

# HINDSIGHT

Newsletter of the  
Optometric Historical Society  
243 North Lindbergh Boulevard, St. Louis, Missouri 63141, USA

Volume 37

October 2006

Number 4

## Election for Board positions beginning in 2007:

Congratulations to Walter Chase and Jay Enoch for being re-elected to OHS Board positions to begin in 2007. The Board members will now, as specified by OHS by-laws, elect among themselves officers for the 2007 year. The results will be announced in the January, 2007 issue of Hindsight.

## Ballot for by-laws change enclosed:

Enclosed please find, as a separate enclosure, a ballot for a change in OHS by-laws. The annual OHS membership dues have been \$10 since 1985. With increasing costs of production and mailing of Hindsight and a planned modest upgrade of Hindsight, the OHS Board recommends an increase in dues. Membership dues are stated in the OHS by-laws, so a change in dues must be established through a change in by-laws by ballot. Please complete the enclosed ballot and return as instructed on the ballot.

## Jay Enoch's column:

*Editor's note: The Spring, 1994 issue of the journal Optometric Education published a feature celebrating the 25<sup>th</sup> anniversary of the National Eye Institute. However, some of the optometric involvement in the formation of the NEI was not included. Jay Enoch wrote the following letter to the editor to fill in some of the missing information. His letter to the editor was published in the Summer, 1994 issue of Optometric Education (volume 19, number 4, pages 104-105). The editor's response to the letter was as: "We appreciate Dr. Enoch's first-hand account of the role played by optometry. It is a valuable addition to the early history of the National Eye Institute." The letter below is as it was submitted to the journal. It was published with one paragraph omitted presumably due to space limitations and a few very minor editorial modifications.*

**The Anniversary of the National Eye Institute  
Letter to the Editor of *Optometric Education*  
Originally published Summer, 1994**

I read your most interesting feature issue on the National Eye Institute. No doubt because of lack of knowledge, some meaningful early history of, and optometric participation in, the formation of the National Eye Institute were omitted.

In the early 1960's, both ophthalmology and otolaryngology were represented in a limited manner on the then National Advisory Neurological Diseases and Blindness (NNDB) Council. Eye and ENT each had two members on that Council, and their share of NINDB funding was (separately) virtually a fixed percentage and modest, and not responsive to perceived needs. This limited role had not been mandated by Congress. Apparently, the NINDB leadership was unwilling to alter existing patterns of support. A number of powerful advocacy groups supporting Neurology research wielded great influence.

In 1964, the NNDB Council sponsored an ad hoc meeting held at the annual meeting of the (then) American Academy of Ophthalmology and Otolaryngology to consider the desirability and feasibility of forming task forces to consider the state of research in vision and its disorders, and human communication and its disorders. The formation of both groups was recommended, and then approved by the NNDB Council.

Early on, during planning, there was a rather critical meeting called by the academic leadership within ophthalmology which was held in Philadelphia (date ?). Many of the individuals listed below were present. That meeting included both Professors Glenn Fry (Ohio State) and Meredith Morgan (UCB), both of whom represented optometry.

The NNDB Council Subcommittee on Vision and Its Disorders which was appointed was composed as follows:

Bernard Becker, MD, Chair of Subcommittee, and Member, NNDB Council; Chairman, Ophthalmology, Washington U. in St. Louis

Jay Enoch, OD, PhD, Executive Secretary of Subcommittee; Research Associate Professor, Ophthalmology, Washington U. in St. Louis

Mathew Alpern, OD, PhD, Professor, Ophthalmology and Physiology, U. of Michigan

Goodwin Breinin, MD, Chairman, Ophthalmology, NYU

Everett Kinsey, PhD, Member of NNDB Council; Assistant Director of Research, Kresge Eye Institute, Wayne State U., Michigan

