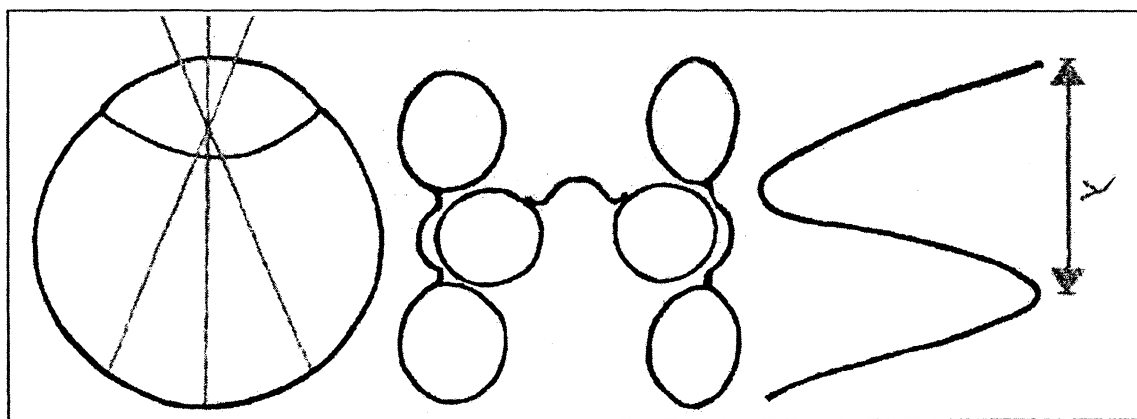


INDIANA UNIVERSITY
OCT 04 2008
PROQUEST LIBRARY

HINDSIGHT

Journal of Optometry History

July, 2008
Volume 39, Number 3



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.

Officers and Board of Trustees of the Optometric Historical Society:

President:

Melvin Wolfberg, 3095 Buckinghammock Trl., Vero Beach FL 32960-4968,
ilovesylvan@bellsouth.net

Vice-President:

Jerome J. Abrams

Secretary-Treasurer:

Bridget Kowalczyk, American Optometric Association, 243 North Lindbergh Boulevard,
St. Louis, MO 63141; btkowalczyk@aoa.org

Trustees:

Walter W. Chase

Jay M. Enoch

Chuck Haine

Douglas K. Penisten

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

OCT 04 2008

OPTOMETRY LIBRARY

HINDSIGHT: Journal of Optometry History**July, 2008****Volume 39, Number 3****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

La Dedicación del Centre Universitari de la Visió de La Universitat Polytècnica de Catalunya, Juneo 27, 2008, Terrassa, Catalunya, España, <i>Jay M. Enoch</i>	86
Rare book library catalogs with significant eye and vision content, <i>David A. Goss</i>	91
Book Review: A Brief History of Bausch & Lomb's First 150 Years, <i>David A. Goss</i>	95
Book Review: The Prism and the Pendulum: The Ten Most Beautiful Experiments in Science, <i>David A. Goss</i>	97
Past American Optometric Association presidents remembered, <i>David A. Goss</i>	99
Instructions to Authors.....	102
OHS Membership Application Form.....	104

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.

La Dedicación del Centre Universitari de la Visió de La Universitat Polytècnica de Catalunya, Juneo 27, 2008, Terrassa, Catalunya, Espagña

Jay M. Enoch, O.D., Ph.D., Dr.s Sci.(h.c.)

Professor of the Graduate School, Dean Emeritus, School of Optometry, University of California at Berkeley, Berkeley, California 94720-2020,
jmenoch@berkeley.edu

Bon dia! I last appeared before you at 12 Noon on October 18th, 2002, at which time this Faculty, School, and University honored me by conferring upon me the Doctor of Science degree, *Honoris Causa*, in Vision Science. This was the first such recognition in Vision Science granted in the history of Spain, and the first honorary degree offered by this School. Indeed, I was highly honored! On that occasion, as a first step in the process, I was granted membership in the fine Faculty of this University and was awarded a gold ring symbolizing my acceptance by them as one of their own, as well as a fine pair of white gloves as a symbol of my purity (well, let us say that was a bit of "a stretch"!). These and my diploma hang on the wall in front of my computer desk at home as a constant reminder of that very special event. I remember this occasion most fondly!

