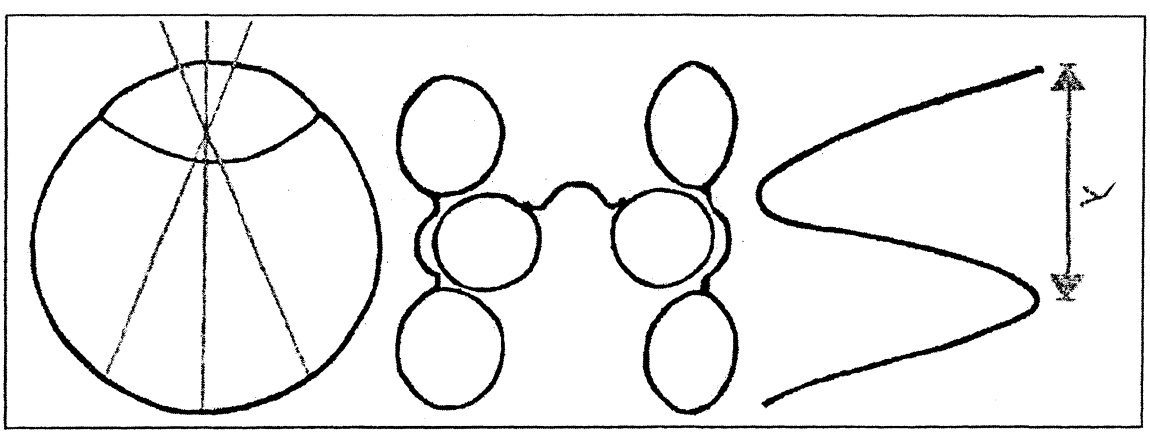
HINDSIGHT
Journal of Optometry History

October, 2008
Volume 39, Number 4



Official Publication of the Optometric Historical Society

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.

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).
Hindsight: Journal of Optometry History began in 2007 with volume 38, number 1.

On the cover: The drawing represents OHS for Optometric Historical Society: the O an elementary schematic of an eye, the H three intersecting pairs of spectacles, and the S a representation of a light wave with the Greek letter lambda indicating one wavelength. The drawing artist was Diane Goss.

OHS website: www.opt.indiana.edu/ohs/opthohiso.html

HINDSIGHT: Journal of Optometry History
October, 2008
Volume 39, Number 4

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

Contributing Editors:
Jay M. Enoch, School of Optometry, University of California at Berkeley, Berkeley, CA 94720-2020, jmenoch@berkeley.edu
Douglas K. Penisten, College of Optometry, Northeastern State University, Tahlequah, OK 74464, penisten@nsuok.edu.

TABLE OF CONTENTS

Low Vision Care in India: A Time for Action! & Issues Which Need to be Considered, *Jay M. Enoch*.....106

Biographical Sketch: Frederick W. Brock (1899-1972), *David A. Goss*.....120

Optometry in North Carolina: Calendar of Events in Legislation and Litigation Concerning Expanding Scope of Practice, January, 1971-May, 2008, *John D. Robinson*.....124

Recent Booklets and Video of Historical Interest, *David A. Goss*.....138

Recent Dissertation on the History of Spectacles, *Jonathan Erlen*.....141

Book Review: The Use of Eyeglasses, by Benito Daza de Valdes, *David A. Goss*.....143

Book Review: What is Medical History?, *David A. Goss*.....146

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.

Low Vision Care in India: A Time For Action! & Issues Which Need to Be Considered (Plenary Lecture, The 9th International Congress on Low Vision, July 10, 2008, 8:00 AM, Montreal, Canada)

Jay M. Enoch, Ph.D., Dr.s Sci. (h.c.)
Professor of the Graduate School, Dean Emeritus, School of Optometry, University of California at Berkeley, Berkeley, CA 94720-2020, USA, jmenoch@berkeley.edu

Abstract

With a national population now estimated at 1.1 billion people (and growing!), it is often stated that India accounts for 1/3 of all blind and visually impaired individuals in this World! If this statement is correct, this means that there are 5-6 million visually impaired and blind individuals in India! Although certainly real progress is being made, one can reasonably ask, is the existing organizational structure designed to serve the needs of so large a number of people, and are the necessary care-providers available to provide for visual rehabilitation requirements of this very substantial cohort of affected patients?

Both continuing growth and aging of the Indian population tend to challenge the capacity of that Nation to meet demands for ophthalmic services, as well as their ability to meet the visual rehabilitation requirements of this populace.

Modern optometry is, in many ways, a nascent profession in India. In behalf of the large cohort of visually impaired patients, I argue that a difference can be made through effective inter-professional cooperation between emerging modern optometry and more developed ophthalmology! I hope to see an increasing role for optometry in the provision of care for the visually impaired and blind in coming years.

Here, I discuss a number of issues pertinent to needs of the blind and visually impaired population, as well as means for enhancing applicable rehabilitation services.

Introduction

Within days after I was appointed as a new Dean at the School of Optometry in Berkeley in 1980, I was called before my new Provost of Professional Schools and Colleges, Prof. Doris Calloway. As Dean, I reported to her. I had never met her before that moment. Please note, in Berkeley, we rarely use last names.

I walked into Provost Calloway's office, we shook hands, and "right off the bat", she said to me in a very strong voice, "Jay, I pay you to be effective, not nice! If you can be effective and nice, so much the better! But be effective!" I quickly realized that

these were quite literally my marching orders as Dean! *And, she was just right!* In our various roles in this complex World, *in all things, we must seek to be effective*!

Why do I speak of India today? *I have been active in that Great Nation since 1984, that is, since shortly after the death of Prime Minister Indira Ghandi.* In India, I have played roles within both ophthalmology and optometry as teacher, as one of the founders of the Elite School of Optometry in Chennai, and as a member of their Board of Studies, as occasional clinician, and as clinical researcher. My main efforts have been concentrated at the Sankara Nethralaya in Chennai and at the Aravind Eye Hospital in Madurai. *I am told I presented the first-ever lecture on Low Vision and Vision Rehabilitation at an All-India Ophthalmological Congress.*

As a group we must search for means and needed resources to enable us both to enhance development of, and to provide *effective* visual care for the blind and visually impaired population(s) of India. Comparable requirements need to be provided in many other Developing World Nations. I will argue that optometry can play a more effective role in providing this care. So saying, I believe that the professions of ophthalmology and optometry need to work together towards this goal and in other matters where they share "a common cause".

We must never forget that fully 1/3 of all blind and low vision patients in the World are said to reside in India! *If there are about 16 million blind and visually impaired individuals in the World, that means we are speaking of 5-6 million individuals! While good progress in visual rehabilitation has been made in India, is the existing infrastructure set up to manage so large a population of affected individuals? Do we have the man (and/or woman) power among the eyecare professions or the rehabilitation workers, etc., to service the needs of individuals who comprise the visually impaired population? Are we prepared to address this challenge?*

The late Dr. Govindapa Venkataswamy of Aravind Hospital in Madurai repeatedly drilled into me that *37%-38% of eye camp patients needed only a refractive correction or a simple magnifier to meet their visual needs.* In addition, he also noted that this percent of patients was actually even a bit greater than those who required cataract surgery, and this substantial subset of patients could be treated more cheaply than those requiring surgery. Dr. Venkataswamy might have spoken with a soft voice, but he was never subtle!

In order to underscore his argument, he placed me on the Eye-Camp Committee at Aravind for a few years. In that role, I saw the regular tallies of data from the unending eye-camps organized and managed by the Aravind group. These were held mostly in Tamil Nadu in the latter part of the 1980s. Data and statistics, which I encountered in that role, rarely wandered from Dr. Venkataswamy's estimates. *It is important that we endeavor to help this group in the eye-camp population to attain useful vision.* Most of these patients do not have low vision, but a meaningful proportion of them do. If we can make possible this group's fuller participation in schools, or enable them to find useful employment, or, at the least, to be less of a

burden upon their families, this would be a major step forward! Stated another way, it is our collective duty to aid those with limited visual performance to recognize and to utilize objects-of-interest in their homes, at work, or in other environments, and to identify those individuals requiring further eye-care and/or rehabilitation services.

To assist those many individuals who can be helped by a satisfactory refraction, or a modest visual aid(s), we need to more effectively mobilize ophthalmologists, optometrists, and their associates. For patients with meaningful visual impairments which are not correctable, *we also need to develop cadres of trained individuals to provide these patients with effective training in mobility techniques, education in the use of aids-to-daily-living, and to offer them personal and vocational counseling,* and other critical services. Obviously, for those able to afford superior care, higher cost services and devices can be provided. On a sustained basis there is a need to make continuing substantial efforts to address the visual and rehabilitative requirements of this population. And such services need to be addressed broadly, that is, wherever they are not being currently met.

In order to fulfill our responsibilities regarding eye and vision care-provision to the visually impaired and blind populations, we need to consider a number of structural and organizational issues. The remainder of my talk will concentrate on such considerations.

Training Cadres of Technicians to Assess and to Properly Treat Low Vision and Blind Patients

For low vision rehabilitation services to be both successful and practical, existing teams of professionals, technicians, and providers are often utilized to teach established techniques and skills to newly recruited individuals. This becomes a repetitive cycle. *However, I want to interject some words of caution here.* We need to be aware that, in certain instances, by employing established techniques, we may encounter certain problems! That is, *though the intent is indeed well meaning(!)*, a scheme where one technician teaches or trains another technician, and that second technician now teaches yet another technician trainer, etc., after the second "generation" of trainees, this system tends to result in development of trainers who may not have been exposed to a broad enough sampling of patients, and/or they may come to their assigned tasks with too limited an acquaintance with the fundamental science (or sciences) associated with their assigned tasks! And, in turn, these deficiencies in necessary knowledge, or in broader applicable skills, can serve to limit their abilities to expand their own technical skills, and/or our capability to utilize these technicians fully in teaching other new workers.

While it is true that an individual can learn by rote, this can carry them only so far in their acquisition of a specific set of knowledge. Thus, we need to question, or at least restrain, that which used to be stated as a rather cynical witticism in clinical programs, as the "see one; do one; teach one" cycle.

Hence, if a professional practitioner, with a good foundation and reasonable instructional skills, teaches the first round of technicians, they will usually perform their tasks quite adequately. If that then newly trained technician communicates his/her knowledge or skills to a second set of students, up to a point, all may be well if both the program and associated processes are well-thought-out. That is, students having had reasonable subsequent experience can probably transmit their limited knowledge to a second set of individuals, etc., but it is not clear that by the "n"th round of individuals trained within such a system, if the then new trainees will receive an adequate non-rote learning experience. There needs to be periodic re-introduction of the original knowledge provided by the more experienced practitioner-teacher into the system at critical point(s) in such training programs. That same instructor also needs to introduce periodically needed applicable updates and corrections into the curriculum. And there needs to be provided a scheme for continuing education to aid these technicians to continue to grow, and to keep them current – *just like everyone else in the clinical milieu*!

Consider an Audio-Visual Approach

An alternative approach is to teach such material by using audio-visual material prepared by, or in close cooperation with the primary instructor(s). And, similarly, that material needs *to be upgraded regularly* (i.e., at a minimum of once a year). The trained teacher can supplement the audio-visual materials he/she develops by providing an additional period of time to see students who have used the audio-visual materials, and who have one or more questions concerning the contents of a given set of that material. If the audiovisual materials provided are of sufficient quality and provide suitable depth of coverage, the required question and answer time provided by the instructor is most often modest. This argues for the primary instructor to take great care in the preparation of his/her teaching segment(s).

