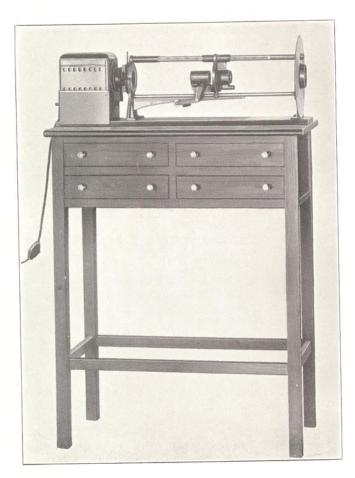
HINDSIGHT Journal of Optometry History

April, 2014

Volume 45, Number 2

Official Publication of the Optometric Historical Society



Clason Visual Acuity Meter on Mahogany Table

Hindsight: Journal of Optometry History publishes material on the history of optometry and related topics. As the official publication of the Optometric Historical Society, Hindsight: Journal of Optometry History supports the purposes and functions of the Optometric Historical Society.

The purposes of the Optometric Historical Society, according to its by-laws, are:

- to encourage the collection and preservation of materials relating to the history of optometry,
- to assist in securing and documenting the recollections of those who participated in the development of optometry,
- to encourage and assist in the care of archives of optometric interest,
- to identify and mark sites, landmarks, monuments, and structures of significance in optometric development, and
- to shed honor and recognition on persons, groups, and agencies making notable contributions toward the goals of the society.

Officers and Board of Trustees of the Optometric Historical Society (with years of expiration of their terms on the Board in parentheses):

President:

John F. Amos (2015), email address: eyedoc@uab.edu

Vice-President:

Alden Norm Haffner (2014), email address: anhaffner@msn.com

Secretary-Treasurer:

Chuck Haine (2016), email address: chaine@hainews.com

Trustees:

Irving Bennett (2016), email address: irvbennett23@gmail.com

Jay M. Enoch (2014), email address: jmenoch@berkeley.edu

Ronald Ferrucci (2017), email address: rferrucci@juno.com

Morton Greenspoon (2015), email address: drmort@mac.com

Alfred Rosenbloom (2015), email address: aarlvpro@sbcglobal.net

Bill Sharpton (2017), email address: sharpton@windstream.net

The official publication of the Optometric Historical Society, published quarterly since its beginning, was previously titled:

Newsletter of the Optometric Historical Society, 1970-1991 (volumes 1-22), and Hindsight: Newsletter of the Optometric Historical Society, 1992-2006 (volumes 23-37). Use of the current title, Hindsight: Journal of Optometry History, began in 2007 with volume 38, number 1.

Volumes 1-42 are available online at:

https://scholarworks.iu.edu/journals/index.php/hindsight/issue/archive.

OHS website: http://www.aoafoundation.org/historical-gems/

On the cover: Clason Visual Acuity Meter patented by optometrist Milo B. Clason in 1916 and marketed by Bausch & Lomb. Photo from an undated Bausch & Lomb instruction manual for the projector.

HINDSIGHT: Journal of Optometry History April, 2014

Volume 45, Number 2

Editor:

David A. Goss, School of Optometry, Indiana University, Bloomington, IN 47405, dgoss@indiana.edu

Contributing Editors: Jay M. Enoch, 5537 106th Avenue NE, Kirkland, WA 98033-7413, jmenoch@berkeley.edu Irving Bennett, 5551 Dunrobin Drive, #4208, Sarasota, FL 34238

TABLE OF CONTENTS

Journal subscriptions are registered by joining the Optometric Historical Society. The cost of an institutional or library subscription is the same as for personal membership.

Manuscripts submitted for publication should be sent to the Editor at the email or postal address above. A Word document attached to an email message is the preferred means of submission. Paper copy submissions sent by postal service will also be considered.

OHS News

OPTOMETRIC HISTORICAL SOCIETY

Affiliated with Optometry Cares – The AOA Foundation

243 North Lindbergh Boulevard

St. Louis, MO 6314

2013-2014 ANNUAL REPORT

The Optometric Historical Society (OHS) had another busy and productive year. The affiliation of OHS with Optometry Cares – The AOA Foundation, since it was instituted in 2011, continues to be successful. As approved by the OHS Board of Trustees in 2011 efforts continue to move forward to place OHS under Optometry Cares - The AOA Foundation. These changes were made necessary as a result of financial advantages to members of the OHS and IRS regulations. Once implemented, in June 2014, the new OHS Advisory Committee will perform the same functions as those performed by the former OHS Board of Trustees. The details of this change will be explained more fully once the transfer is made. The OHS is staffed by Mr. Dennis Holter, Chief Advancement Officer for the AOA and Optometry Cares – The AOA Foundation and Kirsten Hébert, a historian, archivist, and museum specialist with a background and interest in public health. Kirsten joined the staff of Optometric Cares – The AOA Foundation in June 2013. Kirsten's primary duties are acting as Heritage Services Specialist for the Archives & Museum of Optometry. In this capacity, she has been surveying AMO's holdings and developing programs to build collections, make them more accessible and ensure their preservation. She is becoming familiar with the OHS and continues to provide administrative support to the Board, assists in maintaining the website and publicity efforts, and facilitates the collection of membership dues and maintains the member database.

The Board of Trustees voted to permit financial transactions of more than \$500 but less than \$1,000 to be made by the Chief Advancement Officer with the cosignature of the AOA Financial Officer. For amounts less than \$500 a second signature is not necessary.

Currently the membership of the OHS is 80, 70 individuals and 10 organizations/libraries. This decrease in membership is a result of the membership roll being updated, although several new individuals have joined OHS, and some institutions are renewing their memberships as they are informed of their delinquent status. Dr. Irving Bennett, past President of the OHS, has recently sent letters to various entities of the optometric press requesting they print a short article about the

OHS. Growth in membership remains a priority of the society. The financial status of OHS continues to be stable and the cash flow is positive.

The OHS had its annual meeting in conjunction with Optometry's Meeting in June, 2013, at San Diego, California. After a brief introduction of board members, a Resolution was read acknowledging the many efforts Dr. Irving Bennett has made to the profession, but especially, during his four years as President of the OHS. The OHS is indebted to Dr. Bennett for his vision and leadership. This Resolution will be presented to Dr. Bennett at the 2014 meeting. The majority of the remainder of the program was a presentation given by Dr. Morton Greenspoon as the "The Blast from the Past". Dr. Greenspoon's topic was "The History of Contact Lenses in the Movies". This interesting and excellent presentation provided the attendees a unique perspective about the scope of movies and videos for which his father, Dr. Reuben Greenspoon, he, and his current partners, have been asked to provide contact lens services. In addition, he discussed the many creative ways in which certain visual effects were achieved. Dr. Greenspoon is a current member of the Board of Directors of the OHS. He has continued to improve and keep current this fascinating aspect of optometry. This program was co-sponsored with the Contact Lens and Cornea Section of the AOA.

Dr. David Goss continues to serve as Editor of *HINDSIGHT: Journal of Optometry History*. This journal is published quarterly and is now in its 45th year. This past year, Dr. Goss has worked diligently with *IUScholarWorks* (https://scholarworks.iu.edu/), to have volumes 1 to 42 of *HINDSIGHT* scanned and posted in the latter's repository. These volumes are available to members, nonmembers, and the public. Issues published since 2012 are available through print subscription members receive through their membership in the OHS. The intent of this effort is to let the public know that OHS exists as well as provide access to past articles that have appeared in the journal. The website hosting HINDSIGHT, *IUScholarWorks*, has received 21 hits since being announced in late 2013. The availability of this digitized database of past journals was also announced in the March 27, 2014 issue of *AOA Week in Focus*.

Dr. Goss implemented a change in the cover of the publication with the last issue of the 2012 journal so there is a color photograph of historical interest or importance. The OHS is indebted to Dr. Goss for his editorial leadership and writing so many papers of historical value to the profession. All optometrists are encouraged to submit papers of historical interest to Dr. Goss at dgoss@indiana.edu. The annual dues for membership in the OHS are \$25.00 and the membership requirements are few. Dr. Goss oversees the election of members to the OHS Board of Trustees as well as the election of Officers to the Board.

The OHS website, created by Dr. Goss and maintained by Indiana University at Bloomington, is now online and the OHS website is now maintained on the Optometry Cares website: http://www.aoafoundation.org/historical-gems/. Kirsten has also expanded the OHS presence on the website.

Unfortunately the OHS did not have a meeting in conjunction with American Academy of Optometry meeting during 2013. A number of factors contributed to this including the budget necessary to support such a meeting.

This year's meeting is being held in conjunction with Optometry's Meeting on Thursday, June 26, 2014 at Philadelphia, PA. The speaker for this year's "Blast from the Past" is Dr. Alden N. Haffner. Dr. Haffner's presentation is entitled "Expanding the Scope of Practice in a Complex Health Care System". Dr. Haffner has had a distinguished career in optometry and optometric education. He is considered the primary architect of the decision made some 46 years ago that the time had come to expand the scope of optometric practice. This decision was a watershed event in the history of the profession. Dr. Haffner will share his insights regarding the current state of optometry, optometric education and the future of the profession. He has been a witness to many of the changes that have occurred in optometry over the past 60 years. His remarks will be made in an historical context. All attendees are encouraged to attend this important presentation.

A new initiative for OHS and the Archives & Museum of Optometry this coming year will be an oral history program entitled "In the Public Eye: Optometry in Public Health Practice". The goal of this program is to record the experiences of optometrists involved in all aspects of public health during the course of the last 50 years. The first contributor to be interviewed will be Dr. Lester Caplan. Dr. Caplan served as the first consultant to the Indian Health Service for the period 1969-1985. Pending his approval, his recollections will be on the Archives & Museum website along with a finding aid for his personal papers which he donated to the Archives. Members of the OHS are encouraged to submit the names of optometrists, or others, who should be interviewed, or otherwise contribute to this project, to contact Kirsten Hébert at KHebert@aoa.org.