Shortly prior to that event, Director Nuria Lupon and Professor and former Director Josep Pladellorens asked Dr. Joan Gispets to show me the beginnings of a new and rather ambitious project then being undertaken by this fine educational institution. It was a clinical development and research facility designed to serve the School of Optometry, the University, the Profession of Optometry, and the public for years to come. This building and academic program was to be called *del Centre Universitaria de la Visió*. Today, we are assembled to proudly dedicate this completed and fine new academic and clinical Center! We can all be very pleased with the realization of this special achievement in behalf of science and research. It will provide education for new clinicians and specialists serving society for the coming decades. It, too, is a resource for provision of continuing education for graduate optometrists and other practitioners, as well as for the welfare of the patient population of this School and University, for Terrassa, for Barcelona, and the surrounding countryside.

A clinic provides a vehicle for delivery of health care to the populace, and in a very real sense, it becomes a true gift to them for many years to come. Just as it serves to educate and enlighten, it helps to ameliorate the visual and eyecare needs of its client population. You will be surprised from how far and wide patients will come here to seek eye-care, from not only Catalunya, but also from other parts of *Espagña*, and, by

extension, from parts of France. By coupling this clinic to a research facility we effectively multiply its gifts to society in general!

Following a suggestion made by Prof. Ondategui to Prof. Gispets in an e-mail message, I am pleased to state to you, we at the University of California at Berkeley are examining possibilities for undertaking joint research enterprises and student exchanges for purposes of special training and research between our two institutions. I have spoken to our Dean Dennis Levi, to our Associate Dean and Director of Clinics Edward Revelli, and to the Clinical Research Center Director Prof. Meng Lin. Each of them and others will interact with Dr. Nuria Lupon who has been designated as your leader in the effort to develop a meaningful collaborative endeavor. During this trip, one of my purposes is to explore further the proposed nature of such activities with interested parties within your group. Indeed, it is our collective hope that a promising cooperative program between our two institutions will result!

In the years since my last visit here, both the Profession of Optometry and this School made excellent progress! In 2002, you were still limited to offering the *diplomatura* to your students. Due to the European Convergence Process in higher education, 2007-2008, you are now able to offer the M. Sci. degree, *and hopefully soon to follow*, the Ph.D. degree, and as an important result, you also will be able to develop fully your associated graduate studies and research program. The Centre Universitari de la Visió will play a meaningful role in evolving graduate and post-graduate training at this distinguished institution. Already necessary changes in the curriculum are being made by the faculty and administration.

A law, which passed in 2003, properly declared optometrists as health professionals(!). It requires them to give evidence of on-going continuing education. No doubt, the new clinical and research Centre will also serve an important ongoing role in continuing education for optometrists and for other health care professionals as well. One of my contributions to optometric education (in general) was (to my knowledge) the first introduction of Rounds at the School of Optometry at Berkeley in 1980. Given rapid and important developments in basic knowledge, in ophthalmic instrumentation, available and emerging diagnostic techniques (including adaptive optics, coherent scanning laser ophthalmoscopy, optical coherence tomography, flood illumination, individually or in combination), as well as remarkable advances in molecular and cellular biology, the genome and genetics, and pharmacology, for us it is most important to participate in continuing education studies.

Thus, in a sense, we also celebrate today advances made by the Profession of Optometry and by this School of Optometry, as well as the creation of new scholarly opportunities for optometrists, and for the pursuit of advanced eye and vision research in behalf of the health and welfare of the public.