Such a system was in place when I served as a faculty member at the School of Medicine at the University of Florida in Gainesville in the late 1970s. I had opportunity to study these techniques on multiple occasions, and to take courses in the application(s) of such techniques. They had the necessary methodology well developed at that time. There, I also had opportunity to watch my son and his classmates utilize this learning technique through much of their training in the then new University of Florida at Gainesville Dental School program. Each student *proceeded at his/her own chosen pace*(!) - a very impressive and useful technique! That is, each student takes *whatever time he or she needs to complete individual teaching modules*. This policy can be particularly effective when a heterogeneous group of individuals with non-common backgrounds is being trained. Today, my son is very successful orthodontist, and the same may be said of his several classmates.

Individual courses, or units provided within that dental program were quite straight forward, and they were placed in logical sets or sequences. Each course or segment of the program was composed of detailed sets of notes supported by 35 mm slides held in one or more Kodak Carousels which were placed into available slide projectors. Each segment and supporting materials could be checked out of a library-

like resource. In addition, added motion pictures were available on loan; and the students were offered periodic demonstrations of specific experiments, diagnostic techniques, and/or surgical procedures, etc. *There was a self-administered examination that the student had to pass at the end of each of the then 80+(?) training units, segments, or modules*, before beginning the next segment. If my memory is correct, remedial segments were also offered to those students who lacked or failed to retain certain preliminary/basic knowledge. All of these segments or component parts had to be completed successfully *before* the individual could enter the clinical phase of his or her training program.

Using this quite creative and interactive program, the classroom time spent by the professor was very limited, and he had more time for clinical work and teaching, laboratory research, and for providing scheduled supportive consultations to students as needed. Yes, the initial set-up or preparation of the program was time consuming, but if the material was regularly upgraded and updated, a major re-write or review was needed only every three to five years (as distinguished from the yearly update of the syllabus).

Today, we would employ a Power-Point display placed on CD-ROMs, or offer plug-in memory sticks, or, most probably, place the individual segments on-line on the World-Wide-Web. I suspect the programs would be also designed to be even more interactive, and would offer branching options, etc. In addition, there would be offered web-based links to critical selected URLs for readings and additional documents recommended to aid learning-in-depth.

Growth and Adequacy of Professional Services

We have seen great growth in the quality of ophthalmological programs, the numbers of medical practitioners, and more effective dispersal of eye-camp services in India. In the latter case, eye-camp services, I tend to prefer the Aravind principle where patients for eye surgery were most often brought by bus to the hospital-center for treatment. There, all needed resources and facilities were concentrated. And at the hospital-center, complications were minimized, and the capability for quick and appropriate response was available 24/7.

There has occurred a marked increase in cataract surgeries performed and other medical eye care provided in India, but for every advance, often there has been a near parallel increase or an even greater enhancement of the population needing to be served. And, not surprisingly, provision of care for the rural poor often remains less than adequate. Even with the improvements made, many among the blind and partially sighted populations remain under-served.

Today there are over 1,100,000,000 people living in India. While the Indian economy has unquestionably expanded in recent years, the vast rural population, where so many of the visually-impaired population reside, has experienced only small changes in their lives and lifestyles. That is, they seem not to have been full

participants in the recent expansion of Indian industrial and commercial society. I am sure we all feel this to be most unfortunate.

The Role of Optometry I

Today, the profession of optometry in India is experiencing a modest quickening! Some fine modern schools have been created, examples include: The Elite School of Optometry associated with the Sankara Nethralaya in Chennai; The Bausch and Lomb School associated with the L.P. Prasad Eye Center in Hyderabad; The Lotus School in Coimbatore; etc. Other new optometry schools exist, and others are in development. A number of older institutions seem ready to begin to make the transition to more modern formats and curriculums in optometry. There is an active movement towards national optometric recognition and licensure. Of course, there remains much work to be done. Recently, I discussed many aspects of this set of issues in my Palkhivala Oration.*

(*Jay M. Enoch (Invited): *The need for recognition, regularization and regulation of eye and vision care practices in India.* This Oration was presented as the Shri Nani Palkhivala Foundation Lecture, January 26, 2006, Chennai, Tamil Nadu, India. The text of this oration has been reproduced as a separate "Special Report" by *The Indian Optician*, January-February 2008, non-paginated, 24 pages; and it also has been printed in Hindsight: Journal of Optometry History April, 2008; 39(2):25-57.)

So saying, *the large majority of current "optometric practitioners" in India* have been trained far less adequately than that level of education provided in the more modern/emerging schools which offer four-year quality optometric training programs. The earlier-developed optometric programs, still extant, have not kept pace with development of optometry outside of India. The profession (or perhaps better stated) the various professions of optometry in India must get their acts together, in order to join modern optometry in this 21st Century of the Common Era! I have argued forcibly that these programs should coalesce about the four-year optometric training programs just mentioned. Indian optometric groups need to clean house and bring all of their institutions and curriculums up to a standard comparable with that of their stronger Schools and Colleges of Optometry and/or those existing now in quite a number of other Nations.

On a most positive note, I was impressed during my recent trip to India in January, 2008, by the use of examination-vans equipped with TV/computer linkages. These special vans are dispatched to rural and remote locations from the parent clinical center. These models of modern "Tele-Medicine" were effectively linked to the central (or base) clinic for consultation and advice on more complex cases. I watched this system operate with Dr. S.S. Badrinath at the Sankara Nethralaya College-Road Campus in Chennai, and I was most impressed. These well equipped vans were manned by optometrists. This same positive approach can be taken by many ophthalmic programs, which serve to bring eyecare effectively to rural and more remote locations. This is an important example of eyecare professions working cooperatively together in an effective manner in order better to serve India!

As I stated in my Palkhivala Foundation Oration, it is time for those identifying as optometrists to move past the archaic roles many of them still fill in India, and for the profession to serve much more effectively the vision and eye-care needs of this Nation. This includes playing a greater role in the examination for, and detection of ocular diseases and disorders. And this must be done cooperatively with those practicing ophthalmology. This is no small task, but in the final analysis, if properly managed, everyone gains.

The Role of Optometry II: Optometry may be the more effective group to lead and/or address needs of the visually impaired and blind!

I will now comment on what might be considered to be a somewhat sensitive topic. I have served with more than one ophthalmologist who either felt rather frustrated, or in other situations, felt that they had somehow failed in the care of some of their blind or severely visually impaired patients. I also have noticed some ophthalmologists experience discomfort when a patient who was totally blind, or nearly so, came to consult them in their office. Occasionally, they have commented to me on these issues. I found that except for attendant medical issues, many ophthalmologists (at that stage of care of their patient) felt that they had little more to contribute to these particular patients.

It is also true that the presence of a blind patient can be disruptive to patients who are sighted. In the presence of a totally blind patient, you can often observe restlessness among other patients in the waiting room of an ophthalmic practice.

The optometrist is obligated to refer the patient losing-sight for treatment to the ophthalmologist. In such situations, the optometrist, who often does not manage patients during the critical time period when they experience their major loss of vision, usually does not share the same sense of responsibility, or perhaps better, frustration, for that loss (whether it is the ophthalmologist's responsibility or not!). *In such instances, the optometrist may well be at greater ease relative to the provision of post-vision-loss care, and when offering these patients rehabilitative care.* So saying, I do not suggest that the ophthalmologist does not empathize with his/her patients; and I am sure he or she always wished for a more positive outcome!

In effect, this problem was addressed somewhat indirectly in a wonderful dialogue which I sought to reconstruct as accurately as I could in the obituary I wrote of my close friend (and one of my personal heroes!), the late and most distinguished Rector and Professor Hans Goldmann, M.D., of Berne, Switzerland. These remarks were made at a special Rounds program which I attended at Washington University in Saint Louis quite a number of years ago. On that occasion, Hans Goldmann described his own frustrations relative to provision of care for a gentleman who was rapidly losing vision due to open-angle glaucoma.**

(**Jay M. Enoch: Tribute: Hans Goldmann (1899-1991), Ophthal. Physiol. Optics July,1994;19:330-332. *or* Optom Vis Sci 1992;69: 168-169.)

I must admit, I have special admiration for clinicians who have the courage to describe their failures, or partial failures, in order to help guide others in the management of such patients. I quote from my obituary of Prof. Goldmann:

""At the time there was quite an ongoing debate about the value of a surgical technique called the Preziosi surgical procedure for reducing intra-ocular pressure in patients with glaucoma. This technique was then being used in Berne. At Washington University in Saint Louis, they were not having good results with this procedure. Thus, when Professor Goldmann visited Washington University, *he was asked a rather loaded question at Rounds,* it went something like the following: "Professor Goldmann, do you feel the Prezioso technique to be successful for treatment of glaucoma?"

""He paused a minute, and then responded approximately as follows: "A patient comes to me in his late forties. He is experiencing trouble reading, and I tell him he has open angle glaucoma, he is losing visual field(!), I prescribe medication, and I tell him he must return in a few months." The patient returns as requested, and says to me (that is, to Goldmann), 'Professor Goldmann, thank you very much for your diagnosis and treatment, but I still have trouble reading. In fact, I am having even more trouble reading when I take the medication!' I examine him, and I find the situation has become worse, and I must increase his medication. He comes back again a few months later, and he says to me, 'Professor Goldmann, I am really having great difficulty reading!' I have no choice but to respond to him, 'Mr. X, your glaucoma is much worse, I must perform some surgery.' I do the surgery, and as a result, perhaps 60%-70% of the time, I achieve improved control over his intraocular pressure. In the remainder of the cases, I do not achieve improved control. However, for the purposes of this discussion, let us assume this gentleman had a reasonably successful result. The patient later returns to me and says, 'Professor Goldmann, I know the surgery was successful, and I thank you very much for this. But to tell you the truth, I still cannot read well.'"

""Hans then turned to face directly the audience, and he said, "I ask you, do you regard this as a success?....Hmm?!...Hmm?!" Hans often used this locution..."Hmm?!" with his eyes gleaming and his fists clenched, as a means of emphasizing a point he was making. He was not questioned further on this issue! Goldmann cared very much about his patients.""

Based on many such exposures, I think it wise and wholly appropriate for ophthalmic professionals in India to consider enhancement of the role(s) played by optometrists in the management and provision of care for patients with severe visually impairments and blindness. Also, above, I suggested that there be trained added cadres of individuals who would minister to the needs of many of these patients. Logically, therefore, in India, I urge you to turn to optometrists and/or to optometric institutions for backup and guidance of such activities, and in the development of needed personnel. I also advocate that there be enhanced training in management of

low vision and blind patients by optometrists *per se*, and that they utilize this training in their practices as well.

The Economic Transformation Occurring in India

There is no question that the Indian economy has changed for the better in recent years. Today, India is exhibiting meaningful industrial and financial growth. Better roads are being built – particularly away from city-centers. And factories, from very large to small, are appearing across the country; educational institutions are proliferating; medical facilities are expanding in population centers, and so forth. As but one example, one needs only to consider development associated with a relatively new four-lane road built between Chennai and Bangalore.

On the other hand, when driving in, and or visiting rural communities, one sees only modest or limited changes from the past. While I am sure there are other alterations occurring as well, one does observe the presence of increased use of cell phones by individuals, and a boost in the presence of TV antennas in certain areas. Of course, these both are powerful tools or vehicles for education and change in society!

Otherwise, in recent visits, I have noted few signs of broad participation of the vast rural populace in an "Emerging India". If true, such a meaningful divide in appreciation of the benefits of economic and industrial growth can result in restiveness in so large a segment of society. One can deduce from the popular press that the same is occurring in rural China. Somehow, these governments need to enable their vast rural populations to feel that they are participating more fully in modern economic and social developments. It is easy to say that educational opportunities and health care need to be expanded in rural areas, but these are not easy tasks to accomplish!