The OHS has been contacted by Dr. David Fleishman, a retired ophthalmologist from Boston. Dr. Fleishman is an avid collector and authority on spectacles and their history. He shares the opinion, many of our colleagues share, in that the impact of spectacles, on society, is generally under appreciated. To this end, he has been contacted by Kris Koenig who has produced and directed, among other things, the video "400 Years of the Telescope". This video was narrated by Neil deGrasse Tyson and has appeared on PBS. He has asked the OHS to recommend someone from this organization and AOA to be on the Advisory Board for this project. Thus far there are 14 members on this board representing ophthalmology, optometry and the optical industry. This project is in its infancy but seems to be moving rapidly towards funding.

There is a need to update Dr. James Gregg's book on the "History of the AOA" or commission an author to write a history of optometry covering the past 50 years. Other alternatives include an edited compilation of chapters with an editor in overall charge of this additional history. This could include topics, as delineated by the OHS Board, deemed to be of great importance to the past 50 years of AOA history. The OHS would also like to encourage the development of a one-hour power point program for

presentation to incoming optometry students or perhaps local society meetings. Likewise, there is the need for the design of a banner for the organization.

The OHS held elections for members of the Board of Trustees in March 2014 for terms beginning 2014 through December 2017. The elected Board members then voted among themselves, as outlined in the OHS by-laws, for officer positions. Those duly elected Officers and Board Members for 2014 are the following optometrists:

2014 Members of the Board of Trustees

Officers:

John F. Amos
Alden N. Haffner
Chuck Haine
Trustees:
Irving Bennett
Ronald Ferrucci
Morton Greenspoon
Alfred Rosenbloom
Bill Sharpton

President Vice-President Secretary-Treasurer

Submitted by John F. Amos, O. D. April 8, 2014

Unions in Optometry: Introduction

Irving Bennett, O.D.

5551 Dunrobin Drive, #4208, Sarasota, FL 34238, irvbennett23@gmail.com

I was just finishing my ten-year stint as editor of the *Journal of the American Optometric Association* in 1964 when I learned that optometrists employed by the Kaiser Permanente (in Northern California) were seriously considering forming a union. We, as optometrists, always considered the American Optometric Association (AOA) as our "union" and wondered why another group was necessary. In fact, it was subtly suggested to me that a story on unionism would be frowned upon by the leadership of AOA since publicity would only encourage this movement. This was before the AOA published its monthly newspaper (The AOA NEWS) and the *Journal* served a vehicle for both scientific articles and professional news.

In the 1960s, there were at least three national optometric magazines published and distributed to optometrists for a subscription fee. None of these magazines to my knowledge ever published reports or stories on the whys and wherefores of an optometric union forming in Northern California among optometrists working for Kaiser Permanente. That changed only slightly when I took over as editor and publisher of a fledgling magazine called *Optometric Management* (OM). Not only was I now independent to publish what I wanted, but also this magazine, primarily concerned with business subjects, was the ideal vehicle for this type of reporting.

In September 1975, OM published an article written by professional journalist David Green entitled, "Should an OD Join a Union?" Green's article dealt with development of a union for the optometrists in New York City who were employed by the City to examine patients for the Department of Health (Medicaid) and the Department of Corrections. This same article reported on the activity in California with the optometrists in the Permanente Medical Group. In those days there was only a group of 48 Kaiser optometrists and they had staged an unsuccessful seven-week strike, unsuccessful because 6000 AFL-CIO affiliated Kaiser workers crossed the picket lines.

Getting the story that led up to the strike and to the creation of at least four separate optometric unions, now affiliated directly with the AFL-CIO, was no simple task. But we have now sufficient information directly from the AFL-CIO on what transpired before and after the 1970 strike.

For the record, we have located four separate optometric unions, all affiliated with the AFL-CIO. These optometric unions are involved with Kaiser Permanente organizations. Those unions with their affiliations are as follows:

Northern California: Engineers and Scientists of California, Local 20, IFPTE Southern California: United Nursing Association of California Union of Health Care Professionals, AFSCME

Colorado optometrists belong to United Food and Commercial Workers UFCW Local 7 Professional and Healthcare Division

Mid-Atlantic region optometrists belong to Office and Professional Employees International Union OPEIU Local 2

There are approximately 600 doctors of optometry in Kaiser affiliates and they are now connected to larger trade unions that number over a quarter million people.

The union of optometrists that was the subject of the *Optometric Management* article of September 1975 no longer has optometric members.

History of an Optometry Union in Association with the Engineers and Scientists of California

Katie Uraguchi

Engineers and Scientists of California Local 20 History Project Intern

This material is reprinted with the permission of Engineers and Scientists of California, Local 20, International Federation of Professional and Technical Engineers, AFL-CIO/CLC.

Introduction

The Optometry Unit of the Engineers and Scientists of California (ESC) remains the second oldest unit within the Association. The Permanente Optometrists witnessed the major internal changes of ESC's structure in the late 1970s and contributed their Unit President to stabilize the Association. The following decade precipitated an 8 week strike rooted in professional integrity and union solidarity. The Unit sponsored the expansion of the scope of practice for all California optometrists in the 1990s, and greatly influenced the Kaiser Labor Management Partnership in relation to the Optometry field with the onset of the new millennium. The Optometry Unit is unique as a unionized group of Optometrists, and with its leverage within organized labor, it has negotiated successfully with the largest HMO group in America.

The First Years of Optometry at the Permanente Medical Group

Prior to the existence of an organized group of Optometrists within Kaiser, only one Doctor of Optometry worked at the field hospital in Henry J. Kaiser's Richmond Shipyard in 1944. Leno Mastache, of the Class of 1942, remains the earliest recognized Optometrist within the Kaiser system. In 1945, Mastache was succeeded by Henry Mioduchowski and Arthur Clayton. However, with the 1946 shut down of the shipyards, the vast majority of the health plan membership vanished. Most optometrists between the 1950s and 1960s went between working full and part time for Kaiser.

The Permanente Medical Group (TPMG) and the Kaiser Foundation Health Plan decided to maintain a low cost quality health care plan around 1959, and with this decision they explored other avenues to generate income. The pharmacy was one driver, and optical sales was another. TPMG had established its own optical dispensaries around 1950, and then began to purchase independent private shops in the Bay Area.

By 1954, more than 10 optometrists were employed by Kaiser, with the great majority working part time. At this time, optometrists had two different pay options. Full time optometrists could choose between working on salary or piece meal pay, at \$1 to \$1.50 per examination. Salaried optometrists received full benefits, while piece working optometrists could purchase healthcare packages for themselves at \$4.50 per month, with their dependents at a higher price.

In the 1940s, exams were scheduled for every 30 minutes, but with pressures to see more patients with piecemeal pay, some optometrists were seeing up to 22 patients per day. It was in the late 1960s and 1970s that optometrists were compelled to work within a 20 minute exam framework. This scheduling issue would fortify the Optometry group decades later as a powerful labor force with specific professional interests.

The Northern California Permanente Optometrists

Following World War II, after the initial employment of Permanente Medical Group (PMG) Optometrists, health plan membership contracted and then expanded, and the number of Optometrists grew to about thirty by 1965. It was at this time that the Bay Area Optometrists met to discuss issues pertaining to their occupational and professional concerns. Just the year before, in 1964, some of the older Optometrists had met with a University of California, Berkeley Professor of Labor Relations. He recommended organizing to improve their working conditions through collective bargaining. The two suggested options were either representation through a labor union, or through their professional association.

The "Northern California Permanente Optometrists" met officially as a distinguished group on June 9, 1967. The Optometrists elected Peter Catanich as Chairman, Seth Arnold as Program Chairman, and John Apffel as Secretary. Though multiple local unions solicited their collective bargaining services, the group chose to align with the California Optometric Association (COA). Starting in 1967, the President of the COA, Harvey Arnold, OD, began meeting with Cecil Cutting, MD, Executive Director of TPMG. Two years later, COA became certified as the Permanente Optometrists' sole collective bargaining representative on October 4,1969 through a National Labor Relations Board election.

In June of 1969, with Seth Arnold as the elected President of the Optometrists and the COA utilizing the services of legendary labor attorney, Victor Van Bourg, the Optometrists entered into several months of negotiations with Kaiser management. Difficult negotiations precipitated a seven week strike, yet the picket line was rendered

hollow due to the lack of support from other hospital employee groups. Upon Van Bourg's advice, 48 ODs attempted an exceedingly unsuccessful strike, during which about 6,000 AFL-CIO affiliated Kaiser Permanente workers crossed the picket lines. Without organized labor support, the optometrists were left defenseless, and the hospitals operated practically unaffected.

The Optometrists and Kaiser Permanente management reached a settlement on June 1, 1970 that incorporated only very modest gains for the optometrists, and language compliant to the interpretation of the employer. Essentially, the last offer laid out by management before the strike was signed as the final settlement. In an article titled, "Should an OD Join a Union?" printed in Optometric Management in September 1975, David Green dedicates half of the article to the story of the ESC Optometrists before their union affiliation. He describes the frustrating strike and outcome as an impetus for union membership. The settlement "was (not surprisingly, given the productivity orientation of this HMO) more work for slightly more money. But more important, the Permanente Medical Group O.D.s were forced to admit that, as a handful of professionals among thousands working for a single employer, they needed a union--not only to guarantee their rights as employees, but to protect their status as professionals."

In the interest of professional practices during this time of impacted schedules, Dr. Gary Oda served as an experimental tester for patient loads. While testing the case of scheduling, against the wishes of the Medical Chief Officer of his clinic, Oda was terminated. His termination went to arbitration and he was reinstated. Following his return, Oda ascended to his role as President of the Optometrists group in September of 1970. After being terminated in the name of his profession and in the interest of his colleagues, Oda was restored to his position with a new vigor and determination to ensure that his efforts were not in vain. "No one else had to go through what [he] went through." Realizing through his termination that working with the COA "was not an effective way to bargain with Kaiser," he sought a stronger backing to negotiations and managerial respect.