Irving Leopold, MD, Director, Ophthalmology, Mount Sinai Hospital, NY

A. Edward Maumenee, MD, Director, Wilmer Institute (of Ophthalmology), Johns Hopkins U., Baltimore

Frank Newell, MD, Chairman, Ophthalmology, U. of Chicago

George Smelser, PhD, Director of Ophthalmic Research, Columbia U., NY

Lorenz Zimmerman, MD, Chief, Ophthalmic Pathology Branch, Armed Forces Institute of Pathology, Walter Reed Army Hospital, DC

This group was charged to review the (then) current state of knowledge in vision and its disorders, the status of research, per se, and training in this area, and to make recommendations relative to "further development of the NINDB program in eye and vision research."

As Executive Secretary, I was effectively withdrawn from research for two years in order to organize, to manage, and to write a substantial portion of the report of the Subcommittee. Obviously, I worked closely with the membership, the staff of NINDB, and, in particular, with the Chairman, Professor Becker. This was an extraordinary experience for me, as I spent time visiting the institutions of all the members (except Zimmerman) and developed a clear picture of where research in ophthalmology was at that time. I was also provided access to fiscal data, allocations, and activities of the NIH. And I was given a relatively free hand in the preparation of the report and in defining proposals included in the report.

I was not told to develop a plan for a separate institute. However, given the relatively poor state of support for the eye research community, and the apparent intractability of the NINDB concerning provision of resources for eye research, or even willingness to provide leadership to alter this situation, it became clear that movement towards a separate institute was inevitable. The separate Human Communications and Its Disorders Sub-committee reached essentially identical conclusions. My colleague, Professor Joseph Ogura, Department of Otolaryngology at Washington U. in St. Louis, played a dominant role on that committee. Although that group held similar views, it was many years before the ENT and auditory scientific establishment sought an independent institute of its own.

Each member of the Subcommittee on Vision and Its Disorders ably reviewed research in his own area of expertise and indicated opportunities for future research. A special section on low vision was added. The Subcommittee report was a precursor to the five year plans regularly provided since then by the NEI.

I was fortunate in having access to the then recently submitted NIH report dealing with research in heart, lung, and cancer. Data and recommendations contained in that document proved to be a valuable guide to me in preparing the plan for rectification of the situation existing in ophthalmic research. I had help from many

people, in addition to the Subcommittee. Their contributions have been properly recognized. Note, this was a report to the NNDB Council, and as such, it would have been inappropriate to call for a separate institute. However, this conclusion, unstated, was implied in the plan.

After preparation, the plan was first reviewed by and approved by Professor Becker. The Subcommittee debated it, and was very pleased with it. They added only two recommendations to the lengthy list I had formulated. In fact, Professor Ed Maumenee commented to me one day (something like), "Jay, how did you ever know how to write such a plan as that?"

The report "Vision and Its Disorders" was submitted on November 1, 1966. The NNDB Council accepted the report, but until the legislation leading to the formation of the NEI was passed by Congress, no part of it was released by the NNDB for duplication or publication. This report, which had broad private distribution (from many sources), served both as the initial plan and the *raison d'être*, for the development of the National Eye Institute. Although not then published (the "plan" was never published), during the Congressional debates, the entire three volume document was introduced into the Congressional Record by one of the members of the House of Representatives. It was repeatedly quoted during the Congressional debates.

Several members of the Subcommittee on Vision and Its Disorders served on the initial National Advisory Eye Council (NAEC). Also appointed to the initial NAEC were Professors Meredith Morgan and Glenn Fry. At a later time, I served two terms on the NAEC. I was also complimented to be considered for appointment (as the only optometrist) as Director of the NEI and received the full treatment. However, I had no illusions that I would be appointed.

