magnet on a movable arm located beneath the surface of the instrument. The examiner was able to move the ball around on the surface of the recording sheet, but the patient could not see the examiner's hand, removing a major source of distraction when plotting a visual field. A number of ball diameters were available, with 1.59 mm (1/16 inch) the standard for blind spot chartings, while smaller ball diameters (1.0 mm, 0.79 mm, and 0.5 mm) were recommended for evaluation of glaucoma or other ocular pathology.[11] It was suggested that measurement errors with the caecanometer were on the order of ½ mm.[1]

Figure 2. A Davidsen-Wottring caecanometer. LeRoy Wottring of the Wottring Instrument Company patented this device in 1951.[13] Wottring also invented the Rotoscope[16] and Troposcope[17], instruments used for diagnosing and treating binocular vision problems.

An unusual feature of caecanometry was the recommendation that it be performed early in the day, before a patient had performed much physical activity.[4] This later evolved into what became known as a "basal charting" or "basal conditions."[11] A patient was to be charted as close to awakening in the morning as possible. The patient was advised to "dress slowly, do absolutely nothing to exert themselves, do not brush their teeth, to abstain from food, beverages, or smoking, and to not use their eyes any more than they absolutely must. If patients had exerted themselves in reaching the doctor's office, they should be given a period of rest before the charting is taken."[11]

Maybe the oddest feature of all was the use of bubble gum for diagnostic purposes when dental problems were suspected.[11,12] This became known as the "bubble gum basal" or 'basal bubble gum."[20-22] After basal testing was completed, the patient was given two large sticks of gum (or dental paraffin) to chew vigorously for *exactly* 15 minutes. Charting was then repeated. If the patient had dental problems, then the plotted blind spot was supposed to show even more constriction (Figure 3). The greatest effect was said to occur 14 to 17 minutes after beginning the act of chewing. After 17 minutes the body's immune mechanisms would begin to negate the toxin-releasing effects of chewing.

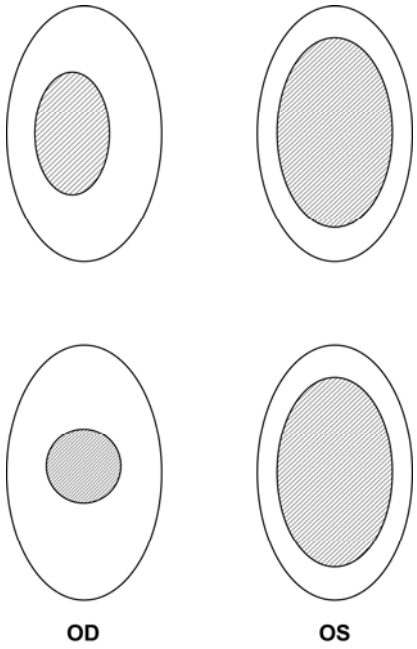

Figure 3. Results of a "bubble gum basal" provocative test for dental problems, as described in the caecanometer instruction manual.[11] The shaded areas in the upper drawing are the charted blind spots with basal testing. The lower drawings show the blind spots after 15 minutes of vigorous chewing of bubble gum. The right eye blind spot is further constricted, suggested a dental source for the blind spot constriction, probably on the right side of the mouth.

Monroe Hirsch and Max Schapero, from Los Angeles College of Optometry, tested Davidsen's claims soon after the description of the technique was initially published.[9] In the introduction to their paper, Hirsch and Schapero mentioned that they were aware of "the absence of any physiological reason for infection causing what amounts to an increased sensitivity of certain retinal areas." They also stated that they were aware that the shoulder blades were an unphysiological line of demarcation for sites of infection, and that Davidsen's field plotting techniques were different from normal. They compared white blood cell counts to blind spot size in a population of optometry students and found that, if anything, blind spot size might be increased when an infection was present.

Pheiffer eventually responded to Hirsch and Schapero in an article published in the *Journal of the American Optometric Association (JAOA)* in 1959.[23] Pheiffer claimed that the subjects studied by Hirsch and Schapero had very small blind spots before the study was begun, so either most subjects had focal infections or there was a difference in the measurement technique between their method and that recommended by Davidsen. However, Pheiffer's claim of small blind spots was most likely the result of a misinterpretation of the method used by Hirsch and Schapero to present their data. Hirsch and Schapero normalized their results so that a normal blind spot was 100 arbitrary units in size. Pheiffer interpreted this number to be an area of 100 mm^2, a value much smaller than the "normal" area of 425 mm^2 mentioned earlier. Hirsch and Schapero's paper was the only one ever published that actually tested the claims of caecanometry. The technique otherwise appears to have been ignored by vision researchers.