Figure 1. Peter Bartolo, MEBA Executive, and Dr. Gary Oda

The Engineers and Scientists of California

Oda, with the approval of the other members of the Optometry group, went "union shopping" at the University of California, Berkeley Optometry school, when a state mediator heard about him and his hopes for a professional union. This mediator introduced Oda to Henry Dooley, the Executive Director of ESC, affiliated with MEBA. The NLRB sponsored another election in November 1971, and the Optometrists chose the Engineers and Scientists of California as their new collective bargaining representative. Gary Oda recalled the transition and explained, "First of all, representing employed professionals was [ESC's] stock in trade...Second, PMG Optometrists had the benefits of full labor support coupled with the advantages of forming a separate unit of Engineers and Scientists with their own constitution, by-laws and dues structure."

The first ESC negotiated agreement, signed January 1, 1972, increased salaries, placed upper limits on appointment scheduling, and offered access to grievance procedures. However, scheduling issues would later become a major point of contention, as the Employer attempted to stretch the interpretation of the agreement. Importantly, this initial agreement also incorporated what later would prove to be critical provisions to form both Regional and Local Professional Practice Committees to discuss professional concerns and offer recommendations to the Employer. Newly hired Optometrists were required to join the Union, though those already employed at the beginning of 1972 needed only to pay dues if they wished not to join. In mid-1973, the Unit adopted its first Optometrists Unit Constitution. During May of 1974, the Regional Professional Practices Committee (RPPC) established a space for Optometrists to voice issues and concerns. The RPPC was formed with three goals, first, to consider the professional practice of Optometry and its relationship to other professional disciplines; second, to work constructively for the improvement of patient care and Optometric practice; and third, to examine and improve Optometric practice and interdisciplinary relationships in the eye clinic.

The second Agreement, effective 1974-1976, enacted a full Union shop. As a condition of employment, all 58 Unit members were required by January 1, 1975 to serve as members of the Engineers and Scientists of California. While Gary Oda assumed the Presidency of the Engineers and Scientists of California from late 1978 through 1980, Les Chan was elected President of the Unit in 1978. Oda served as a stabilizing force during a time of transition following the dramatic departure of Henry Dooley as Executive Director of the Association.

The 1979- 1981 negotiated agreement further expanded the reach of the union by including part-time Optometrists with "outside entrepreneurial interests hired after 1971..." Following the 1981 agreement, however, Optometrists and Kaiser management came to a head. The scheduling practices management attempted to impose on the Optometrists were not conducive to the professional standards and patient care the Optometrists hoped to uphold.

The Optometrists Strike with Principles and Practices in Mind

The Kaiser Optometry Strike of 1982 was a demonstration in defense of the Optometrists, and also an event to bring awareness to the domineering stance of Kaiser Permanente as a corporation during the tumultuous 1980s. Ben Hudnall, ESC Business Manager, charged that "Kaiser, the largest prepaid Health Maintenance Organization in the nation, [was] understaffed and oversubscribed throughout its operation, causing both access to health services and quality of care to suffer." He asserted the rights of patients as Health Plan members "entitled to expert, prompt and quality medical care for their paid-in-advance health plan premiums." As Kaiser hoped to "increase productivity" by further increasing the number of patients seen by optometrists daily, the company demonstrated its willingness to sacrifice patient care and professional standards to potential profit, rather than prioritizing services by hiring more doctors.

The Optometrists took a stand against commodifying their professional judgment with a conveyor belt-like system, and on January 4, 1982, 85 optometrists began their strike at 18 different Kaiser Permanente facilities in Northern California. The vote to strike was passed unanimously, and the labor support of the strike was backed by ESC's AFL-CIO affiliations.

In this case, the key issue in negotiations revolved around one clause in the contract related to appointment times. Kaiser demanded the optometrists accept a "speed-up" clause to allow for scheduling intervals of less than 20 minutes. The 20 minute appointment schedule served as an integral point of contention for the optometrists, as the prevailing standard for appointments was set at 30 minutes. This strike was deeply supported and of utmost importance due to its impact on professional practices, and quality patient care. The optometrists could not return to work or accept the clause out of professional principle and concern for upholding high standards for eye care services.

In 1982, there was one optometrist to every 21,000 HMO plan members. The backlog for an eye appointment was generally six to twelve weeks. Before Kaiser demanded the removal of the scheduling provision from the contract, arbitrations were ruled in favor of ESC twice, against attempts to increase the number of patients seen per day. The scheduling average for private practices was to schedule 45 minute exams, other national plans scheduled 16 patients per day with 30 minute appointments, while Northern California Kaiser scheduled 20 patients per day at 20 minute intervals. Any attempt to augment the schedule could surely result in an incomplete examination, and a request that the patient schedule yet another appointment to return. This case of multiple appointments would continually stress the patient backlog, and decrease patient satisfaction.

Seven weeks after the commencement of the Optometry Strike, Local 29 of the Office & Professional Employees Union began to strike as well. The simultaneous strikes further encouraged Kaiser labor solidarity as other Kaiser labor unions, such as Local 250 of the Service Employees International Union, continued to inform their

members of the strikes, send letters of support on behalf of ESC, and remind other labor affiliates of the struggles represented by the strikes. SEIU Local 250, ILWU Local 6, OPE Local 29, SEU Local 505, SSEU Local 535, Hotel and Restaurant Union Local 28, and Hotel, Motel, Restaurant and Bartenders Union Local 50 all officially advised Kaiser Permanente of their respect for the Optometrists' Picket Line. At several facilities, more than 90% of the unionized labor force would not cross the picket lines. Numerous other unions and community members contacted Kaiser directly in protest. Because so many Kaiser plan members were union members as well, labor solidarity was two-fold, from the workers of Kaiser, and from the Kaiser clientele. This leverage led to the eventual settlement on March 3, 1982.

The settlement allowed for Kaiser's "productivity" by increasing Optometrists workday by one hour. The Optometrists gained a 40.4% wage increase over the life of the two year agreement. Pertaining to the scheduling issue, it was agreed that a committee composed of both union officials and management would develop guidelines appropriate for scheduling optometric appointments. Reflecting on the personal transformations brought on by the strike, Dr. Vic Stern would reminisce in 1986, "When we (the Kaiser Optometrists) went out on strike in 1982...we were a group of optometrists who worked at Kaiser, who also happened to belong to a Union. When we went back to work we were Union members who were optometrists, who just happened to work for Kaiser."



Figure 2. Dr. Vic Stern

Optometry, Professional Standards, and Scope of Practice

For many ODs, the strike validated their decision in 1972 to associate with a union. However, other ODs still were uncomfortable with being a represented health care professional. At this time, very few health care professionals – let alone doctors – were unionized. After the 1982 strike, the core leaders and advocates on the OD Unit Board would focus their efforts on engaging the members through a wide of array of efforts to protect the profession and establish and maintain a strong voice for optometrists at Kaiser. Jim Hornberger entered the role of President in 1982. Although the Unit remained stable, the issues of patient scheduling and scope of practice would persist. Following Jim Hornberger, Mike Lee accepted the Presidency of the Unit in 1986. John Apffel ascended to the Presidency in 1989 to complete the last year of Mike Lee's second term. When 1990 gave rise to new contract negotiations, newly-elected President Tom Longa and Ben Hudnall asked all ESC members and the public to offer support to the Optometrists bargaining against the twenty minute appointment

slots that Hudnall described as "a consumer issue as well as a workplace issue and a professional concern for our members."

By February of 1990, negotiations with Kaiser were at a draw after a Federal Mediator declared a "lack of progress" in January. Patient scheduling was the main outstanding matter, along with wages. Though Kaiser proposed 6% wage increases, union research found that "on a salary by patients scheduled ratio, [Northern California Permanente Optometrists'] pay rates [were] more than 30% behind" other Kaiser regions. The eventual three year settlement ratified on May 18, 1990, led to a 23.6% increase in hourly rate at the uppermost wage step, with a 10% increase across the board in the first year. Additionally, the agreement added new language on experience credit, and non- discrimination by adding "sexual orientation' to [the] list of categories regarding which discrimination will be prohibited."

Revisiting the scheduling issues that prompted the 1982 Strike, ESC launched a full force initiative to educate and empower the public and union members to engage in the legislative battle against the potential for coerced, inadequate eye care. Without enough time to complete an examination, patients would need to be scheduled for multiple appointments, and endure 6-12 weeks of waiting due to an impacted schedule. Optometrists had a legal and moral obligation to abide by the standards of practice outlined by the California Optometric Association. One formidable supporter, Michael G. Harris, OD, JD, MS, explained from his perspective as a clinical professor of optometry and attorney at law, that "Employed optometrists, such as those at Kaiser, have a professional responsibility to perform a comprehensive examination that meets the standard of care in spite of restrictions placed on them by their employer." The ever expanding scope of practice ascribed to California optometrists necessitated proper appointment windows.

Captivating the support of politicians, concerned members entitled to attentive care, and optometric experts, this constituency wrote to the Supervising Health Care Analyst at the California Department of Corporations and various legislators in favor of the professional practices the optometrists wished to uphold, on behalf of the Optometry Unit. ESC drafted and actively lobbied for Assembly Bill 1462, a bill that would have prompted the California Department of Corporations to investigate the adequacy of comprehensive eye examinations in appointment times under 30 minutes. By mobilizing community support and action, the bill passed through the State Senate and House of Representatives, yet Governor Deukmejian vetoed the bill.

In 1991, the "Optometrists Seminar on Retirement and Financial Planning" program addressed the Kaiser Permanente Optometrists Retirement Plan (KPORP), 401K programs, retirement health benefits, and "Investment Planning for Retirement." The event was organized by the Optometry Unit Board and ESC Staff to better acquaint the Northern California Optometrists and their specific retirement packages. The Unit wished to promote further education and awareness to its members by empowering them with not only their benefits, but with the knowledge and awareness of what their Unit had gained through years of negotiations as a union group.