In addition, somehow, there is need to meet the needs of the burgeoning population. The fact that the population has been and continues to age rapidly, also speaks to the need of providing more attention to the needs of the rural poor. Separately, one must also ask, how will agricultural production be further increased in order to feed adequately the growing population? I see very little un-tilled or un-committed land which remains available for development.

Bringing Eye Care to Rural Societies

When I was Dean of the School of Optometry at Berkeley, I learned how very difficult it is to induce young graduates from our institution to venture into rural communities in order to better serve these populations. *That is, in the U.S.A., we also are not successful in providing adequate and equivalent health-care services for our rural populations.* Stated alternatively, it would be very desirable to enhance vision and eye care in virtually all non-urban and non-suburban societies. I had hoped to achieve a comparable goal also in India. There, too, I was not very successful.

Let me help you to understand some of the reasons for difficulties encountered. For example, one rarely encounters large centers or concentrations of population in

agricultural regions. As a result, there is a lack of hospitals or appropriate nearby centers for referrals in support of medical practitioners. That is, MDs may not have meaningful facilities for advanced diagnostic testing of patients, or for surgery, or for necessary consultations.

Optometrists are not nearly so dependent upon such supportive services as are physicians, but some important common factors do exist. *One tool, which has been used successfully to enhance available health-care provision in rural areas, has been for society to offer to pay a student's tuition while in professional school, in return for their commitment to serve, subsequent to graduation, in a rural area for a defined period of years.*

Education of Professional Health Care Providers

Today in the USA, an optometrist goes to college for four undergraduate years, and that undergraduate training in optometry, like in medicine or dentistry, provides most all of the basic science pre-requisites required for success when these students attend their future professional school. *One might argue that the undergraduate program has become an integral part of the professional training of the health-care provider.* This is an important change from the past! In "the good old days" undergraduate school years were not nearly so focused, and there was time for a student to take a number of elective courses. That is, they were able to explore their individual interests in the sciences, in the arts, or in other disciplines.

Clearly, today, *the formal or classical "four-year professional educational program"* in medicine, dentistry, optometry, podiatry, pharmacology, etc., is *no longer sufficient to fully train the clinician!* Stated alternatively, in this age of information explosion, *there is just too much to teach* for the whole set of topics and subjects, *which need to be taught*, to be contained in that four-year period of professional education. This statement does not even consider the necessary broad exposure of the individual student to clinical populations of all sorts.

There have always been some undergraduate pre-requisite courses required for entry into the health professions, but today, *that list of pre-requisites is very long and engages the undergraduate for the large majority of his or her undergraduate training period.* The whole time period is nearly filled with the basic science prerequisites for the specific health care profession chosen. *And these prerequisites are very similar for all of the health sciences!* Included are the usual introductory biology, chemistry, physics and math courses. Today, there are also added required introductory courses which address the genome and genetics, biochemistry, cellular and molecular biology, pharmacology, human anatomy and physiology, statistics, etc. Each health group then adds on a few specific courses for their special purposes. Thus, in this day and age, the education of a health care practitioner in the U.S.A. is essentially *an eight year continuum from undergraduate training through professional school* and, in many cases, on into subsequent specialty training! Thus, the collegiate experience has changed dramatically, largely due to necessity, and partially by chance. And that is not the end of it. This entire set of issues is also of critical

importance to institutions in the Developing World as well! The pressures leading to such actions are or will be comparable there, and are of no less importance.

In my Palkhivala oration, I argued strongly that it was necessary to bring modern optometry in India up to a four year program after secondary school! *Will even that be enough for the future of the optometric profession in India!* Somehow, I seek or sought to convey the urgency of the problems faced by health care professionals in India without unduly alarming them. They need to become aware of realities extant in this World, in health-care provision, and in health-care education. It is no different for any of the health professions.

Turning attention to the USA once again, at the end of that eight year training period (i.e., the pre-health science program, and the health science school), many health care practitioners go on for further specialty-training as well. Today, for example, at Berkeley, about 30% of our optometric graduates (now not-so-young people) at Berkeley stay on for another year or two of specialization or fellowship and some others go on to an academic career. Thus, in the USA, optometrists literally train for 8-10 years before entering practice. In medicine, these training periods are even longer than in some of the other health-care professions. An associated problem not considered here, is for how many years very highly trained professional health care providers will be available to participate effectively in the work force after completion of their extended training periods? This question is important particularly for medical practitioners, and especially so for those who have chosen the surgical specialties where the duration of the residencies are often quite a bit longer.

Provision of Health Care for Rural Communities

Let us return to the issue of provision of health care to rural communities (anywhere!). Where, within rural communities, will very highly trained health-care providers live and work? By the time of completion of their training, many of these individuals are now married, and either have done, or are seeking to develop their families. *Where in the rural communities will they find their educational and social equivalents?* Those that live there, no doubt will mingle socially with the local physician, the dentist, the optometrist, the lawyer, the accountant (assuming they are also there and are of roughly equivalent age). That is, they will mingle with other professionals. And equally or more important, will these same (now highly trained individuals) be satisfied with educational opportunities available *for their own children* within such settings or locales? The short answer to such questions is that for such reasons, few of them will choose the rural environment for their professional career, and this situation is really not different in India or in any other nation! The problem is real; all of the health professions need to find adequate solutions to this existing (and growing!) set of problems.

As I stated before, I am sure most all of us will agree we must serve these rural, less densely populated, areas in a much more satisfactory manner. This is why, I found *the telemedicine option* mentioned above so very interesting! Surely, that is not

the whole solution, but some such schemes need to be developed in order to address these problems.

"Compassionate Capitalism"

I heard both Dr. Rau of L.V. Prasad and the late Dr. Venkataswamy address the general problem of "compassionate capitalism". This reminds me somewhat of pronouncements of our own government. President Bush has stated on occasion that he supports "compassionate conservativism". Some of our comedians point out that our government is neither "compassionate" nor "conservative"!

"Compassionate" as proposed here implies that this tool will be used with a sympathetic view, and with consideration of the individual person's special needs and resources. By inference, within such a system, those with limited resources are expected to pay a lesser charge than those with greater resources. "Capitalism" used here means the whole health care system needs to be self-supporting, integrated effectively, and logically organized.

As I understand the use of the term, "compassionate capitalism", as used by both Drs. Rau and Venkataswamy, it addresses the very real need to find ways to meet the real needs *and* costs of health (and other) care provision and services offered to those residing in the Developing World, and to do so within a viable health-care-delivery framework applicable to the area and nation where such activities are being carried out. The concept is quite rational in that it seeks to balance costs and services adjusted to an individual's ability to pay for those services. *At the same time, this approach places demands upon resources of the health delivery system.* It is necessary to provide trained social workers, or other appropriate individuals, capable of determining appropriate charges to be applied to individual patients for professional and other services and supplies rendered. This, too, can be a burden, particularly if the health care delivery unit is of modest size.

The Community/Agency providing service needs finally "to stand upon its own two feet" financially in a viable manner. Thus, each patient must pay what they can afford for their care. The general concept is critical if we are to succeed in offering quality low vision care to the many individuals who are not well-endowed fiscally. We cannot assume that organizations can always depend on either the Government (at any level), or Non-Governmental Organizations (NGOs) to finance activities of the health-care system.

What if Grandpa or Grandma is Blind or has Very Limited Vision?

Consider the near-total blind person (for example, say grandfather). *Often, in the Developing World, a responsible not-too young child or older adult, etc., is made available to offer care-provision to grandfather.* This individual also leads him about the village at the other end of a stick as is necessary - for whatever purpose. The old man can do little constructive work and either contributes minimally in the economy of the family or not at all. The second individual, the care-provider, who tends grandfather, is also limited in his/her contribution economically to the family because of

his assigned duty to look out for grandfather. This is a large burden on the poor family with limited resources! Two individuals at each end of the stick create meaningful financial and social problems for the well-intended family.

I have often asked why they don't consider broader use of the Hoover Cane in the Developing World? I would urge that these canes be painted white for visibility at dusk or at night, or that the white paint is applied in bands in order to enhance visibility. Is it not possible to free up the care-giver in at least some situations, or for some period of time, so that the individual can serve constructively as an economic provider, or go to school, etc.? Of course, all roads are not outstanding in rural India, but grandfather is not going to walk long distances either. Holes in the road or impediments near the home and immediate area can be filled in or repaired, etc.

In the management of low vision in India, I have long followed a *dictum* of Dr. Venkataswamy, that is, services and devices provided must work, be of modest cost, and their design must be simple and practical. The just mentioned Hoover Cane falls in this category.

In Conclusion

I have discussed a number of pertinent issues here, and I could go on for another hour or more in a similar manner. For example, I have hardly touched upon the substantial research required in behalf of these populations! Indeed, each of these topics and others are multi-faceted. While good progress is being made in India, I wonder if the existing program is adequate to serve the projected five to six million affected individuals located in that fine Nation? We need a program which will provide enhancement of residual vision, living conditions, and the quality of life of the partially sighted and blind.

Here, I use India as an example; this is a Nation with which I am familiar. So saying, this is not the only Developing Nation needing or deserving special attention. Such requirements are also great in most all Developing World Nations.

I feel strongly that the visual quality of life for many of these people can be enhanced through rehabilitative care of all sorts, including provision, if and when applicable, of visual aids, of mobility training, of utilization of aids for daily living, as well as access to counseling, and development of local centers for provision of such care. The latter may not measure up to the well known Kooyong Vision Center in Melbourne, Australia. These might be simply gathering or meeting places for the provision of care or for dispensing of needed supplies, training, and advice. To assist in these efforts, we need professional leadership at all levels, particularly from the eye-care community, and here I argue optometry can play a meaningful role, but I certainly do not exclude ophthalmology. In addition, we need cadres of adequately trained technical people as well. As is necessary, or as indicated, these same individuals also need to intercede in behalf of their patients. Hence, there needs to be a united effort made in their collective interest. And this should occur in real time.

Surely, no one would deny the visually-impaired populace a better, and a more satisfying existence. Poor sight often limits the lives of people; here, I call for our maximizing the capabilities of these five-to-six million people in order that they may be able to live a more normal existence, and to make more effective contributions to their society. *Above all, together, let us be effective in their behalf!*

Acknowledgements

I have discussed these remarks with a number of individuals. I particularly appreciate the critical comments provided by Professor Amanda Lueck of San Francisco State University, and Professor Olga Overbury of the University of Montreal.

Biographical Sketch: Frederick W. Brock (1899-1972)

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

Abstract

Frederick W. Brock was an innovator in the development of instrumentation and treatment strategies for strabismus and amblyopia. Brock was born in Switzerland and graduated from optometry school at Columbia University. This article provides a brief biographical sketch of Brock and an overview of some of his contributions.

Key words: *Frederick W. Brock, Brock string, history of optometry, strabismus, vision therapy.*

The name Brock is associated with several binocular vision testing and training instruments and procedures. The best known of these is the Brock string. The *Dictionary of Visual Science and Related Clinical Terms* includes Brock's scotoma box, Brock's luster method, Brock's Posture Board, Brock's rings, Brock's Stereomotivator, and Brock string.[1] A book of optometric eponyms contains five for Brock among its roughly 120 entries: Brock Basic Targets, Brock Posture Board, Brock rings, Brock stick and straw, and Brock string.[2] As an instructor in binocular vision, I was familiar with some of Brock's contributions, but I knew little else about him. This article summarizes what I was able to learn about Frederick Brock through a literature search and requests for archival resources.