Pheiffer's 1959 paper presented additional caecanometry data collected by Davidsen and by Guy Fenton, O.D., of Kansas City, Missouri. These data showed that the constricted blind spots of patients with sinus or dental problems returned to normal size after medical treatment. He also presented a graph based upon data from Davidsen showing the relationship between antibiotic treatment and the amount of blind spot constriction. A fairly linear relationship was found, with every injection of antibiotic decreasing constriction by about 10%. Pheiffer suggested that caecanometry could be used to determine the amount of antibiotic needed for a given patient.

Caecanometry's Zenith

A few case reports on caecanometry were published in the 1950s and early 1960s.[24-27] McAlister, Pheiffer and Grosvenor presented a post-graduate course related to caecanometry at the American Academy of Optometry meeting in 1961.[28] The high point occurred in 1963, when the April issue of the *JAOA* was devoted to the topic, with articles from many of its proponents.[1,5,29,30] However, not long after this issue was published, David Harrington, M.D. (the author of the textbook *The Visual Fields* and one of the developers of the Harrington-Flocks visual fields screener[31,32]) published an editorial in the *American Journal of Ophthalmology* that referenced the April, 1963 issue of *JAOA*.[33] Harrington was extremely critical of caecanometry, stating that it was based "on spurious assumptions and inadequately controlled experimentation." He also termed it a "fad" and that the only person who stood to gain from the procedure was the "optometrist who is gullible enough to believe in its value."

Pheiffer published a rebuttal to Harrington in 1964,[34] essentially accusing organized ophthalmology of trying to co-opt the technique of caecanometry for themselves. At the same time, Pheiffer reiterated his complaints about the work of Hirsch and Schapero. Yet, caecanometry was now on the decline. Only four more articles were to appear in the optometric literature, one by Lin Moore in the reports of the 1964 International Ophthalmic Optics Congress,[35] two in the journal *Contacto* by Joseph Haefeli, O.D., of Greeley, Colorado, published in 1965 and 1968,[22,36] and the last a two-part article by Lin Moore, published in the *New England Journal of Optometry* in 1971.[12,37] Haefeli's articles are mainly case reports relating to the use of

caecanometry for contact lens patients. The articles by Moore attempted to justify caecanometry based upon the underlying physiology and pathology. In addition, Moore's articles described the technique of caecanometry and its use for diagnosis as practiced at UHCO.

The Geography of Caecanometry

Caecanometry appears to have been restricted primarily to optometrists in the southern and western United States. UHCO was one of its centers in the 1960s and 1970s, and Chester Pheiffer was one of its leading proponents. Caecanometry was taught as part of the curriculum at UHCO by Pheiffer at least until the early 1970s, and Pheiffer would occasionally ask students to perform caecanometry on selected patients. A local newspaper from a small town near Houston reported that Jerome McAllister, O.D., taught a seminar on caecanometry in Oklahoma in 1966.[38] UHCO was also the site of at least three caecanometry symposia,[21,34,38] and Pheiffer appears to have been the moderator or leader of one of the symposia discussions. Partial transcripts of the third symposium exist,[21] and this was given to optometry students as material for study when caecanometry was taught. It is probable that Pheiffer was also preparing a book on caecanometry.[20,37] A source of Pheiffer's interest in caecanometry may have been Samuel Renshaw, a psychologist at The Ohio State University (OSU). Pheiffer was one of Renshaw's graduate students,[39] and Irving Bennett, O.D., in an editorial in the *AOAJ*, stated (without explanation) that Renshaw was the first person to recognize caecanometry.[40] Moore mentioned that Pheiffer was also an assistant of Davidsen at OSU.[37] Davidsen[4] stated that the "head of an optometry school located at one of our great universities" told him that his caecanometry ideas were not worth pursuing. If this happened while Davidsen was at OSU, then this person would have been Glenn A. Fry, Ph.D., head of the OSU College of Optometry at the time.[41]

Caecanometry's Rationale

Caecanometrists accepted as fact that no photoreceptors were present within the optic disk, and they were greatly concerned with providing a scientific explanation for their discoveries. They offered a number of explanations for the constricted blind spots they measured, including the Pulfrich effect and afterimages.[37] The mechanism that was finally accepted by most caecanometrists was that infections above the clavicle somehow caused increased scatter of light within the eye.[1,37] Their evidence was a paper by Wolff and Morandi[42] showing that the most likely explanation for occasional claims of light detection within the blind spot was scattered light. Although increased scatter could have possibly been a mechanism, the caecanometry findings of unusually shaped blind spots (such as the truncated blind spot supposedly related to infection of the tonsils) could still not be explained.