The Optometrists also published a Quarterly Journal of Optometry in 1993. The Journal, sponsored by ESC-MEBA, included information about pertinent legislation and research, minutes from various committees and the RPPC, and updates on relations with other associations such as the California Optometric Association. The March 1993 edition also featured a "History of Optometry at ESC," with a foreword written by Dr. Leslie K. Chan, in appreciation of the work and research of Dr. John Appfel. Dr. Appfel spoke with retired members to get a better idea of Kaiser Optometry from the 1940s on. He composed a history of the Optometry Unit spanning from the 1940s until the 1980s.

In light of unauthorized regulations issued by the Division of Allied Health Professionals of the Medical Board of California, the ESC and the California Optometric Association filed a consolidated suit against the amendments which violated existing law. The unauthorized regulations would allow medical assistants to practice Optometry, going against the Business and Professions Code that designates optometrists, physicians, and surgeons as the sole, sanctioned practitioners of eye care. On May 25th, 1994, the Superior Court ruled in favor of the ESC and the COA, thereby protecting the professional practice of Optometry. Following this ruling, John Spallone was elected to the Unit Presidency.

Continuing Education and TPAs

Again, professional standards for the Optometric scope of practice would enter into the political arena for the ESC agenda. At the end of the 1995 legislative session in Sacramento, representatives of Optometrists and Ophthalmologists met an accord regarding the use of therapeutic pharmaceutical agents (TPAs) by Optometrists. The legislation, Senate Bill 668, passed in January of 1996, allowed for the further utilization of diagnostic drugs and therapeutic medications in Optometric practice. This legislative change widened the range of praxis for all California Optometrists, and this legislative effort was significantly backed by ESC's presence in Sacramento and in the labor community.

More importantly, the expansion of professional duties promoted and necessitated further education and certification standards. Kaiser proved to be instrumental in providing the necessary funding for education and educational leave in the wake of the legislative action, as the new responsibilities of Optometrists were beneficial to their functions of providing expanded patient care. In 1997, the Kaiser Optometrists signed a Letter of Agreement on Therapeutic Pharmaceuticals Training, which also addressed the duties to be assigned to ancillary personnel. The inclusion of TPAs in Optometric practice has gone through additional stages, resulting in Optometrists treating a range of issues, such as glaucoma, with prescriptions. The passage of Senate Bill 929 in 2000 authorized Optometrists to utilize an entire new series of TPAs and even treat some forms of glaucoma. In observance of the new responsibilities afforded optometrists, in 2004 Assembly Bill 2464 added 35 hours of ocular therapy to OD continuing education requirements. Considering the expansion of the Optometric scope of practice and responsibility, continuing education and

certification would remain significant topics of discussion for the Optometry Unit and their aims in negotiations.

ESC dedication to lobbying and education in relation to the concerns of the Optometrists demonstrates a unique aspect of professional unionism. The Kaiser optometrists specifically bargain with an incredibly large employer, situating them in circumstances that may be entirely different from those of private practitioners. When the Optometry Unit involves itself in professional issues and especially in state legislation, it advances the practice of Optometry. With unified support, know how, and access, the Optometry Unit coupled with ESC solidarity has the power to make vast change within the profession. Though a comparatively small group of optometrists, their agency in legislative affairs and collective bargaining leverage demonstrates the possibilities for wider representation and professional empowerment through labor unity.

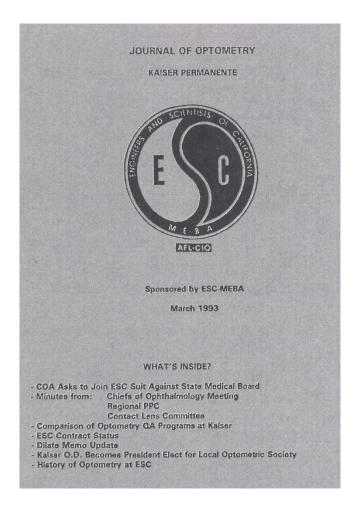


Figure 3. Cover of a quarterly publication from 1993.

Kaiser Labor Relations

For Kaiser labor relations and the history of collective bargaining, the year 1997 was transformative, momentous, and just the beginning. On May 30, 1997, 24 local unions completed a nation-wide vote to endorse the Labor-Management Partnership system with Kaiser Permanente. In the Winter of 1997, the Optometry Unit began to address the re-design of Ophthalmology, Optometry, and Optical sales through the Regional Professional Practices Committee and through involvement in the World Class Eye Care Committee. The Committees also discussed scheduling guidelines, laser vision correction surgeries (PRK), TPA administration, and referral services.

On December 4, 1997, the World Class Eyecare Group met with the intention of examining how to function within the existing system and make adaptations to improve it within six months. Some of the issues at hand regarded appointment protocol, follow-up with the Optical Department, and the potential for patient input and surveys including what changes patients would like to see with their Optometric services. ESC's involvement in Optometric committees continued with the Vision Care Advisory Committee, which met at the end of 1998. John Spallone reported back to the Optometry Unit about the best practices identified, and prioritization. Ten items were selected as a discussion focus, including interprofessional care, appointment guidelines, improved communication between the "three O's" (Optometry, Optical, and Ophthalmology), and revisiting the roles of Vision Service Assistants in optometry to maximize patient satisfaction and optical sales revenues.

By 1999, the Optometry Unit had more than 160 members. The Northern California Kaiser Health Plan had added 150,000 new members, while 100,000 federal employees had optical benefits added to their plan. At this time, Dr. Christine Chan designed and conducted a survey of Unit members that gathered information about OD practice at Kaiser. With a response rate of over 75%, the survey found that the average OD had over 19 years of experience, and generally 13 years at Kaiser. This typical optometrist functioned with little or no assistance providing all patient care, preparing the examination rooms and charts, and performing the examination. The study found that, in relation to shorter appointments, more ODs performed "target exams" while only half of the examinations given were full routine exams, and the majority of exam time was used for the refraction. This type of union aided survey illustrated the Unit's continual research and involvement, striving for a better working environment through understanding the circumstances.

On November 15, 1999, Christine Chan was installed as Unit President. The following year, the constitution was updated to reflect a new unit structure with six area representatives serving the following districts:

A. South Bay- Milpitas, Mt View, RWC, Santa Theresa, Campbell, Foster City, Santa Clara, San Mateo

B. Golden Gate- SSF, SF, San Rafael, Novato, Petaluma, Santa Rosa C. North East Bay- Solano and Diablo region

- D. Fresno/Stockton- Central Valley
- E. Sacramento- S. Sac, Sac, Roseville, Davis, Pt West, Rancho Cordova, Elk Grove, Folsom
- F. East Bay- Fremont, Hayward, Oakland, Richmond.

This constitutional revision did not go into effect until July 16, 2001, following the overwhelming membership approval of the change. It was decided that half of the representatives would serve a two year term, while the other half would serve for three years, to ensure Unit Board continuity and maintenance of human capital. (Acquired experience, knowledge, maneuverability...)

The National Agreement with Kaiser

In 2000, the Coalition of Kaiser Permanente Unions and Kaiser Management agreed to consolidate negotiations at a national level. With an interest based problem solving approach and delegations of specific task groups, the Unions and Kaiser embarked on a historic endeavor. The 2000 agreement and bargaining sessions set a precedent of united labor in partnership with management, leading to the successful 2005 and 2010 national bargaining sessions.

Professional Practice Committees

At the onset of 2001, following the 2000 national agreement, ESC's Ben Hudnall was clearly optimistic about the leverage provided by the innovative bargaining methods provided by the labor management partnership. He announced that Optometrists "have the opportunity to seriously deal with the issues of patient scheduling, scope of practice, and staffing as a result of national and local bargaining" through the Regional Professional Practice Committee. The RPPC would address these issues through interest based problem solving, and awarded true efforts to pursuing viable change by dedicating time to refreshers and seminars on the method.

In the Spring of 2001, the RPPC addressed the possibility of an Optometric Assistants (OA) pilot program. The committee discussed the job description and qualifications for OAs, and discussed other Group Health practices that utilize the services of OAs, in order to observe their model.

The Regional Professional Practices Committee has served as a foundational and integral aspect of professionalism, communication, and influence since its inception in the first ESC Optometry Unit negotiated contract in 1972. In 2003 the RPPC reaffirmed and reevaluated its goals and recognized four objectives as the focus of the Committee. First, the RPPC would serve to address the resolution of issues not settled at the Local Professional Practices Committee. Second, the RPPC would have jurisdiction over patient care or regulatory issues. Third, the committee would address questions arising from the contract that could not be resolved on the LPPC level. Lastly, the RPPC would incorporate an issue resolution process to identify and determine issues, the stakeholders, the decision making authorities, and communication avenues.

The Partnership led to an entirely new day for professional practice committees. While the original contract in 1972 had established the RPPCs and LPPCs as instruments for change and improvement, in actuality these committees rarely met. Facilities were not required to form LPPCs, and many considered them to be duplicative of the management-run department meetings. This issue was compounded by the fact that the contract specified that the RPPC would convene only if a LPPC was unable to resolve an issue. But with the new Partnership contract in 2000, both RPPCs and LPPCs were required to form and meet four times a year using interest-based problem solving and consensus.

In 2000, the RPPC took on its first Labor-Management Partnership (LMP) task – the joint design of the Optometrist Member Patient Satisfaction Recognition program and the Laser Vision Correction Recognition Program. The LMP was (and remains) based on the agreement that it was in both Kaiser's and the Unions' interest to build both the business of Kaiser and the effectiveness of the Union while engaging union members in their professional work. The goal was (and remains) to make Kaiser "the best place to work and the best place to receive care." Both of the new recognition programs for ODs were designed as a facility-based team effort that would be realistic, attainable, and profitable. To this day, in accordance with these principles, both Kaiser and the ESC Optometrists are benefitting from the rewards of these recognition programs.

The Optometric Assistant Pilot

In 2002, the Optometric Assistant Pilot, organized by the RPPC, received a thorough evaluation. The evaluation found three benefits to the utilization of Optometric Assistants that satisfied the goals of the initial program. First, OAs improved access to Optometry without requiring additional optometrists. Second, the use of OAs increased professional satisfaction. Third, OAs increased patient satisfaction. These advantages were derived from a 20% increase in appointment availability and supply without increasing the number of optometrists. With meaningful patient care, and punctual appointment times, patient satisfaction greatly increased with the implementation of ESC represented OAs. Though the report concluded that the decision to integrate OAs would be left to the Local Professional Practices Committees, it stressed the importance of selecting Optometric Assistants based on qualifications and fit at the facility. These considerations included local budget space, availability, and patient care needs.