You have already established a fine tradition in the development of research within this institution and the surrounding geographic area. In addition to individual faculty members and students who perform research at this institution, I have learned

from Dr. Gispets that about 20 optometrists have formed the "Grup de Recerca del Centre Universitari del Visió". In addition, there is the CD6, the Centre de Desenvolupament de Sensors i Sistemes; the GOPAPI, the Grup d'Òptica Aplicada i Processament de la Image; the CIMA, the Centre Internacional de Medicina Avançada; and the CST, the Consorci Sanitari de Terrassa. Your activities in support of the journal, *Ver y Oír*, also provide a valuable means of disbursing and sharing the results of that research with your professional colleagues. Of course, individuals have the freedom to publish in any of a number of other journals of merit as well.

The CD6 is a research group with broad interests in Vision Science, the area which formerly used to be termed, Physiological Optics. The GOPAPI is a leading research group in image processing, and they have interest in applications to medical imaging, and the utilization of these techniques clinically. CIMA is a group which, among other activities, promotes coordination of research between ophthalmology and optometry in behalf of the public interest. CST seeks to emphasize and develop research in the region of Terrassa, and no doubt within Catalunya and beyond.

I am also well aware of developments here in Spain in the field of Adaptive Optics (AO) as well. Work on AO at the CSIC in Madrid, and at U. of Murcia is well known and is growing in a number of centers. Some of the leaders in this particular field reside within this fine Nation. I expect that such research developments will lead to, "a new era in ophthalmoscopy" and much more in the years to come.

One area of enterprise which unfortunately is often not quite adequately addressed, nor served as well as it should be by the ophthalmic professions, is "low vision". We need to focus more attention on this speciality; we can all make a difference in this arena. We owe it to these often handicapped individuals to improve meaningfully their quality of life. In España, you are indeed fortunate to have the ONCE organization. They raise meaningful funds to serve that population. We need to seek their support to further enhance research and services to the blind and visually challenged populations, including the ever-growing aging populations of this World.

In regard to all aspects of your research program, I urge you to seek and to find common ground with those conducting research within ophthalmology. I am as well aware of some of the unfortunate history of the relationships between our two professions, but this, shall I say, goes no-where. There is no reason that Optometric and Ophthalmological researchers cannot work together constructively in the public interest, and they should. I have done so throughout my career.

We hope to see you and your associates with some regularity at the several international meetings, as well as meetings in the USA of the American Academy of Optometry (AAO), and the Association for Research in Vision and Ophthalmology (ARVO). I note this has already occurred to some extent. An example of this is our annual meeting with a number of Spanish friends at the (informal) "Cuban" dinner which has been held for some years now at ARVO. One of the things I came to appreciate when I lived in Florida, was Cuban food! It is different, rather interesting, and very good!

A few words about academic research programs: I have served for many years as both a clinician and a researcher both within optometry and ophthalmology. In optometry, we do not have available the enormous "research engine" which is available to medicine. The depth and breadth of the medical enterprise is enormous and rightly so. We all benefit from it, and hopefully they, in turn, benefit from contributions made by the optometric profession and its educational institutions. *It is our collective duty to translate basic science into clinical applications!* So saying, we have only limited research facilities in optometry, both in this country and elsewhere. For some years, I have watched these services grow within the profession of optometry, and I have sought to contribute in many ways to that growth as researcher, clinician, and administrator. We, as optometrists, very much need centers with programs such as the one which we dedicate today, in order to allow us to enhance our abilities to address the broad ophthalmic needs of the public, whom we all serve. And we must strive to perform our roles in an ever more effective manner.