A phenomenon conceivably related to the results claimed for caecanometry is that of "filling-in" of the blind spot. When a person views the world with only one eye, the blind spot is not perceived as a hole or defect in the visual field. Rather, the area of the blind spot appears similar to the surrounding visual field. This topic has been the subject of a relatively large amount of recent research.[43-45] Filling-in commonly occurs when there are contours on each side of the blind spot. For example, a horizontal line

that is larger than the blind spot but is positioned such that it extends across the blind spot appears as an unbroken line. However, this stimulus situation is very different from that of caecanometry, so it is unlikely to account for caecanometrists' results. It is also difficult to imagine how changes in the process of filling-in could be related to disease only above the level of the shoulder blades.

Where, then, did the caecanometrists go wrong? Probably the simplest explanation is that mentioned by Harrington, a lack of proper experimental controls. The case reports presented by caecanometrists were highly selective, and cases where caecanometry was not predictive of disease were not published. There are hints of this problem in the caecanometry literature. Pheiffer mentions in a conference transcript[21] that a flattened blind spot is "supposedly found in approximately 60% of severe tonsillar involvement and is flat with tonsils in general, maybe 20 to 30% of the time." He also suggested that there was either a relatively large amount of error involved in measuring blind spot size or that blind spot size fluctuated rapidly. Kensett[5] stated that "One of the real perplexing problems involving the use of the caecanometer arises when a patient with severe symptoms returns with a report of negative findings from the local doctor. Difficult as this is to handle, it is not a situation unique to those who use a caecanometer." (Harrington, in his highly critical editorial concerning caecanometry, mentions this same statement.) Kensett also suggested that caecanometry can be used "with an adequate degree of reliability."

About all that is left of caecanometry today are the journal articles and the caecanometer. This instrument occasionally shows up for sale on the Internet, and a few are probably gathering dust in optometrist's offices and museums.

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The Initiation/Origins of The Elite School of Optometry (part of the fine SankaraNethralaya Program) in Madras/now Chennai, Tamil Nadu State, India

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Quoting Wikipedia: "Indira Priyadarshini Gandhi née: Nehru; (19 November 1917 – 31 October 1984) was the prime minister of the Republic of India for three consecutive terms from 1966 to 1977 and for a fourth term from 1980 until her assassination in 1984, a total of fifteen years. She was India's first, and to date only, female prime minister."

In a sense, from the writer's point-of-view, the origin of the Elite School of Optometry can be dated quite precisely. This occurred in the early hours of November 1, 1984! It was then that I received a call from then Berkeley Chancellor Ira Michael ("Mike") Heyman. I lifted the telephone and heard Mike's booming voice literally shout, "Enoch you are going to India!" I responded, "Mike, you are drunk, it is 3 AM!" [It should be stated that I knew Mike (sort-of) from high school days. I was in the class ahead of his at the Bronx High School of Science. He never graduated Bronx Science, because his parent's transferred him from that high school to a private high school in Manhattan.] He then shouted, "Enoch, you have two female students in India; Indira Gandhi has been assassinated, there is wide-spread violence; we don't know where they are; and YOU need to bring them home promptly!" God-bless him, now I really thought he was drunk. We had NO students in India!

There was no convincing Mike on this issue. A week later, a seemingly miraculously arranged Indian Visa in my pocket, my arm swollen with shots, I found myself on a plane to New Delhi. There, I was told I would be greeted by "our man in New Delhi" (who and where?)...I got off the plane in New Delhi in the early hours of the morning amongst a literal sea of people shouting and milling about. Amazingly, a gentleman appeared at my side about 15 minutes later...how he knew who I was in that crowd, I shall never know? (I suspected this was to be "my quest," that is, a Cervantes-like series of events!) After he introduced himself, I asked him, "Where are these two ladies? He answered, "We don't know?" At that moment I felt like "Dorothy" dropped into the middle of Kansas without Toto.

It turned out later that these two ladies were alumnae (!) of our School who were then participating in a very fine Berkeley program organized for graduates of professional school programs. (Sometime, later I was placed on the advisory board of

that fine program! In turn, it was managed on a day-to-day basis on campus by Dr. David Grisham's former wife.)