Kaiser Permanente Health Connect

The roll out of Kaiser Permanente Health Connect, the HMO's own extensive electronic information system, allowed for further ESC influence and involvement in union-employer feedback. This complex network enables further exchange between health plan members and Kaiser professionals through an integrated plan to access knowledge and personalized health information. Health Connect synchronizes communications between the different players in health care, from the facility to the lab to the physician. Implementation of the system was finalized in March 2010, but ESC's involvement began in 2000 with the National LMP Workplace Safety (WPS) Initiative.

In recognition of the high potential of ergonomic injury from electronic charting, a few eye exam offices were selected to pilot various computer stand and arm options. Given the compact and equipment-laden nature of optometry exam rooms, optimizing the computer stand or arm was critical to ensuring worker safety. Also, WPS local department teams were created as a structure for identifying and resolving incidents of workplace injury. Team members were trained in the LMP worker injury safety program, Systems of Safety.

ESC members and stewards were deeply involved with teaching their coworkers about the Health Connect system and its use, along with acknowledging ergonomic concerns. With union access to communications, system complications and issues were addressed, while solutions and considerations were encouraged. With a greater presence and leverage promoted by the partnership, ESC members were called upon to promote change and improvement with experience from engaged frontline workers.

Kaiser – Leadership, 3 O's

In 2007, all specialties within Kaiser were invited to form a task force to evaluate their practices and make recommendations to KP leadership. This group, originally called the Quartet, would utilize its experience from best practices to construct solutions to save money, resources, time, and staffing. Drawing from its Partnership advantage to collaborate, Kaiser Permanente and the Union coalition allied to increase Kaiser's efficiency in order to maintain market share. The Union representatives entered into this project with clear intentions to assist Kaiser to thrive, with the awareness that a solution was not to tell members "just to work harder." They ensured that the project would work from LMP principles with true partnership participation. While serving on the 3 O's task group, John Spallone was again elected to be the Unit Board President.

At the start of 2008, the group became the Optometry, Ophthalmology & Optical Services Leadership Group. The "3 O's" addressed topics such as Service, Quality, Work Environment, and Affordability. Later, priorities shifted to Efficiency, Quality, Service, and Access. The 3 O's Leadership Group continues to serve the Labor Management Partnership as an integral avenue to communication between professionals on the front line of patient care and all levels of management, from a regional to a national perspective.

In 2011, Alejandra Reyes rose to the Unit Board Presidency. Brett Perkins then followed suit in 2012 to complete Ali Reyes' term. (The OD Unit's annual Continuing Education Seminar is now named as a memorial for Dr. Reyes) With the onset of 2012, the Ben Hudnall Memorial Trust, instituted in 2007 to honor the memory of ESC's Ben Hudnall, further enabled continued education for ODs. Hudnall, as Business Manager of ESC, strove for professional justice through strong negotiations, open channels for communication, and his great involvement in the Labor Management Partnership. The Ben Hudnall Memorial Trust continues to offer professional advancement through education and support, while offering almost \$400 thousand to

ODs for glaucoma licensing. This trust also supports the workplace Spanish for Optometry class. Additionally in 2012, the Optometry Unit Constitution was amended to include District 7, in order to create an OA at Large position on the Optometry Unit Board.

Finally, it should be noted that the ESC OD Unit has been a unique and effective forum for the concerns of women professionals, and has been the home base of an ever growing number of women who are also union leaders. Since the genesis of the ESC-represented Optometric group in the largest HMO on the West Coast, women Optometrists have been taking on increasing roles in local and regional decision-making. The work-life balance issues that have been bargained in the union contract has attracted female ODs to this form of patient delivery care. Both half-time and full-time female ODs benefit from family-centric vacation, sick, and educational leave policies, and enjoy full Kaiser healthcare benefits for all family members. Today there are 138 female optometrists in the OD unit, which represents 53% of the ESC Optometrists at Kaiser. The majority of patient care decisions and practices reflect their roles on all committees where the union has a presence. This trend will continue for the foreseeable future.

As the second oldest Unit of ESC, the Optometry Unit continues to uphold and advance professional standards in California. Through Partnership leverage, the OD Unit continues to bargain on behalf of all professionals in the Optometric field for benefits, better patient care, and continued education.

Historical Note on Distance Test Charts and Projectors

David A. Goss, O.D., Ph.D.

School of Optometry, Indiana University, Bloomington, IN 47405, dgoss@indiana.edu

Abstract

The first documented letter distance test charts appeared in the 19th century. The first electronic projectors for eye and vision examination arrived in the early 20th century. This paper comments on some of those and other developments in distance testing charts and projectors. Brief biographical information is given on some of the inventors of projector systems.

Key words: eye examination, optometric procedures, optometry history, projectors.

The first distance vision test charts were designed for evaluation of visual acuity. The first studies of visual resolution grew from interest in astronomy. The earliest experimental investigations of visual acuity may have been conducted by English scientist Robert Hooke in the 17th century. German mathematician and astronomer Tobias Mayer experimented with grid and checkerboard patterns in the 18th century. It is unclear when the first letter charts were used in eye examination. In 1807, Thomas Young wrote about a letter chart attachment to an optometer, and in 1823, Purkinje wrote of an acuity apparatus designed by a Leipzig optician named Tauber.

In 1843, Heinrich Küchler produced test charts with Gothic script letters of descending size. In 1854, Viennese ophthalmologist Eduard von Jaeger produced a similar chart with several lines of letters smaller than those of Küchler.² In 1862, Herman Snellen introduced a letter chart with letter design and sizes that became widely used for many years.

The progression of letter sizes on the Küchler and Jaeger charts was based on availability of typefaces rather than an orderly system. Snellen's system had seven lines.³ The letter sizes in what is now known as the Snellen fraction (which actually was proposed by Donders) were 20/20, 20/30, 20/40, 20/50, 20/70, 20/100, and 20/200. Today, a logarithmic progression of letter sizes, such as in the Bailey-Lovie chart, is preferred by most investigators.⁴ It is interesting to note that in 1906, the French ophthalmologist Henri Armaignac empirically derived a progression of letter sizes very close to a logarithmic progression.^{5,6}

The first transparent vision test charts were developed in 1893 by Cohn, who had optotypes painted on glass plates which were placed in front of a window. Transparent test charts back illuminated by electrical lights followed soon after that. A significant development in distance vision testing was the invention of electronic projector systems designed specifically for vision examination. Although targets in addition to letters, such

as clock dials, were available on some paper charts and back illuminated systems, projectors allowed incorporation of targets for a wider variety of test procedures.

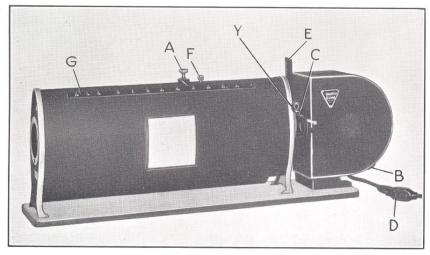
It appears that the first projector for vision examination, or at least the first commercially successful projector in the United States, was the Clason Visual Acuity Meter, which was marketed for many years by Bausch & Lomb. The Clason Visual Acuity Meter was based on a 1916 patent by Milo B. Clason. Clason (1870-1947) was an optometrist who was born in lowa and moved to Columbus, Georgia when he was about twenty years old. The headstone on his grave in Georgia says he was a "scientist and inventor of national optical fame – all who came to him were benefited through his skill and kindly understanding."

With the Clason projector, the examiner could choose between one large letter, a 3x3 block of mid-sized letters, or a 5x5 block of small letters. A zoom system varied the size of the letters. When examiners ordered a Clason projector, they specified the distance between the projector screen and where the projector was to be placed. Based on that distance a scale was placed on the projector indicating the decimal visual acuity of the small letters. Letters could be presented in a block or masked to form a horizontal row or vertical column. Targets for astigmatism testing were also available. A photo of an early Clason projector is shown in Figure 1 and a later one in Figure 2. The slide used in the later Clason projector is shown in Figure 3. The Clason Visual Acuity Meter is included in the 1948 edition of the *Bausch & Lomb Ophthalmic Reference Book*, so it would appear that Bausch & Lomb was producing the Clason projector at least as late as 1948. Bausch & Lomb had a later design projector, the Compact Acuity Projector, that they were also making in 1948.



Clason Visual Acuity Meter on Mahogany Table

Figure 1. An early Clason projector. From an undated instruction manual.



The Bausch & Lomb Clason Acuity Meter.

Figure 1

A—Button to adjust lens.

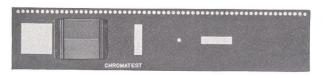
D—Switch.

B—Button for opening lamphouse. C—Slide Carrier.

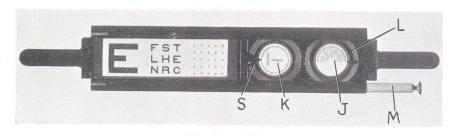
E—Chroma-Test Slide. F—Focusing Button.

G-Scale.

Figure 2. A later Clason projector. From an undated instruction manual.



Chroma-Test Slide.



Hamilton Slide.

Figure 2

J—Sunburst Dial; Fan Dial. K—"T" Chart.

L—Index for Sunburst Dial.

M—Rod. S—Index for "T" Chart.

Figure 3. The test slide from a later Clason projector. From an undated instruction manual.

In 1932, Arthur P. Wheelock filed a patent for the projector system that would become the American Optical Project-O-Chart. A November, 1933 advertisement said that the Project-O-Chart was "radically new, scientifically correct" and that it "offers new versatility and convenience in the subjective examination. Various versions of the Project-O-Chart have been available from American Optical and its successor company Reichert into the twentieth-first century.