It can be useful for a School to establish a modest *cadre* of individuals (here simply defined as "more than one") having relatively common interests (but each person addressing somewhat different aspects of a problem), as a means of creating one or more research-focus-groups which can serve to encourage interpersonal interactions, and broaden offerings to advanced students. These can effectively serve to stimulate research progress. On the other hand, there is also an argument for enhancing the breadth of interests and topical coverage of an existing faculty. If we set goals too broadly, the result is a diffuse product. If the research group (and teaching resources) are chosen too narrowly, in turn, this may not serve adequately the larger interests of the school or profession. The argument comes down to a need for all concerned parties to consider carefully the long term needs of the school and profession when making decisions regarding selections of new faculty. In candor, it is a difficult balancing act! And it is in *everyone's interest* that there to be a congenial relationship between all parties.

The facility we dedicate today gives to you the opportunity to help this School to develop and to broaden further, to recruit additional capable faculty, to offer special advanced courses at all levels, to train graduate students, to expose undergraduates to science (and to interest some of them in an academic and clinical role and career). This and other Schools in Spain have a special additional responsibility. For a very long time, you have helped to train students from Latin-America (as well as within the European Union) in modern technology and eye care. But *above all*, collectively, we need to offer the profession of optometry new approaches applicable to patient care including enhancement of clinical assessments and treatments of patients, and the means of correction of disorders and diseases of the eye(s) and their *adnexa*.

In conclusion, you are to be congratulated on this *truly fine and forward looking achievement!* May *del Centre Universitaria de la Visió* serve society well in terms of its contributions to the education of ophthalmic practitioners and to the training of advanced research students and future faculty, to the enhancement of the ophthalmic

health of the populace, and to the realization of enduring creative and meaningful ocular and vision research. May this Center prosper for many years into the foreseeable future! And may each of you find great and continuing satisfactions in your contributions to this Institution, to your chosen profession, to this Area, and to *España*.
Mucho Gracias!

Rare Book Library Catalogs with Significant Eye and Vision Content

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

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

Abstract

Rare book library catalogs can serve as useful historical reference works. This paper discusses the content and format of seven rare book library catalogs with significant information relating to the eye and vision. The catalogs examined are held in the libraries on the Bloomington campus of Indiana University.

Key words: *history of ophthalmology, history of optometry, ophthalmology books, optometry books, rare books.*

Rare book library catalogs are documents describing the books in a collection or in an exhibition. The detail they contain can vary from a simple listing of bibliographical data to annotations describing the historical significance of the books and giving biographical information concerning the authors. Illustrations may or may not be present. The content and format of a catalog varies depending upon the purposes of its publication or of the exhibition it accompanies. Such purposes can include: (a) providing entertainment for the general public, (b) creating a reference work for the academic community, (c) making a contribution to scholarship on the topic, (d) recognizing a donor or meeting an agreement associated with a gift, (e) celebrating the library's opening or anniversary, and (f) elevating the recognition of the library.¹⁻⁴ Rare book library catalogs published today are often produced with the goals of having a visually appealing document of lasting contribution to the particular field of study.⁵⁻⁷ This paper will discuss seven rare book library catalogs which contain significant content relating to the eye and vision and which are held in the libraries on the Bloomington campus of Indiana University.

Catalogue of the Adolph Lomb Optical Library at the University of Virginia⁸

This quite plain catalog, published in 1947, consists of 203 pages of reproductions of card catalog cards reduced in size to fit ten to fifteen items per page. A one-page introduction by James P.C. Southall, Professor Emeritus of Physics, Columbia University, notes that the collection began with the donation of the books of Adolph Lomb and was built up further with contributions from companies and individuals. Most of the books in the collection deal with optics of lenses, optical instrumentation, and optics as applied to optometry and ophthalmology. The catalog does not appear to have been produced in association with an exhibition, and seems to be a complete listing of the books and pamphlets in the collection. Most of the items were published in the 19th century, with many others from the early 20th century and a few from the 18th century. Items are in alphabetical order by author. There are no illustrations and no index. The collection includes 706 books, 470 monographs and

brochures, 174 bound and 86 unbound volumes of journals.⁹ Adolph Lomb, who died in 1932, was one of the founders of the Optical Society of America, and the oldest son of Henry Lomb, co-founder of Bausch & Lomb.