Frederick Brock was born in Zurich, Switzerland, on December 4, 1899. His father, Arnold E. Brock, had an optical business in Zurich, dealing in spectacles, optical instruments, cameras, and photographic supplies.[3] Frederick's high school work included optical technician vocational training. After high school, he attended the University of Switzerland for two years.[4] There his studies included geometrical optics and instrument design.[3] When his father died suddenly, he left school and for a while he ran the business that his father had started.

After about a year, Brock found his interests to be "centered in the refractive procedure rather than in dispensing of optical goods."[3] As a result, he sold the business, and in 1921, he came to the United States to study optometry at Columbia University. Despite difficulty with English language, Brock graduated from Columbia in 1923 with "highest honors."[3]

Brock practiced briefly in Brooklyn and Staten Island, New York, before going to Jena, Germany, to study at the Zeiss Optical School for two years. Subsequently he opened an office in Staten Island, where he practiced for 41 years.[5] In 1935, in an era in which commercial practice was common, Brock bought a building and "tore out the

commercial front and put up a Colonial façade minus plate glass, minus signs and minus displays. A nameplate bears the only outside evidence of an optometric establishment."[6] Brock noted that such an environment "benefited [his] professional standing in the community. Patients showed greater willingness to pay for eye examinations and to make appointments for such examinations and the local physicians showed a greater willingness to refer patients."[6]

In 1966, Brock[7] recalled that a 1938 paper by F.H. Verhoeff in *Archives of Ophthalmology* led him to seriously study strabismus. Brock identified Verhoeff as "the first who tried to raise orthoptics from an art to a science."[7] The first of Brock's three decades of publications on strabismus, amblyopia, and visual training were five papers in the *American Journal of Optometry* in 1939 and 1940.[8-12] In 1940, Brock made a major presentation on Optometry Day at the New York World's Fair and he became the director of the Experimental Strabismus Clinic at Columbia University School of Optometry.[7]

Brock wrote numerous articles on strabismus and amblyopia, including two extensive series in *Optometric Weekly*. Segments of a series entitled Binocular Vision in Strabismus appeared in thirteen issues of *Optometric Weekly* in 1945 and 1946. His series Visual Training was published in three parts: Part I was split between eleven issues in 1947 and 1948; Part II was published in fourteen issues from 1950 to 1952; and Part III was found in 38 issues from 1955 to 1959. Most of Brock's work was published in *Optometric Weekly*, but a bibliography of his writings includes papers in journals such as *Canadian Journal of Optometry*, *Journal of the American Optometric Association*, *Archives of Ophthalmology*, *American Journal of Ophthalmology*, *British Journal of Physiological Optics*, *American Orthoptic Journal*, *American Journal of Optometry and Archives of the American Academy of Optometry*, and *New England Journal of Optometry*.[13]

Birnbaum[13] observed that Brock's "contributions far transcend his instrumentation and techniques, although the latter are certainly significant.... Brock developed instruments and techniques to serve specific purposes in keeping with the principles of vision training that he developed and/or espoused. Brock's insight into eccentric fixation and eccentric viewing preceded the work of Cuppers and Bangerter, and even preceded the development of the visuscope. Brock introduced the approach of training in the normal environment, in free space, with training devices that simulate reality and at tasks within the patient's capacity for achievement. He introduced the idea of establishing a binocular line of sight [superimposition of foveal images] in real space in strabismus training. Brock also pioneered in the use of large targets to stimulate and involve the retinal periphery in the achievement of fusion and stereopsis. He recognized the significance and value of peripheral fusion as an aid in facilitating binocular alignment." (pages 667-668)

Revell[14] stated that Brock's work "was marked not only by profound thought on the problems of strabismus but by numerous practical techniques and instruments to solve these problems." Wittenberg[15] noted that Brock's "investigations were almost

always directed toward illuminating some point of clinical relevance. Interestingly though, his written work almost always described studies within a theoretical rather than a clinical context. His writings tended to be an amalgam of abstraction and clinical observation....In his writings, Brock darted back and forth between the founders of binocular vision theory, contemporary researchers in vision, and his own simple tests."

In 1965, Brock brought in Israel Greenwald as an associate in his practice, and Greenwald eventually took over the practice. Greenwald attended the City College of New York for two years before his studies at the Pennsylvania College of Optometry, where he graduated in 1959.[16] Greenwald was Assistant Director of the Optometric Center of New York from 1960 to 1966.[16] The practice continues today with Greenwald and several other optometrists. In 1979, Greenwald published a 168 page book entitled *Effective Strabismus Therapy*.

Greenwald[17] observed that Brock had a fascination for how strabismics adapted to achieve spatial localization with their abnormal eye position. Brock felt that "vision appears to the strabismic to be anything but normal and seems to be alarmingly complicated and confusing."[17] Greenwald quoted Brock as saying that in strabismic seeing "each eye maintains its individuality and...visual impressions are cortically integrated by means other than fusion."[18]

One of Brock's last papers was a three part article in *Optometric Weekly* entitled "A Chronicle of Orthoptic History Covering 25 Years of Practice."[7] In that paper, he discussed his initial efforts in strabismus, how some of his concepts changed over the years, and some of the important principles in the treatment of strabismus and amblyopia. Another of his last papers was an overview of his thinking on the treatment of amblyopia.[19] Late in his career he also published a guest editorial in the *Journal of the American Optometric Association* encouraging optometrists to continue looking for new concepts and ideas in strabismus treatment.[20]

Brock was active in a number of local, state, and national organizations. Brock was one of the founders of the Richmond County Optometric Society and served as its president for several years. He was on the Research and Standards Committee of the American Optometric Association (AOA) from 1957 to 1959, on the AOA Standards Committee from 1959 to 1963, and on the AOA Committee on Orthoptics and Visual Training from 1963 to 1966, serving as the Chairman of the latter committee from 1963 to 1965. He received a Distinguished Service to Optometry award in 1944 and a Distinguished Achievement Award from the New York State Optometric Association in 1970. He received an honorary D.O.S. degree from Northern Illinois College of Optometry in 1942 and an honorary Sc.D. degree from Wagner College in Staten Island, New York in 1958. Brock died on August 1, 1972, while visiting his daughter in Stowe, Vermont.[5]

Acknowledgments

I thank Linda Draper of the International Library, Archives, and Museum of Optometry; Robert Williams of the Optometric Extension Program; and Elaine Wells of

the Harold Kohn Vision Science Library at the State University of New York College of Optometry for providing information that made this article possible.

References

1. Hofstetter HW, Griffin JR, Berman MS, Everson RW. Dictionary of Visual Science and Related Clinical Terms, 5th ed. Boston: Butterworth-Heinemann, 2000: 58, 60, 322, 404-405, 445, 478, 486.

2. Hendrickson H. Eponyms of Behavioral Optometry. Santa Ana, CA: Optometric Extension Program Foundation, 1993:14-19.

3. Anonymous. Optometry's galaxy, star II. Pennsylvania Optometrist 1943;3(5):4-5.

4. Anonymous. Frederick William Brock. Directory of the American Optometric Association. St. Louis: American Optometric Association, 1972:39.

5. Anonymous. Obituaries. Optom Weekly 1972;63:852.

6. Brock FW. Dr. Brock on validation. Pennsylvania Optometrist 1943;3(5):5.

7. Brock FW. A chronicle of orthoptic history covering 25 years. Optom Weekly 1966;57(5):25-31; 57(6):31-35; 57(7):23-27.

8. Brock FW. Investigation into anomalous correct projection in cases of concomitant squints. Am J Optom 1939;16:39-77.

9. Brock FW. Anomalous projection in squint; its cause and effect – new methods of correction; report of cases. Am J Optom 1939;16:201-221.

10. Brock FW. Dr. Verhoeff and anomalous projection. Am J Optom 1939;16:322-324.

11. Brock FW. Projection habits in alternate squints. Am J Optom 1940;17:193-207.

12. Brock FW. The cortical mechanism of binocular vision in normal and anomalous projection. Am J Optom 1940;17:460-472.

13. Birnbaum MH. Perspectives on the contributions of Frederick Brock. Am J Optom Physiol Opt 1981;58:667-670.

14. Revell MJ. Strabismus: A History of Orhtoptic Techniques. London: Barrie & Jenkins, 1971:70-71.

15. Wittenberg S. Brock's research in stereopsis. Am J Optom Physiol Opt 1981;58:663-666.

16. Anonymous. Israel Greenwald. Directory of the American Optometric Association. St. Louis: American Optometric Association, 1972:133.

17. Greenwald I. Frederick Brock...an optometric giant. J Optom Vis Dev 1993;24(2):4-7.

18. Greenwald I. Strabismus: Brock's Influence on New Therapies. Duncan, OK: Optometric Extension Program Foundation, 1981-82:1.

19. Brock FW. The care of the amblyopic child – an overview. Am J Optom Arch Am Acad Optom 1967;44:42-55.

20. Brock FW. Guest editorial: Quo vadis. J Am Optom Assoc 1965; 36:620,656.

Optometry in North Carolina: Calendar of Events in Legislation and Litigation Concerning Expanding Scope of Practice, January, 1971–May, 2008

John D. Robinson, O.D.
Executive Director, North Carolina State Board of Examiners in Optometry, 109 North Graham Street, Wallace, NC 28466, exdir@ncoptometry.org

1971 - North Carolina Controlled Substances Act completely revised as Article 5 of Chapter 90 of the General Statutes. Optometry is included within the definition of "practitioner" (until further amended in 1981 and 1987, the practitioners were referenced by Article of licensure, i.e. optometry being Article 6).

1973 - A bill re-writing the optometry act in its entirety is introduced. Midway during the session, the definition section (90-114) was separated from the remainder of the bill because of the controversy surrounding the expansion of the scope of practice. The bill without the change in scope of practice was enacted into law.

1975 - There were no legislative bills introduced on behalf of the profession; however, the Society was actively involved in educating the practitioners by providing the opportunities to complete transcript education in the field of pharmacology and in the diagnosis, treatment, and management of ocular disease in order to support legislative efforts to expand the scope of practice in 1977.

1977 - Bills were jointly introduced in the House and Senate to re-write G.S. 90-114 to allow the use and prescription of pharmaceutical agents in the practice of optometry of the eye and its adnexa. The Senate bill passed in May of 1977 and was sent to the House of Representatives. The House version of the Bill was then set aside and the Senate version was placed on the House Calendar. After brief debate and without further amendments the Bill passed the House on June 7, 1977 and became law with the effective date being July 1, 1977. During the next several weeks the Board began the process of certifying those licensed optometrists who had successfully completed the course in ocular pharmacology and therapeutics for practicing optometrists conducted by the Pennsylvania College of Optometry over the preceding 18 months to begin the use of and prescribing of pharmaceutical agents in the practice of optometry effective July 1, 1977.

1979 - No legislation was introduced on behalf of either optometry or ophthalmology.

1981 - A bill was introduced on behalf of ophthalmology to repeal the new optometry definition (90-114) and replace it with the one that existed prior to 1977. This bill never made it out of committee.

1983 - Another repeal effort was made to limit optometrists to the use of diagnostic drugs only. As was the case in 1981 the bill never made it out of committee. During both the 1981 and 1983 sessions there was some testimony given by representatives of the North Carolina Society of Ophthalmology alluding to optometric mismanagement that had resulted from the use of drugs by optometrists since the law was changed in 1977.

1984 - The Board received a copy of a document purported to be evidence of 173 cases of optometric mismanagement in North Carolina that was presented to members of the Nebraska legislature at a hearing in that state. The investigation, hearing and litigation lasted through July 1, 1987, at which time the Board concluded its investigation and hearing and entered an Order wherein it was stated that no substantive or credible evidence existed to support the allegations of the North Carolina Society of Ophthalmology.