Arthur P. Wheelock (1894-1975) was an lowa optometrist, who from 1941 to 1944, was president of the American Academy of Optometry. He was presiding over the American Academy of Optometry meeting in Chicago in December 7, 1941, when someone entered the room and whispered something to him. He had to announce that Pearl Harbor had been attacked. He called for a recess, but then resumed the meeting some minutes later. In 1970, Wheelock was awarded honorary life fellowship in the Academy.

Among four papers that Wheelock published in the American Journal of Optometry and Archives of the American Academy of Optometry was a 1933 paper on visual requirements for railroad employees. That fact becomes more interesting when it is noted that he owned a profitable railroad line in Iowa, which though it was only seven miles long, connected two major lines. The American Journal of Optometry and Archives of the American Academy of Optometry was a 1933 paper on visual requirements for railroad employees. That fact becomes more interesting when it is noted that he owned a profitable railroad line in Iowa, which though it was only seven miles long, connected two major lines.

In the late 1950s, Don Frantz (1916-2007) introduced what he called natural color stereoscopic refraction. ^{19,20} In his office, examination rooms were in an L-shaped configuration. An approximately six foot wide projection screen covered the wall at the top of the L. Dual projectors produced a color stereoscopic picture that filled the screen. The center of that picture was blanked out so that a third projector could present a standard test chart. It was thought that it helped to minimize accommodation when a refraction was done with a standard test chart in the center of, for instance, a distant mountain scene. Even though the appearance was quite striking, this technique was not widely adopted.

Don Frantz was born in Iola, Kansas, and worked in his father's optometry office when he was in high school.²¹ He received a bachelor's degree from Northwestern University and graduated from optometry school at Northern Illinois College of Optometry in Chicago. In 1942, he established a practice in DeKalb, Illinois, which grew into a professional corporation with five optometrists, three opticians, and ten assistants in a two story building. He served the American Optometric Association for many years in various capacities, including the presidency in 1961-62.²² He lectured and wrote for the Optometric Extension Program on practice management and other topics, and he taught practice management at Illinois College of Optometry. He was well known for his inspiring stories in his lectures and writings.²³ He received D.O.S. honorary degrees from Southern College of Optometry and Illinois College of Optometry.²⁴

The use of polarization to allow monocular testing without occlusion was investigated as early as 1939.²⁵ This technique became widely available in the late

1960s when Bernard Grolman developed adult and child vectographic slides that could be used in the American Optical projector for binocular refraction.²⁶

Bernard Grolman (1923-2002) was born and raised in Brooklyn, New York. He graduated from Brooklyn Polytechnic Institute in 1942 and worked for General Electric as a draftsman before service as a radarman from 1944 to 1946 in the U.S. Navy. Grolman attended Hofstra University and graduated from optometry school at Columbia University in 1952. He earned B.S. and M.O. degrees from Columbia. From 1952 to 1955 he was a development engineer at Burroughs Business Machines Corporation, designing and testing optical telescopic missile tracking systems. From 1955 to 1985 he was a research scientist at American Optical Corporation/Reichert. He received more than fifty patents for various optical and ophthalmic instruments. He is probably best known for his invention of the Non-contact tonometer. He was awarded honorary doctoral degrees by the Illinois College of Optometry and the New England College of Optometry and the William Feinbloom Award from the American Academy of Optometry.

The most recent development in projectors used for eye and vision examination is automated remote controlled projectors. One website currently lists remote controlled projectors made by eight different companies.³⁰

Acknowledgments

I thank Dr. Gary Campbell for bringing the material on projectors in the Hirschberg reference to my attention and Kirsten Hébert for providing an obituary for M.B. Clason (reference 9).

References

- 1. Wade NJ. A Natural History of Vision. Cambridge, MA: MIT Press, 1998:325-327.
- 2. Levene JR. Clinical Refraction and Visual Science. London: Butterworths, 1977:42-43.
- 3. Bennett AG. An historical review of optometric principles and techniques. Ophthal Physiol Opt 1986;6:3-21.
- 4. Bailey IL. Visual acuity. In: Benjamin WJ, ed. Borish's Clinical Refraction, 2nd ed. St. Louis: Butterworth Heinemann Elsevier, 2006:217-246.
- 5. Armaignac H. De la nécessité d'adopter une échelle optométrique décimale universelle presentation d'un type, 1906. Translated by Goss DA, Carr RA. Hindsight 1998;29:5-12.
- 6. Goss DA. Armaignac's 1906 paper on the recording of visual acuity and the progression of letter sizes on visual acuity charts. J Am Optom Assoc 1998;69:304-306.
- 7. von Haugwitz T. The History of Optical Instruments for the Examination of the Eye.Translated by Blodi FC. In: Hirschberg's History of Ophthalmology, Volume 11 (Part 2). Bonn: Wayenborgh, 1986:A99.
- 8. Clason MB. Method of and apparatus for testing visual acuity. U.S. patent no. 1174547 A, filed Oct. 18, 1915, patented March 7, 1916.
 - 9. Anonymous. M.B. Clason. J Am Optom Assoc 1947;18:498.

- 10. Find A Grave Index Milo Black Clason. www.findagrave.com, accessed March 3, 2014.
- 11. Bausch & Lomb Ophthalmic Reference Book. Rochester, NY: Bausch & Lomb, 1948:253-267.
- 12. Bausch & Lomb Ophthalmic Reference Book. Rochester, NY: Bausch & Lomb, 1948:237-252.
- 13. Wheelock AP et al. Apparatus for testing vision. U.S. patent no. 1949067 A. filed Nov. 28, 1932, patented Feb. 27, 1934.
 - 14. J Am Optom Assoc 1933;5(4):8-9.
- 15. Gregg JR. History of the American Academy of Optometry 1922-1986. Washington, DC: American Academy of Optometry, 1987:57-58.
- 16. Koch CC. Wheelock to be honored at Miami Beach. Am J Optom Arch Am Acad Optom 1970;47:408-409.
- 17. Gregg JR. History of the American Academy of Optometry 1922-1986. Washington, DC: American Academy of Optometry, 1987:187.
- 18. Weiner G, ed. The American Journal of Optometry and Archives of the American Academy of Optometry Forty-Four Year Cumulative Index, vol. 1 (1924) vol. 44 (1967). Chicago: Professional Press, 1968:77.
- 19. Frantz DA. Natural color stereoscopic refraction. J Am Optom Assoc 1959;30:471-476.
- 20. Frantz DA. A review of three-dimensional refraction. Optom Weekly 1966;57(1):23-30.
- 21. Anonymous. Profiles of personalities in optometry: Dr. Don A. Frantz, AOA President Elect. J Am Optom Assoc 1960;32:314.
- 22. Goss DA. Past American Optometric Association presidents remembered. Hindsight: J Optom Hist 2008;39:99-101.
- 23. Frantz DA. Thorough refraction makes blind woman see: a human interest story. J Am Optom Assoc 1960;32:318-319.
- 24. Directory of the American Optometric Association. St. Louis: American Optometric Association, 1972:108.
- 25. Borish IM. Clinical Refraction, 3rd ed. Chicago: Professional Press, 1970: 765-771.
- 26. Grolman B. Binocular refraction a new system. New Eng J Optom 1966;17:118-129.
- 27. Taylor D. Obituary: Bernard Grolman, D.O.S. inventor of the Non-Contact Tonometer. www.dickwhitney.net. Accessed March 1, 2014.
- 28. Directory of the American Optometric Association. St. Louis: American Optometric Association, 1972:134.
- 29. Myers K. Thank you Dr. Grolman. www.dickwhitney.net. Accessed March 7, 2014.
- 30. http://www.medicalexpo.com/medical-manufacturer/remote-controlled-ophthalmic-chart-projector-10707.html. Accessed March 7, 2014.

Ophthalmic Comanagement and Optometry

Albert A. Bucar, O.D., D.O.S.

Ophthalmic Education Institute, 745 Hanley Drive, Antioch, IL 60002

Up until the late 1970s, when an optometrist referred a patient for treatment by an ophthalmologist, the optometrist was grateful to have the patient return with a prescription for glasses. More aggressive optometrists tried to work out a referral relationship with a cooperative ophthalmologist and they enjoyed a more respectable, if limited, relationship. In these instances, the optometrist made the patient's appointment and used a referral form and/or requested a report on the diagnosis and final disposition of the case. In some cases a report on the patient was received, in some cases the patient was referred back to the referring optometrist, and in many cases the patient was never seen again. There were few good interprofessional referral relationships based on mutual respect and trust.

This uneasy eye care alliance troubled most optometrists who felt that it did not serve them or their patients equitably. There was a growing concern among the profession that their training was being underutilized and that the scope of optometry was eye/vision care. The loss of referred patients was leading to the families and friends of those patients "self-referring" directly to the ophthalmologist, bypassing the optometrist. The confusion, inconvenience and unnecessary cost forced on the patient provided additional motivation for the optometrist to look for a more viable relationship that recognized the unique capabilities of the optometrist and the ophthalmologist and the best interest of the patient.

In the early 1970s, a group of optometrists in the southern states organized and began, among other things, questioning optometry's referral relationships. In 1972, members of the Board of Trustees of the Southern College of Optometry and its alumni association formed the Vision Educational Foundation (VEF), an independent, not-for-profit institution in Memphis, Tennessee. In October, 1980, the Vision Educational Foundation opened an Eye Center in Atlanta, Georgia. They opened the VEF Eye Center of Oklahoma in 1985. The founders were Mr. Hunter K. Cochran, Dr. Frank Day, Mr. James P. Dodd, Dr. Spurgeon B. Eure, Dr. Earl R. Horn, Dr. Jesse Johnson Jr., Dr. Clarence I. McEachern, Dr. Rene Pigeon, Dr. Vonne F. Porter, Dr. Tom Scarbrough, Dr. Edward H. Shannon, Dr. Myron Shofner, Dr. Elmer B. Vaughn, and Mr. Charles Williams.¹

These centers were operated by an optometric board of directors. It provided for the delivery of secondary and tertiary levels of eye care. The premise of the centers was that referring optometrists would provide all primary care and refer their surgery and cases requiring consultation to the VEF Eye Center. The optometrist's patient was returned for post-operative care and all primary care. This procedure was assured by the board of directors and the optometric center director. Continuing clinical education

was an additional service provided to referring doctors as well as all optometrists practicing in Georgia. This pioneering effort was a landmark in interprofessional cooperation leading to the delivery of quality eye care to patients. Never before had optometry and ophthalmology worked together in greater harmony and never before had the eye care needs of the public been better served. In my view, VEF forever changed the optometrist's role in referral and consultation. In addition, remaining surplus funds after operational expense were used to build an endowment and have enabled the Vision Educational Foundation to contribute over one million dollars to the profession for tuition, student loans, funding of the Optometric Research Institute, and start up costs for five optometric referral centers.