After a day of settling in, a visit to the office of University of California Berkeley in New Delhi, a visit to the very beautiful US Embassy, a trip to the USAID office, and other appropriate agencies of the Indian Government and the UN, I asked our chap where I should look further for these ladies. He gave me a tentative and lengthy(!..50+) list of probable venues. (In candor, he should have known where his students were at any given time!) As noted, the list provided was long. He suggested I start my search in the Deccan (the giant central high plateau in mid-northern India). I followed his advice (I had no other guidance). After failing to find them at a number of locations, and with no hint as to where next to look, I visited a small optometric school in Hyderabad which was on my list. Frankly, that institution was less than impressive. At the office, I asked about the ladies' whereabouts and whether they had seen/encountered them there? I was told they never heard of them! Trying to be nice, the secretary of this institution told me they were having a cocktail party that evening; she invited me to come. I figured, why not? Actually it was a very pleasant affair under the stars. On my arrival, I noticed across the field someone who looked familiar! It was a young lady literally wearing a sari made of silver woven into a cloth...truly, she looked lovely! It was one of the two individuals I was sent to "rescue". Amazing! This Don Quixote went up to her and indicated that he had been sent to bring her home by the Chancellor/University. She was most polite, but she declined to be rescued! I asked where I might find the other young lady. She indicated that she was on the beach in Kerala (a truly lovely state/province in South-West India). Apparently, both ladies were well, and enjoying their Indian program. So much for my quest! Now what?

My former graduate student, post-doc, laboratory associate, and long-time friend, now Prof. Vasudevan "Vengu" Lakshminarayanan, School of Optometry, University of Waterloo, had recently finished a very fine dissertation under my supervision. I was proud of his work and I thought it would be nice if I visited his dad, Professor Vasudevan (now deceased) in Madras. My goal was to describe his research to his dad, a very distinguished mathematician. His dad had started and headed India's Institute of Advanced Mathematical Studies, "Matlab," in then Madras (something like U.S. programs at Princeton).

At the time, I was unaware that there had been discussions between Vengu, his dad, and Dr. S.S. Badrinath (Head of the SankaraNethralaya, a major private center for eye-care located on College Road in then Madras). They, and a Mr. Shah, head of the Elite Optical Company, had apparently discussed the opening of an optometry school under the aegis of the SankaraNethralaya program. Apparently, they had planned to seek my cooperation in such a venture. Vengu suggests he had discussed this with me, but I just don't remember any such discussions prior to my trip to India. (I am not sure this makes much difference in the narrative in any event.) Anyway, I came to Madras (now called Chennai) to see his dad for the stated purpose. When I met Dr. Vasudevan, we had a most pleasant talk together about Vengu's research. He, in turn, indicated that he and Dr. Badrinath wanted to speak to me on a separate issue. I was

pleased to meet them at the Taj Hotel in Chennai. There, they raised the issue of starting the School. I remember thinking that this was a fine idea, and I indicated my willingness to help in this endeavor.

I suggested that the then four-year University of California Berkeley curriculum would be a fine model for the development of such a school. I also served as the Chair of the equivalent of the first Curriculum Committee of the Elite School. Two buildings were built on the new SankaraNethralaya Campus dedicated to the Elite School. Both an academic building and a rural eye hospital (clinics) building were constructed on the campus located at the foot of St. Thomas Mount, not far from the Madras Airport. I donated my personal library to the School in order to initiate, and to further the academic program and hoped-for research program in support of the academic effort.

Additionally, in the attic of "Old" Minor Hall there was located and available a large collection of surplus used, but still serviceable, clinical equipment. After discussion with the faculty, the fire marshal, and campus personnel, I offered to forward a good bit of that equipment to them for that new clinic. And, I also offered to donate my personal ophthalmic library to the school to help initiate that academic institution. I urged that books in that library should be made available on inter-library loan to other optometric institutions in India as a resource for future development. When, I returned home, I asked ophthalmic wholesalers in California if they also had added equipment that they would be willing to donate to this cause. Quite a number of them participated! Since the volume of the equipment exceeded the immediate needs of the Elite School, some part of it was also donated for a clinic at the Aravind Eye Hospital in Madurai (the late Dr. Venkataswamy was the then Director), some went to an optometry school in Bombay (later called Mumbai) headed by the now deceased Mr. Balliwalla, a British trained optometrist; and some was sent to another School in Mexico City. (I vividly remember the latter shipment was made in a large truck labeled, "Pork Bellies.") After discussions with a Vice President of the American President Line Shipping Company in Oakland, the equipment sent to the Indian Schools was transferred free of charge. Thus, various people/groups helped to make possible the creation/enhancement of these clinics and schools.