1985 - Another repeal effort was made but failed to make it out of committee; and the Board of Medical Examiners attempted to prevent optometrists from engaging in post-operative management of cataract patients by transmitting the "Views of the Board" relating to the post-operative care of cataract surgery patients for publication in the North Carolina Medical Society Journal; said view being that such practice was the practice of medicine and was not within the lawful scope of practice of optometrists.

1986 - An Attorney General's ruling was issued which nullified the view of the Board of Medical Examiners and stated that post-operative care of cataract patients was within the scope of optometric practice as defined by law.

In May of 1986, the North Carolina Board of Medical Examiners brought certain charges against Dr. Steven White, the substance of which focused upon the postoperative care of cataract surgery patients by optometrists.

1987 - A malpractice law suit is filed against an ophthalmologist and his Clinic alleging unnecessary surgery. The complaint named an optometrist as a co-conspirator though the optometrist was not sued; however, based upon the filing of the lawsuit and the optometrist being named in the allegations, the Board of Optometry instituted a probable cause investigation on the grounds that if the optometrist committed illegal acts as set forth throughout the very lengthy list of allegations, then there would be grounds for disciplinary action by the Board of Optometry. In May of 1990 the Board issued its order of "No Probable Cause" in the case of the optometrists and that all acts and procedures performed by him were within the legal scope of practice of optometrists in North Carolina and that there was no evidence to suggest that the patient was referred for surgical consult and eventual surgery unnecessarily. The final document that set forth the findings by the Board along with all the attachments included some 100 pages. The law suit filed against the ophthalmologists and his Clinic was eventually thrown out of Court.

1987 - In September of 1987, Dr. Steven White and the Board of Medical Examiners entered into a Consent Order wherein it was acknowledged that optometrists were allowed to participate in the post-operative care of surgery patients.

1988 - Senator Heinz holds hearings in Philadelphia concerning the issues involved in cataract surgery, referrals and optometric post-operative following. Drs. Wright and Bowers introduce the "mismanagement" issue in North Carolina into the record. Extensive rebuttal was added to the record by the North Carolina State Board of Examiners in Optometry relative to the previously discredited allegations by these same individuals.

1989 - Senator Ezzell introduces a bill to clarify the medical practice act and re-define surgery to include post-operative care. The effect of the bill would have been to literally eliminate optometrists from caring for any patient whose diagnosis would indicate that they would need surgery; since the definition of surgery (currently undefined by law) would, if the bill were enacted, encompassed pre-operative, peri-operative and post-operative care. This bill failed to come out of committee.

1990 - The suit filed against the ophthalmologist for unnecessary surgery is thrown out of court. May 16, 1990 the Board of Optometry issued a No Probable Cause Order in which the optometrist whose name appeared in the original complaint filed against the ophthalmologist had violated no laws, rules or regulations governing the practice of optometry, nor was there any departure from the acceptable standards of care.

1991 - Senator Ezzell who had become the chief advocate of ophthalmology's position in the legislature was killed in an automobile accident in Raleigh shortly after the beginning of the 1991 Session. It was anticipated that he was prepared to once again introduce legislation similar, if not identical, to the bill he had introduced in 1989.

In May, Representative Ed Nye introduced House Bill 997 which would establish both peer review for optometrists and optometrist's privilege. The bill languished in committee until it died because of lack of action during the 1992 session.

1992 - At its planning meeting, the Society's Executive Council discusses the issues surrounding Peer Review and Privilege with an eye towards having the bill reintroduced in the 1993 Session.

There were communications between the Board and the Society relative to the problems at the Department of Human Resources with the acceptance of the CPT codes that were in effect at Medicare. A revised list of Codes was submitted to the Board on behalf of the Society by its third party committee. At its meeting in November, the Board approved and forwarded to the Society, those codes that were determined to be within the scope of optometry. A number of the codes approved were dependent upon the fact that the optometrist billing the code was qualified by training and experience to perform the procedure; and further, that any special instrumentation

and/or facilities necessary are available and that physician consultation as might be required are available and properly documented in the patient record.

1993 - The Executive Council unanimously approves the previously introduced Peer Review bill that included patient privilege as the number one legislative priority in the 1993 Session of the General Assembly.

HB 987 is introduced by Rep. Ed Nye on April 19, 1993, passed the House with minor amendments and was sent over to the Senate on 7/24/93 where it can be acted upon during the 1994 Session.

A number of other bills dealing with Health Care Reform or that in some way affect optometry were also introduced. Some were enacted into law while others were held over until the 1994 Session. If optometry's current legislative efforts that began with the 1993 Session continue to be successful in the 1994 Session, the profession will have continued to move forward in positive fashion and will be well positioned in the Health Care Reform efforts at the State level.

In that fall of 1993, negotiations between the Society and the Department of Human Resources resulted in the acceptance of the CPT codes approved by the Board. In November of 1993, these codes were published in the Medicaid monthly bulletin. In December of 1993 there was a tremendous uproar from ophthalmologists. Both the ophthalmologic and medical society news letters have devoted the most recent mailings to this issue. On December 21, the Board of Optometry was asked by Attorneys for the NC Society of Ophthalmology to furnish them with copies of all documents in the possession of the Board that related to the Board's approval of the Codes that were published in the November Medicaid Bulletin.

In conjunction with the first Executive Council Meeting following the Spring meeting, the President of the Society called a meeting of a "Special Committee" with a broad representation of the Society including some past presidents and others who have played recent leadership roles in the Society with the goal of identifying and prioritizing those issues that must be addressed by the Society both legislatively and educationally over the remainder of this decade. This committee met for a second time in November at the Fall meeting in Asheville.

1994 - On February 2 and 3, 1994 the President along with a small team travel over the State bringing together all of the officers, trustees, district presidents, committee chairmen and committee members, and the past presidents of the State Society as well as the entire membership of the Society to lay out the plans for optometry's future in North Carolina as we approach the 21st Century.

The North Carolina Medical Society, having received a Declaratory Ruling from the Board of Medical Examiners concerning the use of some 150 CPT Codes accepted for billing by optometrists by the North Carolina Department of Human Resources in

their administration of the Medicaid program requests a Declaratory Ruling by the Board of Optometry relative to these same codes.

The Board of Optometry issues a Declaratory Ruling affirming the use of most of the Codes at issue as being within the scope of optometry.

The Medical Society is successful in getting a temporary restraining order that prohibits the Department of Human Resources from paying for those procedures represented by the Codes at issue.

The Board of Medical Examiners joins the Medical Society in the Law Suit and the North Carolina State Optometric Society joins the Suit on behalf of the Board.

In March, Judge Barnett of the Wake County Superior Court issues a temporary injunction that prevents optometrists from performing any of the procedures at issue pending a final ruling by the Court.

Both sides proceed to file briefs and the Board of Optometry and the Society file appeals with the Court of Appeals.

Negotiations get under way between Attorneys for both sides in an effort to settle the matter. In June an agreement is reached and the Injunction is dissolved leaving optometrists free to perform "core" procedures such as foreign body removal and irrigation of the lacrimal system with or without punctal plugs as procedures authorized to optometrists by the board prior to the filing of the law suit and the issuing of the temporary injunction. Settlement of the remaining codes was not reached; however, the injunction denying their use by optometrists was dissolved.

In July the peer-review and patient privilege bill that had passed the House during the 1993 Session of the Legislature, dies in a Senate Committee with the adjournment of the 1994 Short Session.

During the last weekend in August there is a joint meeting between the elected officers and trustees of the Society and the State Board. While there were no official minutes or reports coming form this meeting there was a consensus from each reporting group that concerted efforts were made to define the quality and availability of continuing education available to practicing optometrists in North Carolina in light of expanding scope of practice and new technologies. The legislative goals previously set forth by the Amplification Committee and reported to the Society served as the template for most of the discussions.

At the November meeting of the Executive Council, prior to adjournment, there was another review of the legislative goals for the upcoming session of the General Assembly. Without a single dissenting vote the Council supported its previous decision to move ahead. The fact that there was a Republican sweep in the recent elections and the fact that they would control the House of Representatives for the first time in this

century was not seen as an obstacle because of the grass root efforts of optometrists over the state. Dr. James Black moves from being the Majority Whip to the Minority Leader in the House of Representatives for the 1995 Session.

1995 - On January 30, Representative Mike Wilkins (D) from Roxboro introduced the House Bill 50 entitled "An Act to Enhance the Role of Optometrists in Medical Cost Containment Through Revision of the Hospital Privileges Law, to Repeal the Requirement for an Optometrist to Collaborate With a Physician in the Use or Prescription of Certain Pharmaceutical Agents, to Establish Peer Review for Optometrists, and to Establish an Optometrist Privilege." Representative Wilkins was joined in the introduction of this bill by 18 of his fellow legislators. The bill was referred to the Rules Committee where it will remain until it is referred to another House Committee, most likely to the Insurance Committee.

Evidence of medical opposition begins to mount. Correspondence over the signature of Scott Bowers, M.D. as legislative chairman of the North Carolina Society of Ophthalmology alleges that there are "hundreds" of cases of mismanagement by optometrists – some leading to patient harm that have been documented by physicians. The degree of medical opposition is greater than anticipated, especially as witnessed by the large role apparently being played by the Medical Society.

On March 7, House Bill 50 is finally moved from the House Rules Committee to the Judiciary 1 Committee of the House for hearing. A hearing is tentatively scheduled on Tuesday, March 21. On March 14, the Executive Council meets and reaffirms the society's commitment to the wording of the bill without any substantive amendments.

On April 20, House Bill 50 passes the Judiciary 1 Committee of the House by a vote of 12 to 7 and is returned to the House Rules Committee for calendaring. The chairman of the House Rules Committee, Rep. Morgan with the support of the Speaker and a number of the Republican leadership holds the bill until the adjournment of the 1995 session. The Bill dies.

April 3, 1995, Senate Bill 573 is introduced and is identical to House Bill 50 which is languishing in the House Rules Committee. On April 13 the bill passes the Senate Health Committee without amendments by a vote of 13 to 6. On April 17 it passed the Senate by a vote of 40 to 6 and is sent to the House where it was sent to the House Rules Committee. It was sent to Judiciary 1 where it passed by the same vote as did House Bill 50 some weeks earlier. It was returned to the House Rules Committee where Rep. Morgan held it until the 1995 session adjourned. Since it was a Senate Bill and having passed on House, Senate Bill 573 was held over until the 1996 Short Session.

1996 - February 1996 until July 1996, Rep. Morgan, again with the support of Speaker Brubaker and most of the Republican leadership held the bill in his committee and it died with the adjournment of the 1996 Session.

1997 - Early in the 1997 Session with the Republicans still in the majority in the House of Representatives, Representative Larry Justice, a Republican, introduced HB 527 which:

1. removed the "communication and calibration" clause from the GS 90-114. The removal of this language allowed optometrists who were certified to use and prescribe pharmaceutical agents in the practice of optometry to use and prescribe any medication, including systemic medications, to "correct, relieve or treat defects or abnormal conditions of the human eye or its adnexa."

2. recognized optometrists along with physicians, dentists, and podiatrists as independent practitioners to whom a hospital might grant privileges within their education, training, experience and demonstrated competence.

3. recognized the authority of the Board to enter into agreements with the Society for the purposes of peer review activities.

4. established "optometrist/patient privilege" and protects communications between optometrists and their patients in a manner similar to physicians, psychologists, lawyers, ministers and a number of other professions.