Since 1980, when VEF opened the first not-for-profit comanagement center in Atlanta, over eighteen centers have opened throughout the country. In 1984, Omni Health Services assumed operation of the Atlanta center.¹

The VEF model encouraged each practitioner to practice at his or her highest level of training. The ophthalmologist did not prescribe or dispense glasses or contact lenses and recognized the optometrist's role in primary eye care. Continuing education, grand rounds, and clinical rounds were offered to the optometrist to enhance his knowledge and assist in maintaining clinical competency. Diagnosis, treatment and management modalities are constantly changing, requiring the practitioner to keep his/her armamentarium of skills current. Assisting in the endeavor was an important function of a comanagement and consultation model. The value of "hands on" training was emphasized. VEF offered the first flexible residency program. This program enabled practicing doctors of optometry to further their formal clinical training without leaving their practices for extended periods. The first laser capsulotomies were performed by the optometric clinical director of the Oklahoma City VEF center, where the first optometrists in Oklahoma were trained to use lasers. This led to the first law in the nation granting laser privileges to certified Oklahoma optometrists in 1998, followed by Kentucky in 2011.

In 1997, VEF disbanded and donated \$500,000 to the Southern College of Optometry (SCO). The SCO board approved a matching \$500,000 gift to establish an Instructional Technology Endowment Fund to enhance its educational program.²

While the comanagement movement was taking place, young ophthalmologists saw an opportunity to practice their first love, secondary and tertiary eye care and surgery enhanced by working with optometrists. The impact on this issue, as well as on diagnostic and therapeutic pharmaceutical agent legislation and managed care, have been additional contributions to higher quality eye care for the public.

The VEF comanagement model as well as others available today have helped assure the optometrist's role as a primary eye/vision care provider. The foresight of those pioneering optometrists who founded the Vision Educational Foundation and the many others who fostered and nurtured its development should be recognized for their legacy. They have left an indelible mark on this profession and its future direction.

References

- 1. Bucar A. Our optometric heritage, the beginning of ophthalmic comanagement. J Am Optom Assoc 1995;66:10-11.
 - 2. Foundation donated \$500,000 to SCO. AOA News Nov. 10, 1997:19.

Biographical Note on Harold Solan (1921-2012), Optometrist and Learning Disabilities Researcher

David A. Goss, O.D., Ph.D.

School of Optometry, Indiana University, Bloomington, IN 47405, dgoss@indiana.edu

Abstract

This paper gives a brief biographical sketch of the career of Harold A. Solan and discusses his five books.

Key words: optometry books, optometry history, learning disabilities.

Harold A. Solan (1921-2012) graduated from optometry school at Columbia University in 1949 after serving in the U.S. Air Force from 1942 to 1946 and receiving a B.S. degree from City College of New York.¹ While in optometry practice, he earned M.A. degrees in 1951 and 1970 from Teachers College of Columbia University in remedial reading and developmental psychology.¹⁻³ He was a lecturer at Columbia's optometry school from 1950 to 1956, and Director of Orthoptics at Harlem Eye and Ear Hospital from 1956 to 1960.¹ He was also a member of the psychology and education graduate faculties at Fairleigh Dickinson University for a number of years starting in 1963.

After closure of the optometry school at Columbia, Solan served as a consultant at the Optometric Center of New York. In 1981, he was recruited to the faculty of the State University of New York College of Optometry, soon after which he discontinued his private practice.⁴ From 1981 to 1991, he was director of SUNY optometry school's Learning Disability Unit.⁴

Solan's research on binocular vision, vision development, the role of visual function in reading, and the relation of visual information processing to learning disabilities was published in various optometry and education journals. Not only did his research help to show the significance of vision in learning, but he also spread the word of the importance of optometric care as part of a multidisciplinary approach for children with learning disabilities.⁴

Solan's work was recognized with the Skeffington and Getman Awards of the College of Optometrists in Vision Development in 1990 and 2007, respectively, being named a distinguished service professor of the SUNY College of Optometry in 1994, receiving the SUNY College of Optometry Benjamin Franklin Society Award in 2001, and being elected to the Optometry Hall of Fame in 2003.⁴⁻⁶ Tributes to Solan by former students and colleagues described him as very energetic, "pleasant, cordial,...exuberant..." and an "inspiration."

Among Solan's publications are five books. In 1968, he edited *Psychology of Reading Difficulties*. It is a collection of 36 reprints of papers, organized into four sections: Readiness Correlates; Visual, Auditory and Speech Correlates; Perceptual and Psychological Correlates; and Physiological and Neurological Correlates. Most of the papers were from education journals, with three from ophthalmology journals, four from optometry journals, and a few from other disciplines. Five of the papers, including a previously unpublished manuscript, were written by Solan. In the preface, Solan noted that: "The psychology of reading difficulties embraces numerous professional disciplines..." He suggested that the book would meet "the professional needs of students in education and psychology as well as the various medical disciplines." An optometric review of the book stated that: "Optometrists who are seeking authoritative material on learning disorders, and particularly reading difficulties, will welcome this book."

Solan edited another compilation of papers, *The Psychology of Learning and Reading Difficulties* (476 pages) in 1973. It was composed of 42 papers, 22 of which were in the 1968 book. Seven of the 42 papers were by Solan. The papers were arranged in five sections, with the same four section titles as in the 1968 book, plus a new section on Disadvantaged Children. Solan added a three or four page introduction to each section. Authorship was interdisciplinary, with contributors coming from education, psychology, psychiatry, optometry, pediatrics, ophthalmology, and speech and hearing. A book review noted that: "The optometrist who is interested in increasing his knowledge about children with learning and reading difficulties will benefit by reading this book. The editor has done a good job of selecting representative papers, and has presented these in an orderly fashion."

In a third book edited by Solan, *The Treatment and Management of Learning Disabilities* (1982, 399 pages), contributors from different disciplines explained their role and their evaluation and management procedures for learning disabilities. Solan wrote an introductory chapter, and along with Sidney Groffman, he wrote a chapter on "Understanding and treating developmental and perceptual motor disabilities." Another optometric contribution was "The diagnosis and treatment of functional visual disorders" by William Ludlam. Other professions represented were neurology, psychiatry, psychology, speech and language, audiology, and education. In the preface, Solan stated: "Although the multidisciplinary nature of Learning Disabilities has been recognized for some time, the scope of each of the several disciplines involved is often less well understood....We must facilitate the complete mobilization of our *combined* professional skills so that the benefits of the multidisciplinary approach will accrue to each learning-disabled child." (pp. ix-x)

Tests and Measurements for Behavioral Optometrists, by Solan and Irwin B. Suchoff (70 pages), was published in 1991. The authors explained concepts related to the standardization and interpretation of clinical tests, particularly those involving perceptual function. Topics included establishment of norms, derived scores such as z scores and standard scores, developmental norms, reliability, correlation, and validity.

A few years later, Sidney Groffman and Solan co-authored Developmental and Perceptual Assessment of Learning-Disabled Children (1994, 270 pages). In the preface, the authors stated that the book was "written for the optometrist interested in comprehensively assessing developmental and perceptual disorders in children who have been identified as reading- and/or learning-disabled....The authors' approach in this book reflects a model of visual perception that conceptualizes vision as a total process that is dependent upon and affects all aspects of human functioning." (p. i) The book consists of three parts: theoretical concepts, diagnostic testing, and perceptual analysis. The theory section discusses various concepts in visual information processing and the nature of those skills. The part of the book on diagnostic testing is composed mainly of descriptions of tests which evaluate aspects of visual motor function and visual information processing, such as eye-hand coordination, visual form perception, perceptual speed, visual memory, spatial relations, etc. The tests come from optometry, psychology, and education. The third part of the book includes some illustrative cases. The authors also emphasize the importance of good comprehensive reports because they may be sent to professionals in other disciplines.

Tributes to Solan from former students and colleagues make it clear that he had a positive influence on many lives. His books and papers demonstrate the importance of a multidisciplinary approach with the inclusion of optometry in the management of learning difficulties.

References

- 1. Directory of the American Optometric Association. St. Louis: American Optometric Association, 1972:332.
- 2. Solan HA, ed. The Psychology of Learning and Reading Difficulties. New York: Simon and Schuster, 1973:[xvii].
- 3. Press LJ. In Memoriam: Dr. Harold Solan 1921-2012. http://visionhelp.wordpress.com. June 22, 2012. Accessed Feb. 13, 2013.
- 4. Anonymous. Developmental vision pioneer Dr. Harold Solan remembered. AOA News 2012;51(1):22.
- 5. Press LJ. COVD: Recapitulating 40 years of excellence. Optom Vis Dev 2010;41:137-142.
- 6. Levin J. Optometrist Harold Solan, expert on learning disabilities. www.northiersev.com/obituaries. June 21, 2012. Accessed Feb. 13, 2013.
- 7. Maino DM. Harold Solan, OD, MA, FAAO, FCOVD: We remember. Optom Vis Dev 2012:43:102-105.
- 8. Hirsch MJ. The optometrist's bookshelf. Am J Optom Arch Am Acad Optom 1969:46:299-303.
- 9. Hirsch MJ. The optometrist's bookshelf. Am J Optom Physiol Opt 1974;51:433-440.

Louis L. DeMars and the DeMars School of Optometry

David A. Goss, O.D., Ph.D.