It is important to note that today the Elite School maintains a creditable research program, it recently increased its enrollment, and a few years ago it entered into a cooperative agreement with the distinguished Birla Institute for Technology and Science, located in Pilani in Rajasthan State to provide B.S. Optom., M.S., and Ph.D. Degrees at the Elite School, Tamil Nadu State, to its able students. I am so very proud of their achievements!

And, yes, our two worthy alumnae returned home safely!

Louis H. Jaques, Sr., (1888-1983) Optometric Leader, Lecturer, and Author

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Abstract

Louis H. Jaques, Sr., (1888-1983) had various leadership roles in optometry, but was best known for his advocacy of various testing procedures such as the incorporation of blur points in fusional vergence testing and for his casual, practical, and anecdotal style of writing and lecturing. In addition to his three books, his best known writings were in his regular column in Optometric Weekly entitled "A Father's Advice to his Sons." This paper provides a brief biographical sketch and description of the contents of his books.

Key words: *fusional vergence testing, optometry books, optometry history, Southern California College of Optometry.*

Louis Harold Jaques, Sr., had a long and notable career in optometry. He was born in Nebraska on February 4, 1888.[1] In 1911, he graduated from the Los Angeles Medical School of Ophthalmology and Optometry, the school that would become the Southern California College of Optometry (SCCO).[2,3] He practiced for many years in southern California, most of those years in Los Angeles. Early years in his practice experience, he learned that even though many people didn't like wearing glasses, they did "like what the glasses did for them, and more important, what was represented in them – the skill of the prescribing doctor."[3]

Jaques had a long association with the Los Angeles School/College of Optometry (other names of the school before being known as SCCO), serving as a faculty member from 1928 to 1930 and as a member of the Board of Trustees from 1933 to 1942 and from 1947 to 1957.[4] He was the first recipient of the SCCO Distinguished Alumnus of the Year in 1980.[3] He was president of the Los Angeles Association of Optometrists in 1927 and president of the California Optometric Association in 1930 and 1931.[3,5]

Jaques was a frequent contributor to optometry periodicals. In the late 1940s and throughout the 1950s, he had a regular column in *Optometric Weekly*, known as "A Father's Advice to his Sons." In a casual conversational manner filled with anecdotes from his personal experience, he offered advice on numerous topics, from testing and treatment procedures to patient and practice management. Later he had a column entitled "Dad's Point of View" in *Optometric Monthly*.

Jaques published many papers in the *Journal of the American Optometric Association* (JAOA), the first being in 1930 and the last in 1972. An "about the author" feature published with his last JAOA article said: "Louis Jaques Sr., more affectionately known as 'Dad' to thousands of optometrists throughout our nation, is a loved and respected elder statesman of optometry. He has been 'Dad' to the profession ever since his column 'A Father's Advice to his Sons' appeared in Optometric Weekly. His wisdom, his skill, his inquisitive mind and his love for the profession of optometry shine through a sparkling wit during his many demand performances as teacher and lecturer…."[6]

One of the various testing procedures that Jaques promoted frequently in his writings and lectures was the observation of blur points in fusional vergence range testing.[7] He advocated the use of small letters as the target for base-in and base-out prism vergence testing so that blur points could be obtained. He also recommended low illumination for near cross cylinder tests.[3]

Two of Jaques' children, Louis Jaques Jr. and Bruce D. Jaques, also became optometrists. Louis Jaques Sr. received honorary D.O.S. degrees from Northern Illinois College of Optometry (1929) and Los Angeles College of Optometry (1959), and the Apollo Award from the American Optometric Association (1979).[3] He died on August 14, 1983, in Los Angeles.