The bill cleared the Judiciary committee by a comfortable majority and, thanks to the work of the Society leadership and the optometrists across the state during the election cycle between the 1996 and 1997 sessions the bill was calendared by the Republican leadership in the House for a vote this time around. It passed the House overwhelmingly and was sent to the Senate. In the Senate there was an attempt to amend the bill in committee with a minor amendment. This was an attempt to "slow the bill down", since any amendment would require that the Bill be returned to the House for concurrence. The amendment attempt failed, the committee reported the bill out with a favorable report and it went on to the Senate floor for a vote where it passed overwhelmingly. Governor Hunt signed it into law on May 22, 1997.

1999 - The Democrats once again in a majority in the House of Representatives. By a margin of only one vote, Dr. Jim Black was elected Speaker. This narrow margin resulted from an attempt by the Republican minority to forge a coalition between themselves and the "Black Caucus" to elect former Speaker, Dan Blue, Speaker. A bill that would allow "any willing provider" to participate as a provider on any managed care panel was debated a length in committee before finally being reported to the House where it passed comfortably, despite intense lobbying by the insurance industry. In the Senate it remained "locked" in committee until the end of the Session; however, because it had passed House before the adjournment, the House and Senate Rules allow the bill to be carried over to the "short session" which convenes in May of 2000.

In February a meeting was held between the Board of Optometry and representatives of the Medical Board to review with them the education of optometrists, including the clinical training in the use of injections. Course outlines of the curriculum

at the Southern College of Optometry were given the representatives of the Medical Board by a faculty member of the college who taught some of the courses in the outlined in the notebooks that were provided. As course director for the clinical portions that including training in performing injections she went into great detail of the training provided and the safety of the procedures as they were performed in the State of Tennessee for a period of nearly five years.

2000 - The managed care bill providing for "any willing provider" in eye care remained in the Senate Committee where it died with the adjournment of the 2000 Session.

The Representatives of the Board of Optometry and the State Optometric Society met with the Medical Board and representatives of the Society of Eye Physicians and Surgeons to discuss the amending of the earlier CPT Code Agreement to include a number of injection codes that could be performed by properly trained and licensed optometrists. At its June 2000 meeting the Medical Board voted to amend the Agreement to include the CPT Codes under discussion. Two months later, however, following a storm of protest from the State Medical Society and the Society of Eye Physicians and Surgeons, the Board rescinded its previous action and formed to a joint collaborative committee with representatives from the Medical Board, the Optometry Board, the Optometric Society and the Society of Eye Physicians and Surgeons to study the matter further and to recommend criteria for certifying optometrists to do the procedures in question. Following a series of meetings over a period of a year with talks going nowhere, the committee was dissolved.

2001 - Dr. Black is re-elected as Speaker of the House, this time without the fight that occurred in 1999 (differences were worked out prior to the opening of the Session); however, his democratic majority was slim.

A managed care bill similar to the one introduced in 1999 was introduced, passed the House by a comfortable margin and is currently in a Senate Committee where it is being held, a situation similar to that occurring in the 1999-2000 Sessions.

After a number of meetings the Committee of the Optometry and Medical Board and the two Societies was disbanded, unable to reach any agreement on the CPT Codes in question.

At its July 2001 meeting, the Board of Optometry unanimously passed a resolution that in its opinion the CPT Codes that included the use of injections by properly trained and licensed optometrists were within the lawful scope of the practice of Optometry, and that the Board intended to proceed to establish educational and training criteria for certifying optometrists to perform the procedures in question. A copy of the Board's Resolution was forwarded to the Medical Board immediately following its passage. Upon receipt, the Medical Board notified that it would be placed on the agenda of their August 2001 meeting for consideration.

2002 - At its meeting in March the Board approves the Southern College of Optometry in Memphis, TN as the provider of an injections course that includes a "wet lab" and final examination as the sole provider of a course that when successfully completed would qualify a North Carolina licensed optometrist to be credentialed to perform injections in the treatment of chalazia.

In June the first 20 optometrists to become eligible for credentialing in the performance of injections in the treatment of chalazia successfully completed the course given by the faculty of Southern College of Optometry.

A series of memoranda from the Board concerning its plans for the credentialing of optometrists to perform injections were mailed to all licensees announcing the requirements and plans for the State Society's offering of additional courses by the Southern College of Optometry to be given at its Fall meeting in Asheville in November.

In late October the President of the Board received a letter from the President of the Medical Board that the Medical Board *may* consider injections by optometrists as the unauthorized practice of medicine and *may* pursue legal remedies to prevent them from doing so.

At its November meeting the Board postponed further action on credentialing its licensees until it could consult with its attorney.

In December, prior to the time the Board could reconvene its meeting to consult with its attorney, the Medical Board's Policy Committee announced that the issue of optometrists performing injections would be on its December agenda. At this meeting the Committee voted unanimously to authorize its attorney to attempt to arrive at an agreement whereby the matter of "injections being performed by optometrists" could be put before a proper court for a ruling as to whether such procedures would be considered the unauthorized practice of medicine. The Board of Optometry will meet in early January, 2003 to confer with its attorney as to how it should proceed.

2003 - After a number of votes by the House of Representatives that resulted in the lack of a majority vote for Speaker, Dr. Black, a democrat, is elected as "Co-Speaker" with Representative Richard Morgan, a republican who had served as Speaker when the republicans controlled the House.

In November the State Board of Optometry filed a lawsuit against the State Board of Medicine in the Wake County Superior Court over the rights of the Board of Optometry to credential properly trained and experienced optometrist to perform injection procedures so long as such procedures were for the purpose of "diagnosing, treating or managing conditions of the eye and its adnexa".

2004 - In November, a year after the filing of the lawsuit, the North Carolina Society of Eye Physicians and Surgeons (SEPS) files a petition with the Court to intervene in the

lawsuit. The petition was denied by the Court and SEPS appealed this decision by the Superior Court to the North Carolina Court of Appeals.

SEPS files a Request for a Declaratory Ruling with the Medical Board concerning the identical injection procedures that are the subject of a lawsuit filed by the Board of Optometry against the Medical Board.

The Board of Optometry asks the Court for an injunction to prevent the Medical Board from proceeding with the issuing of a Declaratory Ruling on a matter properly before Court.

The Court issues a restraining order whereby the Medical Board could conduct hearings but could not issue a Declaratory Ruling so long as the matters at issue were before Court. The Medical Board files a motion to appeal the decision to the North Carolina Court of Appeals.

2005- Dr. Black, with the democrats in the majority, was elected as Speaker.

In January a mediation hearing as required by the Court was conducted with representatives of the Optometry and Medical Boards present. After some 4 or 5 hours of negotiations it was determined by the mediator that the parties were unable to reconcile their differences and the mediation was ended.

On February 16 the Medical Board conducts the first two hearings on the Request for a Declaratory Ruling by SEPS. At this hearing (except for remarks made by the Optometry Board's attorney toward the end when asked if he had any comments) only those representing SEPS offered testimony.

On March 18 at the second hearing the Board President and the Executive Director testified on behalf of the Board of Optometry. Also offering testimony on behalf of the Optometry Board were Dr. Joan Miller from Oregon and Dr. Dennis Matthews from Tennessee who testified on the performance of the procedures by properly trained and licensed optometrists in their respective states without incidence over a period of years. Several others appeared to speak on behalf of SEPS.

In late June or early July word reached the Board of Optometry from the Medical Board that there were now positive indications that the injection issues could be resolved between the two Boards.

A request for a second mediation conference based upon the appeals at the North Carolina Court of Appeals was received.

On July 27 the second mediation conference was held. Following nearly 12 hours of negotiations between representatives of the Medical Board and the Board of Optometry a Memo of Settlement drawn by the mediator with the two parties participating was signed by the Presidents of each of the Boards.

At its meeting on July 29 the Board of Optometry unanimously agreed to approve the Memo of Settlement and authorized its attorney to proceed to work with the attorneys for the Medical Board in order to draft a Settlement Agreement for signature by the Presidents of the Board of Optometry and the Medical Board on behalf of their respective Boards. The following week word was received that the Medical Board had voted at a specially called meeting to approve the Settlement Agreement and to authorize their President to sign it the Medical Boards behalf.

On Saturday, August 13, 2005 the Presidents of the two Boards signed the Settlement Agreement agreeing to the use of three injection procedures by properly trained and credentialed optometrists. In return the Board of Optometry will seek dismissal of its lawsuit against the Medical Board. The injection procedures agreed to are for treatment of chalazia, periocular injections except for the purpose of cosmesis and excluding injections into the extra-ocular muscles, and to perform flourescein angiography. Further, this Agreement between the two licensing Boards supersedes the 1998 Agreement as amended going forward.

On Wednesday, August 17, the Optometry Board dismissed its lawsuit against the Medical Board. On Friday, August 19 the Medical Board and the North Carolina Medical Society filed motions with the Court to dismiss their appeals, thus ending the litigation. However, at the time the Medical Board dismissed its appeal, SEPS refused to dismiss theirs. After weeks of negotiations SEPS did file a dismissal and this lawsuit ended. The main issue, however, did not go away. SEPS then filed suit to have the Medical Board respond to their request for a Declaratory Ruling, such request having been the subject of two separate hearings held by the Medical Board in February and March of this year.

In accordance with the Agreement the Optometry Board appointed a Committee to draft recommendations for credentialing properly licensed and trained optometrists to perform the injections that were agreed to. Before the Committee could began its work it awaited the Medical Board's confirmation of its appointment of an ophthalmologist as a member.

During the week of August 7 the 2005 – 2006 Appropriations Bill passed both the House and the Senate who sent it to the Governor for his signature. Over the weekend the Governor signed the bill. Including in this Act was a provision that created the "Governor's Childhood Vision Care Commission". This legislation required that beginning with the start of the 2006 school year every child entering kindergarten will have to have submitted on their behalf evidence that they have had a comprehensive eye examination by either an optometrist or an ophthalmologist.

In November the Injections Protocol Committee began its work, two Members of the Optometry Board and a designee of the Medical Board meeting with the Executive Directors of the two Boards to draft protocols to be submitted to the Board of Optometry.

On December 1, 2005 the Committee issues its report which included recommended protocols for the credentialing of optometrists who met the criteria as set forth in the recommendations of the Committee.

On December 12, 2005 at a specially called meeting the Board accepted the Committee's Report and voted unanimously to adopt the protocols recommended by the Committee for the credentialing of optometrists who met the criteria to perform injections in accordance with the terms of the Agreement.

On December 27, 2005 the Board sent letters notifying some 50 optometrists that they had been credentialed to perform chalazia and peri-ocular injections effective on January 1, 2006 (some 8 weeks later another 20 optometrists were notified that they were being credentialed effective March 1, 2006)

2005 has been a great year for the optometric profession in North Carolina.

2006 - Some years ago the then attorney for the Board, Edgar (Red) Gurganous, (who represented both the Board and the Society for nearly 20 years) remarked that if we (optometrists) did not have a crisis, we would create one. 2006 starts off with a bang.

Early on news began to spread about pending investigations into political fund raising, particularly by the Speaker of the House, Dr. Jim Black, and monies that was raised among his optometric colleagues through the Optometry PAC.

In late January / early February, 20 or more optometrists were served subpoenas, some by two different agents – one state and one federal – to appear before the State Board of Elections and/or a Federal Grand Jury in Raleigh. The agents had in their possession copies of checks written by the optometrists to the Optometry PAC and/or candidates for the state legislature. Many of their checks had the 'payee's name' and the date in a hand writing different from that of the person filling in the amount of the check and the signature. The Speaker of the House and the Secretary/Treasurer of the Optometry PAC also received subpoenas.