School of Optometry, Indiana University, Bloomington, IN 47405, dgoss@indiana.edu

The letter to the editor from Dr. John Schoen about the DeMars School of Optometry published in the last issue of Hindsight made me curious about that school. This brief note summarizes what I have been able to find out.

The owner and operator of the DeMars School of Optometry was Louis L. DeMars (1873-1945). DeMars was born in Massachusetts and moved to Minnesota as a child.¹ After graduation from Minneapolis public schools, he attended Northern Illinois College of Ophthalmology and Otology. He graduated in 1896, and established a private practice in Minneapolis.^{1,2} In the federal census for 1900 and for 1910, he gave his occupation as optician. In the census for 1920 and for 1930, he gave his occupation as optometrist.³ That change in identification probably reflects the fact that the term optometrist wasn't universally applied to those practicing optometry in 1900 and 1910. The 1920 census indicated that he was in private practice.

DeMars was one of the charter members of the American Academy of Optometry.⁴ In 1921, the American Optometric Association funded a conference to establish standards in optometric education. DeMars attended that important conference as a member of the International Federation of Optometry Schools.⁵ An obituary in the *Journal of the American Optometric Association* described him as "honest, conscientious," and "a natural born instructor."²

A 1923 biographical sketch of Louis L. DeMars stated that he conducted his school in Minneapolis for twenty-five years, but that it was no longer in existence at that time.¹ A news item in the *Optical Journal and Review of Optometry* of April 20, 1922, mentioned that representatives of the N.P. Benson Company "demonstrated different optical instruments to students at the DeMars School of Optometry in Minneapolis on April 12," so it was in operation at least as late as the spring of 1922. In 1920, the course of study at the DeMars School of Optometry consisted of 1,000 hours.⁷

The 1914 *Blue Book of Optometrists and Opticians* said that the DeMars School of Optics was established in 1900.⁸ It also mentioned that the school offered "courses for beginners and also post-graduate work." In the *Blue Books* up to 1922, the school was named the DeMars School of Optics; in 1922, the name was given as the DeMars School of Optometry. This is consistent with the fact that the practice of optometry was often referred to as optics in the early years of the twentieth century.

The 1922 *Blue Book* said that the subjects studied were physics, anatomy, lenses, physiological optics, subjective testing, objective examinations, ametropia, prescriptions and pathology. The 1922 *Blue Book* also noted that: "Dr. Louis L.

DeMars, president, is assisted by Dr. Eugenia W. Lierle as secretary, and Professors R.F. Schuck, C.P. Snyder, O.A. Norstrom, with Dr. McIntyre in charge of the subjects of Anatomy and Pathology." In a survey of 12,534 optometrists practicing in 1944, more than twenty years after the close of the DeMars school, 93 indicated that they graduated from it. Among the graduates of the DeMars school were Carel C. Koch, who was Secretary of the American Academy of Optometry from 1922 to 1925 and from 1944 to 1973, as well as editor of the Academy's journal for 44 years, and Ernest H. Kiekenapp, who was Secretary of the American Optometric Association from 1922 to 1957. 11,12

Acknowledgment

I thank Kirsten Hébert for bringing the excerpt of the Kiekenapp autobiography to my attention.

References

- 1. Bio of DeMars, Louis L., Hennepin Co., MN. Extracted from: Shutter MD, ed. History of Minneapolis, Gateway to the Northwest. Chicago: S.J. Clarke Publishing Co., 1923; II:394. http://files.usgwarchives.net/mn/hennepin/bios/1923/demarsll.txt. Accessed Feb. 21, 2014.
 - 2. Anonymous. L.L. DeMars. J Am Optom Assoc 1945;16:212.
 - 3. ancestry.com
- 4. Gregg JR. History of the American Academy of Optometry 1922-1986. Washington, DC: American Academy of Optometry, 1987:18,192.
- 5. Christensen JL. The first conference to establish optometric standards. Optom Vis Sci 1996;73:428-434.
 - 6. Opt J Rev Optom 1922; 49(16):48.
- 7. Cox ME. Optometry, the Profession: Its Antecedents, Birth, and Development, rev ed. Philadelphia: Chilton, 1957:47.
- 8. Blue Book of Optometrists and Opticians, 2nd ed. Chicago: The Optometrist and Optician, 1914:23.
- 9. Blue Book of Optometrists and Opticians, 6th ed. Chicago: Professional Press, 1922: 21.
- 10. Hofstetter HW. Optometry: Professional, Economic, and Legal Aspects. St. Louis: Mosby, 1948:296.
- 11. Bio of Koch, Dr. Carel C. (b. 1895), Hennepin Co., MN. Extracted from: Shutter MD, ed. History of Minneapolis, Gateway to the Northwest. Chicago: S.J. Clarke Publishing Co., 1923; II:233-234.
- http://files.usgwarchives.net/mn/hennepin/bios/1923/demarsll.txt. Accessed Feb. 21, 2014.
- 12. Excerpt from the unpublished autobiography of Ernest H. Kiekenapp, O.D., Minneapolis, Minnesota. American Optometric Association Museum and Archives.

Instructions to Authors

Hindsight: Journal of Optometry History is the official publication of the Optometric Historical Society (OHS), and, as such, supports and complements the purposes and functions of OHS. The journal publishes historical research, articles, reports, book reviews, letters to the editor, and article reviews. The topics of material published in the journal include: history of optometry; history of eye and vision care; history of spectacles, contact lenses, and other corrective devices; history of vision therapy, low vision care, and other vision care modalities; history of vision science; history of optometric education; biographical sketches of persons who have worked in or influenced optometry and/or vision science; recollections or oral histories of optometrists and persons who have worked in optometry-related fields; and related topics.

Material submitted for publication should be sent to the editor: David A. Goss, School of Optometry, Indiana University, Bloomington, IN 47405; dgoss@indiana.edu. Material may be submitted by postal service or by email, although the preferred mode of reception of submissions is a Word document in an email attachment.

Authors who wish to use direct quotations of substantial length, tables, figures, or illustrations from copyrighted material must obtain written permission from the publisher or copyright owner. Short quotations may be acknowledged by quotation marks and a reference citation.

Submissions should include a title, the names, degrees, postal addresses, and email addresses of the authors. Abstracts are not recommended for short articles. Abstracts and key words are recommended but not necessary for longer articles.

Tables and figures should be numbered sequentially in the order that the mention of them appears in the text, e.g., Table 1, Table 2, Figure 1, Figure 2. Each table and figure should have mention or discussion of it in the text of the article. Each table and figure should be accompanied by an explanatory figure legend or table legend. Any article containing tables should be submitted as a Word document attachment to an email message with the tables produced through the table creating function of Word (as opposed to an Excel or comparable spreadsheet).

Extensive use of uncommon abbreviations, symbols, and acronyms is discouraged. Common abbreviations, such as D for diopters or cm for centimeters, may be used. Common symbols, such as Δ for prism diopters, may be used when the context for their use is clear. The first use of acronyms should be accompanied by the name or phrase spelled out followed by the acronym in parentheses, as for example: The Optometric Historical Society (OHS) has produced a quarterly publication since 1970.

Acknowledgments should be placed between the text of the article and the reference section. Sources of support, such as grant funding or other significant assistance, should be acknowledged. The assistance of persons who contributed to the work may also be acknowledged.

References should be placed after the acknowledgments, and for most papers will be the last section of the paper. References should be numbered in order of their citation in the body of the article. Citations should be identified in the text by superscript numbers. Authors are responsible for ensuring that reference listings are correct. Reference format should be as follows:

Journal articles:

Calvo M, Enoch JM. Early use of corrective lenses in Spanish colonies of the Americas including parts of the future United States: reference to Viceroy Luis de Velasco (the son). Optom Vis Sci 2003;80:681-689.

Section in a single author book:

Hofstetter HW. Optometry: Professional, Economic, and Legal Aspects. St. Louis: Mosby, 1948:17-35.

Chapter in a multi-author volume:

Penisten DK. Eyes and vision in North American Indiana cultures: An historical perspective on traditional medicine and mythology. In: Goss DA, Edmondson LL, eds. Eye and Vision Conditions in the American Indian. Yukon, OK; Pueblo Publishing, 1990:186-190.

Citations to articles in *Hindsight: Journal of Optometry History* should be given as follows: Bennett I. The story behind Optometric Management magazine. Hindsight: J Optom Hist 2007;38:17-22.

If footnotes or notes on additional (minor) details are used, they should be marked in the text with superscript lower case letters starting with a and continuing in alphabetical order. The notes themselves should be the last section of the paper. The heading for the section should be Notes.

Optometric Historical Society Membership Application

Membership in the Optometric Historical Society (OHS) is open to anyone interested in the history of optometry, spectacles, vision science, or related topics. Membership includes a subscription to *Hindsight: Journal of Optometry History*.

To join OHS, send your address and a check for dues payment to:

Optometric Historical Society
Attn: Kirsten Hébert
American Optometric Association
243 North Lindbergh Boulevard
St. Louis, MO 63141

Check one:
_____ regular membership, \$25 per year
____ patron membership, \$50 per year
____ lifetime membership, \$250

Checks should be made payable to the Optometric Historical Society.

Name____

Address_____

City State Zip_____

A sample copy of *Hindsight: Journal of Optometry History* can be obtained by writing to the journal editor: David A. Goss, Hindsight Editor, School of Optometry, Indiana University, Bloomington, IN 47405; dgoss@indiana.edu, or back issues can be viewed at: https://scholarworks.iu.edu/journals/index.php/hindsight/issue/archive.

Institutional or library subscriptions to *Hindsight: Journal of Optometry History* can be obtained by following the above instructions for registering OHS membership and completing the above OHS membership application form.

Members of the Board of Directors of Optometry's Cares® – The AOA Foundation and the Optometric Historical Society (OHS) have signed a Memorandum of Understanding that places OHS under the auspices of The AOA Foundation. For more information about The AOA Foundation and the Optometric Historical Society, please visit www.aoafoundation.org and http://www.aoafoundation.org/historical-gems/.