Applied Refraction

Louis Jaques Sr. published three books. The first was *Applied Refraction with Special Reference to the Blur-out Point Technique* (xv + 123 pages) published in 1934 with George Crow as second author. In the introduction, Jaques noted that he was led to the use of blur points in vergence testing and work on the analysis of accommodation and convergence because of the feeling that for several years, "we did not carry our near point analysis far enough." (p. iv) The first chapter explained the use of blur points in prism vergence testing. Jaques and Crow recommended the use of a blur out rather than the first perceptible blur because they thought that the blur out point was easier for the patient to recognize. Next the authors examined the nature and diagnostic value of subjective refraction, static retinoscopy, dynamic retinoscopy, dissociated phorias, fusional vergence ranges, cross cylinder tests, and relative accommodation tests. Then they described the effects of plus and minus lenses and fatigue on the findings on those tests. Following that the authors discussed the analysis and treatment of accommodative insufficiency and convergence insufficiency. In the last chapter they provided a brief description of some orthoptic exercises that could be used in such cases. One review of the book said that it would "make a most welcome addition" to the library of "the advanced thinker in optometry."[8] Another review lauded the authors for "their lucid presentation of a practical method for handling the most troublesome group of cases which exist in Optometry."[9]

Fundamental Refraction and Orthoptics

Jaques' second book, Fundamental Refraction and Orthoptics (xii + 209 pages) was published in 1936. He dedicated the book to the importance of spectacles and

orthoptics. He said: “My own life did not begin until I was fitted with glasses, and Orthoptics had rendered normal my Visual Function. At the age of 19,…[c]lose work was impossible, and my eyes were examined….The diagnosis was Amblyopia, Astigmatism, Hypermetropia, Hyperphoria, Cyclophoria and Esotropia. The training period…brought me to 20/15 Vision and Orthophoria with Spectacles…” (p. iv)

After an introduction, Jaques discussed case history, pupil testing, version tests, near point of convergence, amplitude of accommodation, and distance phorias and fusional vergences. Next there was material on static skiametry, dynamic skiametry, and subjective refraction written by Ivan S. Nott (pages 41 to 77). Then Jaques discussed base-in and base-out vergences, near phorias, relative accommodation tests, cross cylinder tests, visual fields, and stereopsis testing. After a discussion of normal expected findings, he covered various orthoptic training procedures. The book closed out with discussion of presbyopic adds, a 1935 lecture on blur-out point tests, and two contributions by two other authors, “A study of visual efficiency,” by George A. Parkins, (pages 194 to 207) and “The attention factor,” by H. Ward Ewalt, Jr. (pages 207 to 209). A review of *Fundamental Refraction and Orthoptics* said that “…the difficult cases are chiefly those involving discomfort at near…The author cuts through much…of the theoretic and philosophic encrustation that has impeded development in this field and offers simple methods of analysis and treatment.”[10]

Corrective and Preventive Optometry

Corrective and Preventive Optometry (vii + 190 pages) appeared in 1950. The first part of the book presented information on various testing procedures and on Jaques’ views on heterophoria and refractive errors. Next Jaques presented his ideas on training visual skills. He discussed eye movement training, accommodative facility training, and fusion training. For fusion training he emphasized the use of cheiroscopic tracing because it involved hand-eye coordination. He attributed the idea of the importance of using the hands in fusion training to E.E. Maddox. There was also a chapter devoted to “Some Ideas on Strabismus” in which the nature of strabismus and various training and treatment procedures were discussed. One procedure for strabismus which Jaques described was what he called the half cover technique, in which half of each spectacle lens was covered to encourage alternation as a stage toward elimination of the strabismus. Five appendices at the close of the book included miscellaneous lectures, one being material on the relation of vision and reading written with his son Louis Jr. and another being on stereoscope testing. Reviewers of the book noted that Jaques “respects precise correction of refractive faults where indicated, but thinks that in many cases visual skills training…must be added if the full possibilities for improvements in comfort, efficiency, and general well-being are to be realized.”[11]

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A Trio of Short Vignettes on Optometry History

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Handling a Movie Star

Dr. Harold Blinder (Pennsylvania College of Optometry '43) had his optometric practice in Manhattan. Because of its unique location at midtown Manhattan, he was tapped for optometric services by a variety of famous and not-so-famous entertainment personalities. One particular instance sticks out his mind and he told the tale at a recent Southwest Retired Optometric Luncheon.

It was 1962 and Dr. Blinder got a call from Arthur Penn, who was the director for a movie called "The Miracle Worker." It starred Ann Bancroft and Patty Duke. According to Harold Blinder, Mr. Penn wanted to know if "I knew what eyes blinded by scarlet fever or meningitis looked like" so he could make the star of the movie about Helen Keller look authentic. A strange question but Harold promptly said "Of course. Come over to the office and I shall show you."

Long story made short, Director Penn came to the office and Dr. Blinder showed him pictures of blind eyes and together they decided on the look they wanted. Helen Keller's corneas were severely scarred. Contact lenses were designed for actress Duke and she was made to look authentically blind. The lenses were full scleral ones and they were not the easiest lenses to insert and remove.