Bibliotheca Osleriana¹⁰

This is an impressive 792 page tome that gives bibliographical data for 7,787 works, with occasional notes on provenance and physical description and, in some cases, biographical notes on the author and notes on historical significance of the work. The items were collected by Sir William Osler and donated to McGill University. The initial sections include works by notable authors and they follow a roughly chronological order. This catalog was published in 1969. Within the initial sections entries are arranged by author with inclusion of biographies of those individuals. Following those initial sections, there are sections with works by less famous persons, literary works, works on the history of science and medicine, biographical works, bibliographies, and incunabula (early printed books). These lists are preceded by a six page prologue by Lloyd G. Stevenson, a six page editor's preface by W.W. Francis, R.H. Hill, and Archibald Malloch, and a 17 page introduction by Osler entitled "The Collecting of a Library." There is an 81 page index, but no illustrations. There are over 70 items under the index entries of ophthalmology, ophthalmoscopy, optics, and vision. Sir William Osler (1849-1919) was a Canadian physician who made numerous contributions to medicine and who has been described as "the best-known physician in the English-speaking world".¹¹

British Optical Association Library and Museum Catalogue¹²

Pages 1 to 296 of this 1932 catalog list the books in the British Optical Association Library. Pages 297 to 324 and 75 plates document items in the museum. Pages 1 to 236 of the library catalog give bibliographical data and a one or two sentence annotation for each of the books. The library catalog has a 51 page subject index. There are, for example, 38 items listed under astigmatism dating from 1862 (*Astigmatisme en Cylindrische Glazen* by Donders) to 1930, 131 items listed under frames and lenses dating from a 1614 copy of Bacon's *Perspectiva* to a 1931 book, and about two hundred listings under refraction dating from 1685 (*Oculus Artificialis* by J. Zahn) to 1931. There are some black and white illustrations from selected books in the catalog. A nine-page history of the library at the front of the book (pages v to xiii) states that its first catalog, published in 1901, consisted of only seven books.

Bibliotheca Walleriana¹³

This two volume set, published in 1955, lists the books and journal articles in a collection remarkable in its magnitude – over 20,000 items. It provides bibliographical data on materials significant in the history of medicine and science collected by Swedish surgeon Erik Waller (1875-1955) and willed to Uppsala University in Sweden. There are no annotations on the books in this catalog. There are numerous index entries under ophthalmology, ophthalmoscopy, optics, and vision.

Medicine: An Exhibition of Books Relating to Medicine and Surgery¹⁴

This book was published by the Lilly Library at Indiana University to accompany a 1966 exhibition of books from the collection of J.K. Lilly, Jr., grandson of the founder of Eli Lilly and Company and former president and chairman of the board of the company. The book presents bibliographical data and annotations on 195 books. Three pages are devoted to books related to ophthalmology, such as George Bartisch's *Ophthalmodouleia* (1583) and Jacques Guillemeau's *Traité des Maladies de l'Oeil* (1585), as well as publications by William Briggs, Charles Saint-Yves, Helmholtz, Purkinje, Donders, and Albrecht von Graefe. Another part of the book includes *An Essay Upon Single Vision with Two Eyes: Together with Experiments and Observations on Several Other Subjects in Optics* (1792) by William Charles Wells. There are 24 pages of illustrations from some of the books, but none from the eye related books.

Notable Medical Books¹⁵

This is a 1976 publication of the Lilly Library of Indiana University highlighting historically significant medical books that were donated to the Library by Josiah Kirby Lilly, Jr. Introductory material includes a two page discussion of significant medical book collections and their donation to libraries, a two page account of Lilly's collecting interests and the Lilly Library, and a one page introduction to the main body of the catalog. A description of the contents and historical importance of 130 books is discussed, along with some biographical information on the authors. Two facing pages are devoted to each book, providing a simple but appealing design. The left facing pages contain illustrations, either from the book or having some connection to the author. The right facing pages contain text matter. The entries in the catalog are arranged in chronological order of their writing or publication. There is an index of the authors. An acknowledgments page at the end of the book lists six reference sources. The eye-related items in this book are publications by Bartisch, Purkinje, Helmholtz, and von Graefe that were also featured in the 1966 exhibition catalog from the Lilly Library.