The North Carolina Optometric Society provided legal representation for all those of its members who were subpoenaed to appear before the Federal Grand Jury and/or the State Board of Elections in their investigations of monies these optometrists donated to or through the Optometry PAC in support of the profession's legislative initiatives. The expense to the Society ran into the hundreds of thousands of dollars.

In identical letters of some eight pages in length dated January 25, 2006, the Attorney for the State Board and the Board's Executive Director were asked by Matthew W. Sawchak of the Ellis & Winters Law firm to furnish thousands of documents in the Board's possession dating back some 12 or more years dealing with the injections lawsuit and other matters pertaining to optometry's scope of practice. The request was made under the provisions of the North Carolina Public Records Laws, and while the request was made on behalf of Mr. R.L. Adams, another attorney, there was little doubt

that the records were going to be used as a source of information by the North Carolina Society of Eye Physicians and Surgeons (SEPS) and the American Academy of Ophthalmology for informational purposes in an attempt to seek a reversal of optometry's scope of practice as represented in the Agreement reached with the Medical Board in August 2005. It should be noted here that the Medical Board received an almost identical request for records.

An attorney working for American Academy of Ophthalmology in their Washington office began attending meetings of the North Carolina State Optometry Board on a regular basis. At each meeting he was provided with all the documents provided the Board Members with the exception of those relating to the scoring of the Board's Clinical/Practicum Examinations. At one meeting he was provided with a copy of one of his own memos to the North Carolina Society of Eye Physicians and Surgeons (SEPS) asking for documentation of 'optometric mismanagement'. When asked at a later meeting about the number of cases he had received his reply was "none".

2007 – North Carolina Association of School Boards had announced their opposition to the *"Governor's Childhood Vision Care Commission"* requiring mandatory comprehensive eye examinations for all children entering kindergarten or first grade. Others including the NC Society for the Prevention of Blindness (active in doing school vision screenings), NC Society of Pediatricians, etc. also expressed opposition. The Society of Ophthalmology mainly sat on the sidelines. Others 'wrecked' the mandatory comprehensive eye examination law (which never went into effect because the 'Commission' appointees were late in receiving their appointments and the protocols were never formally adopted). In short the provision in the 2005-2007 Appropriations Act, the *"Governor's Childhood Vision Care Commission"*, was quickly repealed and an 'enhanced' school vision program was instituted in its stead.

Dr. Black gives up the race for Speaker, later resigning his seat in the legislature and is indicted on charges of bribery by a Federal Grand Jury. He was also indicted by the State. On February 20, 2007 he entered a plea to bribery in the Federal District Court and was sentenced to 63 months in Federal Prison. He was sent from Raleigh, NC to the Lewisburg, PA to serve the sentence in the Federal Prison located there. Shortly after appearing in Federal Court he pled guilty to similar charges in State Court. On the state charges he was given a fine of one million dollars and (at the time of this writing) awaits sentencing following payment of the fine. If the fine is paid then his state sentence could run concurrent with that imposed by the Federal Court.

Dr. Scott Edwards who served many years as the Legislative Chairman of the NC State Optometric Society and as Treasurer of the Optometry PAC was indicted on chargers of perjury in Wake County during this same period. At trial in a plea bargaining to avoid the uncertainty of what a jury might find as well as the cost of what could be a lengthy trial (and an appeal if he were to be found guilty) he plead guilty to one count of obstruction of justice and received a 6 month suspended sentence and a 'restitution' payment of court cost and ten thousand dollars to the State Board of Elections to cover their costs of investigation.

2007 was not a good year for optometry in North Carolina.

At the State Board's fall meeting there was no representative from the American Academy of Ophthalmology present. Perhaps it was because they realized that there were no deep dark secrets being held among the Members of the Board of Optometry.

2008 - North Carolina optometry begins the process of mending its 'political fences'. The Short Session of the Legislature is upon us and rumor has it that SEPS has in mind the 'resurrection' of a bill defining surgery previously introduced in the Senate in the 2007 Session that was never heard, therefore not eligible under the rules to be considered in the Short Session. This being said there is a possibility (though remote and requiring a large majority of votes to accomplish) it could be attached to another bill moving through the Senate as a part of that bill. Could it happen? The answer is yes though very unlikely. Optometry in NC learned years ago that the 'price of freedom is eternal vigilance', so a very close eye will be kept on the activities of the legislature over the session which should end by mid July. Then comes the elections in November: a new President, a new US Congress, a new Governor and a new NC Legislature.

A week following AOA's Seattle meeting SEPS's plan to amend the NC Optometry Act was a 'plan in motion' in the NC Senate. Discovery of the plan made it possible at the last minute to prevent the effort from going forward. Two weeks later the General Assembly adjourned. Now the Society looks to the convening of the 2009 Session. In the meantime a lot of work lay ahead of the North Carolina State Optometric Society's membership to ensure their practice act remains 'intact', free from restrictions that would be imposed upon them and the patients they care for.

Recent Booklets and Video of Historical Interest

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

Abstract

This article discusses two booklets and a DVD published in 2008. One is a booklet published in commemoration of the one hundredth anniversary of the International Library, Archives, and Museum of Optometry. Another booklet, published by the Ophthalmic Antiques International Collectors Club, is entitled Restoring Ophthalmic Antiques. The DVD contains an interview of Donald Getz, an optometrist noted for his work in vision therapy and binocular vision.

A booklet commemorating the 100th anniversary of the International Library, Archives, and Museum of Optometry (ILAMO) celebrates and discusses its past, present, and future. The origins of ILAMO date back to 1908 when the Scientific Section of the American Association of Opticians (later known as the American Optometric Association) established a circulating library.

The booklet recognizes four persons as "ILAMO Champions" on page 5. Ernest Kiekenapp served as American Optometric Association (AOA) secretary for 35 years, starting in 1922. The AOA's library resided in Kiekenapp's office in Minnesota from 1923 to about 1953. E. LeRoy Ryer served optometry in many ways, including being history consultant to the AOA library and to the AOA History Committee. Ryer "donated his library, private papers, museum objects, some of his own inventions, patents, awards, and memorabilia to ILAMO." Joseph M. Babcock was 3rd Vice-President of the AOA from 1942 to 1957 and Director of the Department of National Affairs from 1942 to 1960. C.M. Jenkins was the AOA's first librarian and was AOA Treasurer from 1913 to 1928. The ILAMO library is named for Kiekenapp, the archives for Babcock, and the museum for Ryer.

A timeline on pages 6 and 7 notes some of the moves of the AOA library, some changes in personnel, and various other events. The library was consolidated in St. Louis in the 1950s and 1960s. Maria Dablemont was hired as full-time librarian in the mid 1960s. In 1972, the name International Library, Archives, and Museum of Optometry was assumed. In 1977-1978, ILAMO was moved, along with the AOA headquarters, to 243 North Lindbergh Boulevard in St. Louis, where it now resides.

The timeline is supplemented with a historical narrative on pages 9-12. Photographs and additional information on ILAMO, interspersed with advertisements and congratulatory notes, fill the remainder of this 32 page magazine size booklet. The booklet is available free of charge by contacting ILAMO (ILAMO@aoa.org).

Restoring Ophthalmic Antiques is the title of a small (22 mm x 15 mm) 48 page booklet written by Ronald J.S. MacGregor and published by the Ophthalmic Antiques International Collectors Club. The 2008 edition is a revision of a 1990 version. It offers recommendations for cleaning and repairing spectacles, frames, cases, and various other ophthalmic items, such as instruments and eyebaths. The book also contains some suggestions for identification of lens and frame materials. There are color photographs on the front and back covers, but the booklet contains no other illustrations. The ISBN is 978-0-9519290-1-8.

On page 4 of the booklet, MacGregor noted that the material was "written from practical experience" and that "A certain amount of skill and much common sense are required for this work. If you have a good pair of hands there are many happy hours to be had repairing and restoring your ophthalmic antiques." Copies of the booklet can be obtained for 7.50 pounds plus postage from MacGregor at: 17 Corsehill Drive, West Kilbride, Ayrshire, UK KA23 9HU.

In 2008, the Optometric Extension Program (OEP) presented a video on DVD of an interview of Donald J. Getz, O.D. The interview took place in 2006, and was conducted by Paul Harris, O.D., OEP Director of Education. This video is to be the first installment in the OEP Heritage Series.

Don Getz was born in 1931. After three years at UCLA, he entered the Los Angeles College of Optometry, graduating in 1954. Getz is a Fellow of the American Academy of Optometry and a Fellow of the College of Optometrists in Vision Development. He published a manual on strabismus and amblyopia in 1974, with a revised edition appearing in 1990. Getz is noted for his successful vision therapy practice and for his entertaining and informative lectures on strabismus, sports vision, and other topics.

During the interview, Getz mentioned that he started at UCLA as an accounting major, planning to follow his brother into accounting practice. Not finding accounting to his liking, he looked at other professions and settled on optometry. His minor at UCLA was public speaking, which may explain his skill in presenting optometry lectures.

After optometry school, Getz went into the United States Navy. He stated that he was the first commissioned optometry officer in the Navy. After naval service, he worked part-time in a practice with Max Schapero, who taught orthoptics at Los Angeles College of Optometry. He also worked part-time at Kaiser Permanente.

After a short period of time, Getz started his own private practice. Getz stated that he was interested in vision therapy from optometry school. He got heavily into strabismus work after one of his children developed strabismus after a high fever. He proceeded to read every article on strabismus that he could find and developed a protocol for strabismus treatment. He successfully treated his child, who went on to become an optometrist herself.

Getz said that he purchased the practice of George Crow, who was an important influence on him. He mentioned that the greatest influence on him was Louis Jaques. In the late 1970s, Getz started having optometry students spend extended periods of time in his office during summers on an informal basis. The interviewer, Paul Harris, was one of the first two students to take advantage of this opportunity. Harris mentioned during the interview that the experience had a significant impact on his career path. Later Getz had student externs in his office as part of their formal clinical rotation requirement.

During the interview Getz also discussed his work with the College of Optometrists in Vision Development. He was one of the co-founders, was one of the presidents of the organization, and for about 25 years was program chairman for the annual meeting. The recorded interview lasts about 48 minutes.

Recent Dissertation on the History of Spectacles

Jonathan Erlen, Ph.D.
Medical Historian, History of Medicine Collections, Falk Medical Library, School of Medicine, University of Pittsburgh, 200 Scaife Hall, Pittsburgh, PA 15261, erlen+@pitt.edu

An ongoing search of recent doctoral dissertation literature to find works in the medical humanities uncovered the following item on the history of eyeglasses in the United States.

Reading glasses: American spectacles in the age of Franklin. Stebbins McCaffrey, Katherine. Proquest Dissertations And Theses 2007. Section 0017, Part 0323, 425 pages; [Ph.D. dissertation].United States - - Massachusetts: Boston University; 2007. Publication Number: AAT 3279965.

Abstract (Summary)

Reading Glasses argues that spectacles played a critical role in shaping ideas about vision in the American colonies over the course of the eighteenth century. Chapter Two explores the tension between changing expectations for visual aids in seventeenth-century England and the attitudes of Puritans who owned some of the few spectacles available in the early colonies. Chapters Three and Four trace the emergence of a new style, called temple spectacles, made after the 1720s and sold in the colonies by the 1740s, which allowed wearers--both the seriously afflicted and the merely curious--to try on an Enlightenment perspective. This perspective, the makers argued, simulated the privacy, interiority, and security of viewpoint that inhered in the camera obscura while freeing the hands to assist the eyes in collecting and documenting information. Drawing on probate inventories, account books, advertisements, correspondence, literature, medical and philosophical treatises, paintings, and engravings, and organized around the timeline suggested by extant artifacts, Reading Glasses documents how American colonists bought temple spectacles, as technologically restyled and materially refined by the English spectacle guild, to express and enable their devotion to reading, writing, account and other record keeping. Both practically and metaphorically, these spectacles helped to shape understandings of what it meant to be a spectator/speculator in a bourgeois public sphere, and reoriented the body in relation to pages and persons alike. Chapter Five explores how this new awareness of binocularity informed the texts and visions that constituted a functional body politic and a healthy nation in the emerging United States.