It is worth noting that most members of this same Subcommittee played critical roles in the modern development of the Association for Research in Vision and Ophthalmology (ARVO) (of course, there were other able individuals active as well). Among many contributions I made to ARVO during my seven year term on its Board of Trustees and as President were: participating in the major restructuring of that organization (from ARO), including establishing sections; opening that body to broad optometric participation; establishing ARVO's support of the budgetary requests of the NEI before Congress (I testified six times); allowing optional receipt of the journal, *Vision Research*, by members (this provision has been discontinued); supporting the move of the annual meeting to Florida, and then to Sarasota; and creating and fostering poster displays.

In summary, this was an exciting and rewarding time. The members of the Subcommittee represented a substantial portion of the then academic leadership of ophthalmology. They had a clear perception of the research enterprise they sought to build. They were interested in the development of quality products in science and training. Virtually all of these activities and more were interwoven.

I congratulate the NEI on its 25<sup>th</sup> anniversary, and on its seemingly endless achievements. Director Carl Kupfer and his fine staff have indeed contributed greatly to the advance of research in vision and to the provision of modern eyecare. I am proud to have played a modest role in these developments.

Sincerely,  
Jay M. Enoch

Albert Sutton on aspects of behavioral optometry history:

Albert Sutton has written a regular column, Our Optometric Heritage, for *Visions: Newsletter of the College of Optometrists in Vision Development* since 1998. Thirty-eight of his columns have been collected in a 48-page booklet entitled *Our Optometric Heritage*.

Recurring themes in the columns include: 1) the importance of Arnold Gesell, M.D., and the Gesell Institute in investigating child development and in involving behavioral optometry leaders in that work; 2) the efforts of A.M. Skeffington in cultivating interdisciplinary relationships and the various meetings, collaborations, and lectures to optometric groups that resulted, and 3) the contributions of various optometrists and non-optometrists to behavioral optometry theory and practice. Among those whose contributions were discussed are E.B. Alexander, Richard Apell, George Crow, Elliott Forrest, G.N. Getman, Darrell Boyd Harmon, Louis Jaques, Robert A. Kraskin, C.V. Lyons, Emily Bradley Lyons, Lawrence Macdonald, Carl Marsden, Amorita Treganza, and Robert Wold.

Sutton is a 1949 graduate of Northern Illinois College of Optometry. After graduation, he worked in NICO's Visual Training department. Later he established a practice in Pueblo, Colorado. While in Colorado, he served as a regional director for the Optometric Extension Program, as the Colorado Optometric Association president, and as president of the Colorado State Board of Examiners. He also had a fellowship at the Gesell Institute of Child Development and was involved with child development programs at Barry College in Florida.

Limited quantities of the booklet are available for a \$50 contribution to the College of Optometrists in Vision Development, 243 N. Lindbergh Boulevard, Ste. 310, St. Louis, MO 63141-7851.

D.A.G.

Profile of a 19<sup>th</sup> century Australian optometrist:

The March, 2006 issue of *Clinical and Experimental Optometry* included an article entitled "William Henry Vanheems 1831-1917: First honorary life member of the

Victorian Optical Association and one of the first teachers of optometry in Australia" (volume 89, number 2, pages 100-101). The author is Wolf F. Gartner.

Henry Vanheems, born in London in 1831, emigrated to Australia in 1852. Sometime after 1857 he trained in optical work in Melbourne with Thomas Gaunt. Gaunt had learned his craft in England and established Gaunt & Co. jewelers, clockmakers and opticians. Vanheems went to work for Gaunt & Co., and eventually became manager of the company.

Vanheems and his wife and children moved to Richmond in 1884. Vanheems founded the Visioscope optical company, touted as "the exclusive mail order optical house in the Commonwealth."

In Australia in the early twentieth century, prospective optometrists learned optometry as an apprentice or from a private tutor. Vanheems was one of these tutors, charging five pounds for twelve lessons. He taught several persons who were part of the original faculty of the Australian College of Optometry and at least one ophthalmologist. Surviving documents praised him as being "a man of great learning, of manifold scientific interests and singular charm of character," "a gentle person, about 5'6" or 5'7" tall...", and "a dedicated and patient teacher."