To solve the problem one of Dr. Blinder's faithful (and talented) staff attended all of the close-up shoots for the picture in order to be on hand as the official "contact lens inserter." That worked well until the director decided to shoot some close up scenes on a Memorial Day weekend, an official holiday; Blinder's staff was not in town.

Harold to the rescue! The film shoot was done in a large warehouse in New York City, made to look like a room. All day long while scenes were shot and re-shot, Dr. Blinder baby-sat his movie star patient and, of course, became integral part of an Academy Award winning film. Too bad but he did not get any film credits.

An addendum to this story is a conversation I had with Mel Wolfberg, former President of the American Optometric Association and President of the Pennsylvania College of Optometry. Dr. Wolfberg recalls a dinner held in New York City in the 1960s that was sponsored by the Better Vision Institute. Wolfberg was seated at the table with Helen Keller, her sister and her secretary and watched as the entire conversation between the three including his verbal remarks were put into sign language. He remarked that Ms. Keller had a perpetual smile on her face and (to be sure) a halo around her head.

Getting Vision Testing for Driver License Renewals

Dr. Martin L. Kalmanson, and 88-year old retired optometrist from Brooklyn, tells about the events that led up to revising or adding mandatory vision testing to New York motor vehicle laws. It was in the 1960s and here is his story: "I was president of the Kings County (Brooklyn) Optometric Society when the members demanded that something be done about the poor situation regarding the issuance of driver licenses by New York State.

"We involved a man who had recently lost his vision but still had a legal license to drive. We invited him and a member of the local press to come to the Motor Vehicle office in downtown Brooklyn on Fulton Street. The following ensued: he tapped his way into the office followed by several of us. In a loud voice he announced that he had come to have his license renewed. One of the clerks responded with a shout that he should proceed to window #5. He replied that he was blind. One of the clerks came out from behind the counter and led him to window #5 where another clerk helped him by filling out the proper form. When asked to sign the form, he reminded the clerk that he was totally blind whereupon the clerk guided his hand holding a pen so that he could make his mark with an X.

"After a few minutes, he was issued a new driving license and the clerks cheerfully wished him good-bye. Of course, this was possible because the law at that time did not require a vision test for renewal. Indeed, one could renew through the mail!

"After due publicity in the news media, we in Brooklyn believed the legislature was so moved by this incident to agree with the New York Optometric Society that passing a vision test must be a requirement for renewal."

Scholarships for Optometric Students in Florida

Dr. Ed Walker of Tallahassee, Florida reports an interesting happening in the early 1950's. Dr. Walker remembers when Dr. Judd Chapman, Past President of the American Optometric Association, and he visited Dr. Doak S. Campbell, President of Florida State University. As Ed recalls it, Judd asked Dr. Campbell, "What can we do to get optometry better known by the public?" Campbell promptly responded, "Get state supported scholarships for optometry."

With the help of others, Ed Walker walked the halls of the Florida Legislature and managed to get the first state supported scholarship for optometry in our nation passed. It was based upon the optometrists practicing in an "area of need". Dr. Walker said that "Bill Chapel, Speaker of the House of Representatives, stated to me that the Board of Optometry should administer the program, not the Department of Education (which administered the medical and dental scholarships). This allowed Florida to have an optometrist in each of the 67 counties in Florida. And, even more important, this, then, helped optometry later pass TPA [therapeutic pharmaceutical agent] legislation because ODs practiced convenient and accessible to our entire population."

There is an interesting story connected with the effort to get TPA legislation in the sunshine state. Dr. Walker recalls that "As an aside, after the Legislative session was over (as reported to me by Jimmy Kines, the Governor's Chief of staff), Governor Farris Bryant had prepared a veto message for the bill. Dr. Herb Stevens of Gainesville, a good friend of the Governor, was called to get in touch with Governor Bryant in Hawaii to remind him that he had helped us with this legislation by speaking for the bill in Committee. And Governor Bryant then let the bill become law without his signature."

The optometric scholarship program was discontinued when Nova Southeastern University created an optometry college in Ft. Lauderdale.

Ralph Barstow (1884-1968), Optometric Practice Management Advisor and Author of How to Succeed in Optometry

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Abstract

After a background in business and sales, Ralph M. Barstow became a practice management counselor for optometrists. He consulted in individual optometry practices, lectured frequently to optometric groups, and taught at the Los Angeles School of Optometry. His book How to Succeed in Optometry emphasized professional practice and became one of the most popular books on optometric practice management ever published. This paper presents a biographical sketch and a brief description of Barstow's book.