At the same time that observers became accustomed to a relatively powerful, individuated sense of sight by spectacle frames, they were challenged by conventions in the use of lenses to think about the coordination of their eyes.

Reading Glasses demonstrates that temple spectacles formed a tangible link between Enlightenment understandings of vision and the binocular, bounded, embodied concept of vision symbolized by the stereoscope and other nineteenth century visual technologies.

Indexing (document details)
Advisor: Sewell, Jessica
School: Boston University
School Location: United States -- Massachusetts
Keyword(s): Reading glasses, Spectacles, Vision, Eye care, Material culture
Source: DAI-A 68/08, Feb 2008
Source type: Dissertation
Subjects: American studies, American history, Ophthalmology
Publication Number: AAT 3279965
ISBN: 9780549212409

Book Review: The Use of Eyeglasses, by Benito Daza de Valdes

The Use of Eyeglasses (1623). Benito Daza de Valdes. Edited by Paul E. Runge. Oostende, Belgium: J.P. Wayenborgh, 2004. viii + 281 pages. Hardcover, $180.

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

This book contains an English translation of the 1623 book *Uso de los Antojos* (*The Use of Eyeglasses*), by Benito Daza de Valdes, plus supplementary material. The book by Daza de Valdes is the first known book presenting the rudiments of optometric analysis. This is the first English translation from the Spanish to be published. A previous English translation by Pikasa, Arista, and Hofstetter was deposited in manuscript form at the International Library, Archives, and Museum of Optometry, but never published.[1]

The supplementary material makes up more than half of the pages of this book. Included in this material is a translation of the commentary on the Daza de Valdes book by Manuel Marquez which formed a prologue to a 1923 Spanish republication of the 1623 work. This commentary provides some historical background for the book and makes some comments on its content. It also contains these comments about Daza de Valdes: "The only sure facts about Daza are those found in the inscription around his picture in the engraving located after the title page in this edition (and immediately after the prolog in his original text). These facts are that he was a clerk of the Holy Inquisition when he wrote the book in 1623, that he was thirty-two years old, and was born in Cordova, which means that he came into this world in 1591. However, our efforts to find his baptismal registration and other data in his native city have been in vain." (page 38)

The translation of *The Use of Eyeglasses* by Daza de Valdes is found on pages 51 to 178 of this book. After a dedicatory statement and poem and a prolog to the reader, it consists of three parts: Book I: The Nature and Properties of Eyes (pages 71 to 93); Book II: Using Eyeglasses to Correct Vision (pages 97 to 118); and Book III: The Dialogs (pages 121 to 178).

Daza identified five categories of vision defects which can be treated with spectacles. His names for these categories (with what we would call them today in parentheses) are as follows: (1) "blurred or weak vision in old people" (presbyopia), (2) "natural nearsightedness of the young" (myopia), (3) "unaccustomed vision" (refractive amblyopia), (4) "uneven vision" (anisometropia, unequal refractive errors in the two eyes), (5) "opposite vision" (mixed anisometropia or antimetropia, hyperopia in one eye and myopia in the other eye). (page 79) Daza said the following about presbyopia: "Of all types of imperfect vision – and these are innumerable – the most common and most

prevalent is blurred vision, which is created by aging. Therefore, this affliction is found in almost all people of advanced years. Blurred vision is first noticed when one is forty years old – fifty at the latest." (page 81)

Daza was aware of the phenomenon, known by optometrists today, that nearsighted children most often don't know that they have a vision problem until they find out that their friends can see better than they. A common situation today is that nearsighted children notice that classmates can read the blackboard better than they can. Daza explained this as follows: "Every day we encounter children who learn to read and write well, but whose vision deficiency frequently goes unnoticed. Upon reaching the age of reason, however, these young people with deficient vision discover their lack themselves. They do so by measuring and comparing their vision with that of others who have perfect vision. It is then that they realize that their vision is short because they cannot see far away as well as others." (page 83)

Daza said that the types of eyeglass lenses were convex, concave, and conservative, known today as plus, minus, and plano lenses, respectively. Daza used a unit of lens power based on a Spanish measure of linear distance, the vara. One vara is equal to about 0.835 meters. Daza's lens power unit, the grado, translated in the book as degree, is a reciprocal vara. Today's diopter (D) being a reciprocal meter, Daza's grado or degree would be equal to about 1.20 D.

There are methods described in Daza's book for the determination of lens power. For plus lenses, there are two circles, a larger one labeled X and a smaller one labeled Q. Circle Q is viewed through the plus lens and the lens is moved toward and away from circle Q until the two circles are the same size. The distance of the lens from the chart containing the circles is noted on a scale which gives the power of the lens in grados or degrees. There are two similar charts for determination of minus lens power (one for minus up to ten degrees and one for minus over ten degrees), with the minus lens held over the larger of the two circles on each of the charts. There is an additional chart which was used to mark the punctum remotum of a person with myopia. The location of the punctum remotum could then be converted into the number of degrees of needed lens power. The chart covered 5 to 30 degrees.

There are also recommendations for how to order lens power in absentia according to age and gender. It may be noted that the powers recommended by Daza are much greater than we would think appropriate for nearpoint plus adds for presbyopes today. For men, the recommended lens recommendations are: ages 30 to 40 years, two degrees (about 2.4 D); 40 to 50, two and a half degrees (about 3.0 D); 50 to 60, three degrees (3.6 D); 60 to 70, three and a half degrees (4.2 D); 70 to 80, four degrees (4.8 D); and over 80, five degrees, six maximum (6.0 to 7.2 D). For women, ages 30 to 35, four degrees (about 4.8 D); ages 35 to 40, five degrees (6.0 D); 40 to 45, six degrees (7.2 D); 50 to 60, eight degrees (9.6 D); and over 60, nine degrees, ten maximum (10.8 to 12.0 D). (pages 117, 118) Perhaps the different lens powers for men and women that Daza recommended reflected his views concerning gender differences

in visual needs, as later he talked about the vision of women becoming weak due to needlework. (page 164)

After presenting the above and other information on the nature of vision and lenses, Daza presented a series of dialogs in which an optometrist (maestro) holds illustrative consultations with patients with various vision problems. The consultations are also attended by a "doctor." The doctor seems to have a more scholarly background. The maestro and the doctor show mutual admiration toward each other, often supporting statements made by the other.

In one of these dialogs, the optometrist determines the power of presbyopic lenses for a given patient by using the ranges of clear vision with lenses. The optometrist had the patient use lenses of two and a half degrees and stated to the patient: "Move the book farther and closer away and tell me at what distance you see best with those eyeglasses. Then I will know which glasses to give you." Based on those measurements, the optometrist increases the power to three degrees, and being satisfied with the result with that power, reports to the patient: "Those are the glasses you need because you see the print as it is and you read it well and with ease at the distance where one usually puts a book." (page 128) The optometrist goes on to say that one should not wear lenses with any greater power than necessary. Even though higher powers would make print appear larger, "too many degrees weaken the vision." (page 129)

Among the other information contained in the dialogs are recommendations about wearing only well made spectacles. For example, Daza warned against lenses with unwanted cylinder power (at this time only spherical lenses were used): "...raise the glasses over the print. Twist them around and if the print is sometimes long and narrow and at other times short and wide, the lenses are badly ground." (page 167)

Following the translation there is more supplementary material, including tables showing the pages in the Daza de Valdes translation and in the Marquez commentary where various topics can be found, black and white photographs of the copy of the original 1623 book found in the National Library of Medicine, and a facsimile reproduction of the original 1623 book with four pages of the original on each page of this book. Also among the appendices to the book is a translation of the Italian preface by Giuseppe Albertotti to the 1892 French edition of the Daza de Valdes book. The last appendices are black and white pictures of postage stamps issued by Spain in 1966 honoring Daza de Valdes and a glossary. This book is attractively produced, and it provides us with a fascinating glimpse into seventeenth century optometry.

Reference

1. Hofstetter HW. Optometry of Daza de Valdes (1591-ca.1636), Am J Optom Physiol Opt 1988;65:354-357.

Book Review: What is Medical History?

What is Medical History? John C. Burnham. Cambridge, UK: Polity Press, 2005. viii + 163 pages. ISBN: 0-7456-3225-4. Paperback, $19.95.

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

According to the preface of this book, the author seeks "to explain what medical historians have done and are doing." This slim book is not a comprehensive tome on the academic study of medical history, but rather presents the author's theories on how medical history has been written, providing some examples along the way.

The author notes that the first medical history writers were physicians who wrote about the classical teachings of Hippocrates and Galen. In the eighteenth century, medical history writing began to show the idea of progress and advancement of knowledge. Starting in the nineteenth century, medical history still generally written by physicians, often served to praise innovators, portray medicine as an important contributor to civilization, or uphold the status of physicians against "non-medical practitioners or pretenders." It was in the twentieth century that persons trained as historians, not as physicians, began to enter the field of medical history. That resulted in greater emphasis on social and political aspects.

One of the author's theories is that historians have often written about "the extent to which medical thinking shaped life." He presented this as opposing processes of "medicalization" and "demedicalization." Medicalization involves efforts to increase the influence, control, recognition, and perceived importance of medicine. Demedicalization represents the resistance to medicalization.

Most of the book deals with what the author sees as being the five dramas written about in medical history: (1) the healer, (2) the sick person, (3) diseases, (4) discovering and communicating knowledge, and (5) medicine and health interacting with society. The writing about healers could involve a number of themes, including physicians vs. naturalistic healing, development of professional medicine, medical organizations, ethics, struggle for recognition, philanthropy, and biography. The author discussed a variety of philosophical issues surrounding illness that have been written about in considering the patient as a sick person. Likewise, disease has been written about in various ways, such as identifying what older names for diseases may represent, what diseases existed in antiquity, effects and nature of epidemics, significance of diseases that seem to have suddenly appeared or disappeared, social effects of various diseases, etc.

Writing about discovery and the communication of knowledge can include topics such as the discovery process, diffusion of information, tracing the development of

ideas, and specialization. The author cautions that we may be able to better understand persons in the past when we realize that they didn't think as we do about disease or other aspects of life. Topical areas falling within the author's interaction with society category include ways in which civilization causes disease, institutions peculiar to medicine, formal organizations of health care workers, institutions that provide medical care, social history, charitable care, medical economics, roles of government, moral lessons, and so on.

The author suggests that there will always be a market for medical history. He stated that "As long as there are illnesses and healers, medical history will continue to provide context for the efforts of humans to deal with their ailments. Practitioners of medicine will find reassurance in the timelessness of the healing enterprise and may also use history to soften the arrogance of any generation caught up in the excitement of knowledge and treatment. Sufferers from biological invaders and from environmental toxins may also gain from finding out what scholars can tell about how people in the past coped with sickness and fatality." (page 140) Although the author was writing about medical history, many of the principles discussed and all of the five "dramas" of medical history writing could apply as well to the writing of optometry history.

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:

Bridget Kowalczyk
Secretary-Treasurer, Optometric Historical Society
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 _____

_____

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 can be viewed at www.opt.indiana.edu/ohs/hindsightJan07.pdf. For more information on the Optometric Historical Society, see: www.indiana.edu/ohs/optohiso.html.

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.