Vanheems was active in establishing educational requirements when the Victorian Optical Association was established in 1911. In 1913, the Victorian Optical Association elected him their first life member. Vanheems died in 1917.

D.A.G.

#### History of the tachistoscope:

An article entitled "The tachistoscope: its history and uses," by Edward C. Godnig appeared in the *Journal of Behavioral Optometry* in 2003 (volume 14, number 2, pages 39-42). A tachistoscope uses a shutter device to allow timed exposures of numbers, letters, or figures. Godnig noted that the tachistoscope has largely been replaced by computer programs which allow finer gradations of exposure times and of times between exposures.

Godnig cited a 1938 paper by Bender as the first published description of the use of a tachistoscope. Bender used one to investigate the effects of viewing time limitations on visual perceptual experience.

Familiar to many optometrists in the 1940s were the tachistoscope experiments of Samuel Renshaw. He used a tachistoscope to train World War II pilots to more quickly recognize enemy aircraft. Godnig quotes a 1945 paper by Renshaw in which it was claimed that tachistoscope training with digits improved reading comprehension and speed.

Godnig then describes studies done in the 1980s at the State University of New York by Harold Solan and colleagues. They reported that speed of perception measures from the tachistoscope were correlated with reading skills.

The 1980s also saw the tachistoscope used in the training of police officers. It has been observed that under stressful conditions requiring high levels of mental activity, there is decreased awareness of the periphery. The Indiana Law Enforcement Academy used what they called flash recognition training "to improve decision-making skills in 'deadly force' situations."

Godnig cited several psychology research studies in which tachistoscopes were used. The cited studies were published between 1978 and 1999. In one study, for example, a tachistoscope was used to deliver subliminal messages to investigate their effect on eating disorders. Another study looked at the effect of exposure time on perceived size.

Lastly Godnig cited two papers in optometric publications which described use of the tachistoscope in sports vision. A 1984 paper by Harris et al. reported a high level of skill on the tachistoscope in basketball officials. A 1993 paper by Kirscher included the tachistoscope as a tool in office based sports vision training.

D.A.G.

#### Centenary of Munsell's color atlas:

The magazine *American Scientist* marked the one hundred anniversary of the first atlas of color in an article entitled "Charting color from the eye of the beholder," in its September-October, 2005 issue (volume 95, number 5, pages 436-443). The authors were Edward R. Landa and Mark D. Fairchild.

The artist Albert Henry Munsell became interested in describing color in 1879, as a student at the Massachusetts Normal Art School, now known as the Massachusetts College of Art. Munsell became an instructor there after his graduation in 1881. It appears that his work on color description began in earnest in 1898 when he worked on designations of colors for students in his class on color composition. In 1905, he published a 67-page book, the first of fifteen editions of "A Color Notation." In it, he described numerical scales of hue, value, and chroma to specify color. The numerical scales were perceptually, rather than physically, based.

In about 1917, Munsell formed the Munsell Color Company to sell color charts and other products. Munsell died in 1918, at 60 years of age. The company was continued by his son Alexander Ector Orr Munsell. One of the company's products was Munsell crayons which were identified with the color designations from the Munsell system. The crayon business was sold to Binney & Smith, which now makes Crayola

crayons. The color names used on Crayola crayons do not relate to the Munsell color system designations.

The article discussed some of the uses and implications of the Munsell color system in industry, science, and art. There are several color photographs and two black-and-white photographs in the article, the latter being pictures of A.H. Munsell and Dorothy Nickerson. Initially a secretary and laboratory assistant for A.E.O. Munsell, Nickerson published over 150 papers. The article closes with the following two sentences: "Color science is perhaps unique in the degree to which experts in a wide range of disciplines can make important contributions. Albert Munsell is one such example in which an artist and teacher satisfied his curiosity and need to teach by developing a system that had a profound impact on color science and commerce and will continue to do so long into the future."

D.A.G.

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