Key words: *optometry books, optometry history, practice management.*

Ralph Merrill Barstow worked as an advisor to optometrists for nearly forty years. He lectured frequently to optometric groups on professional optometry and practice management, and he counseled individual optometrists on the management of their practices. He was born January 2, 1884 in Binghampton, New York. In 1910, he was working in the office of the Chamber of Commerce in Rochester, New York.[1] In 1918, he was a sales manager for a company in Rochester.[2] At one time, he was a lecturer in the Extension Division of the University of Rochester.[3] Before his work with optometry, he contributed business articles and fiction works to various periodicals, including Collier's, Nations Business, and Forbes Magazine.[3]

Barstow's first professional contact with optometry came in 1928, at the request of Morgan Davis, of The Ohio State University College of Optometry.[4] It appears that shortly after that, he devoted all his time to optometric concerns, because in the preface of his 1948 book, *How to Succeed in Optometry*, he stated: "For the past nineteen years, the author has given his entire time to contact with and counseling optometrists."[5] He became affiliated with the Optometric Extension Program in 1933 and became their director of professional counseling.[6] Barstow was on the faculty of the Los Angeles School of Optometry (now the Southern California College of Optometry) from 1939 to 1955 for his expertise in practice management.[7] During some of those years, he took some of the optometry school classes "for the purpose of thoroughly acquainting himself with optometric practice as it is taught."[5]

Barstow contributed frequently to various optometric publications. In 1935, Barstow published a 46 page booklet entitled *Build a Better Practice Doctor*. It

emphasized professional practice, how to present oneself in a professional manner, and how to treat patients professionally. Barstow is particularly well known for his book, *How to Succeed in Optometry*. The first edition (276 pages) was published in 1948, and a second edition (319 pages) was published in 1959. *How to Succeed in Optometry* was one of forty books to receive multiple nominations in a survey on the most important twentieth century optometry books.[8]

Barstow received many honors from optometric organizations and institutions. He was awarded honorary degrees from the Beta Sigma Kappa international honorary fraternity (D.O.S., 1936), Chicago College of Optometry (D.O.S., 1950), and Los Angeles College of Optometry (L.H.D., 1966).[6] He was the recipient of honorary life memberships in the Colorado and Missouri state optometric associations in 1967 and in the American Optometric Association the following year.[6] Barstow died on December 1, 1968.

Barstow's How to Succeed in Optometry

The first edition of *How to Succeed in Optometry* was published in 1948. On the title page, "Professional Counselor" appears under the author's name. In the preface to the book, Barstow explained the writing style he used and the reason for it: "Textbook writing seems to have fallen largely into an impersonal and rather austere kind of composition….Perhaps it is because of the nature of the author or because of the essential humanness of the subject matter but however it may be, this textbook is deliberately presented in colloquial and friendly form." (p. vii)

Throughout the book, Barstow's emphasis is on the nature of professional practice and how to achieve it. In an introduction, he states: "…the basic tenet of professional practice is the service of humanity, represented by the highest technical development and greatest possible devotion on the part of the practitioner…It may seem odd to some, that the material rewards of such a devotion are almost on a par with the spiritual satisfactions derived from such a motivation. The public which seeks its practitioners with anxiety, senses quickly those who are consecrated to their work, who endow it with something more than deftness and dexterity – patients have a feeling that these professional services touch something far deeper in their lives than mere symptoms and superficial manifestations." (p. ix) Barstow then addressed the differences between professional practice and commercial practice in the first chapter of the book.

The remaining 22 chapters detail how to start a professional practice, analyze a community, lay out and equip an office, render services, determine and present fees, set up an appointment system, establish a bookkeeping system, organize follow-ups, establish and maintain a patient base, develop a budget for the office, set up a billing system, and other factors important in developing and managing a practice. A review of the book said that: "Rarely has a truer title accompanied a text."[9] Further, that review suggested that the emphasis on professionalism would have benefited optometry in preceding decades: "Had optometry been established upon the sound principles detailed here, she need not have struggled half a century only to find herself still

struggling to rid herself of those basically unsound practices which have so seriously retarded her progress and which still stand in the way of full recognition and success."[9]

A second edition of *How to Succeed in Optometry* appeared in 1959 published by the Illinois College of Optometry. Revisions for the second edition were based on Barstow's recorded tapes and writings along with edits and additions by members of the Illinois College of Optometry staff.

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