The Bernard Becker Collection in Ophthalmology¹⁶

This nicely designed catalog discusses 426 rare books in the Bernard Becker collection of ophthalmology books. Bibliographical data plus a short discussion of contents and historical significance are given for each book, along with references for further information. There are more than 30 black and white illustrations taken from these books. Included are a subject index and a chronological and geographical index for the books. Also included in the catalog are a seven page listing (basic bibliographical data only) of 20th century books in the collection, a six page listing of selected titles from the Library's other holdings that are complementary to the Becker collection, and 16 color plates from the Becker collection. This book demonstrates that a catalog can be both visually appealing and a contribution to scholarship. A review of this catalog praised it for being "ably and thoughtfully annotated" and "interesting to browse."¹⁷

Comments

The rare book catalogs discussed were produced with a variety of formats. They differed in number of illustrations, and indexing ranged from none to very extensive.

They provide examples of some of the different purposes discussed earlier, although they could all serve as reference sources to some extent. They vary in potential value as contributions to the scholarly literature, although I learned something from each of them and I enjoyed examining them all.

References

1. Traister D. Rare book collections: the need for interpretation. *Wilson Library Bulletin* October, 1983; 115-119.
2. Allen G. The design and printing of library exhibition catalogues. *Rare Books & Manuscripts Librarianship* 1990;5(2):77-84.
3. Taylor MJ. Letter to the editor. *Rare Books & Manuscripts Librarianship* 1992;7(2):160.
4. Traister D. Public services and outreach in rare book, manuscript, and special collections libraries. *Library Trends* 2003;52(1):87-108.
5. Holman WR. *Library Publications*. San Francisco: R. Beacham, 1965.
6. Berger SE. *The Design of Bibliographies: Observations, References and Examples*. Westport, CT: Greenwood Press, 1992.
7. Berger SE. The design and evaluation of exhibition catalogs. *Rare Books & Manuscripts Librarianship* 1992;7(1):45-60.
8. University of Virginia. *Catalogue of the Adolph Lomb Optical Library at the University of Virginia; With an Introduction by James P.C. Southall*. Charlottesville: Alderman Library, 1947.
9. Hofstetter HW. The Adolph Lomb Optical Library. *Newsletter Optom Hist Soc* 1986;17:45.
10. Osler W. *Bibliotheca Osleriana: A Catalogue of Books Illustrating the History of Medicine and Science Collected, Arranged, and Annotated by William Osler and Bequeathed to McGill University*. Montreal: McGill-Queen's University Press, 1969.
11. Roland CG. Osler, Sir William. *Dictionary of Canadian Biography Online*. <http://www.biographi.ca/EN/ShowBio.asp?BioId=41753>. Accessed July 7, 2008.
12. Sutcliffe JH, Mitchell M, Chittell. *British Optical Association Library and Museum Catalogue*. London: Council of the British Optical Association, 1932.
13. Sallander H. *Bibliotheca Walleriana: The Books Illustrating the History of Medicine and Science Collected by Dr. Erik Waller and Bequeathed to the Library of the Royal University of Uppsala; A Catalog*. Stockholm: Almqvist & Wiksell, 1955.
14. Randall DA, Bennett JQ. *Medicine: An Exhibition of Books Relating to Medicine and Surgery from the Collection Formed by J.K. Lilly*. Bloomington, IN: Indiana University Lilly Library, 1966.
15. LeFanu WR, Waife SO, McCain E, Weber R, Hammond CE. *Notable Medical Books, From the Lilly Library Indiana University*. Indianapolis: Lilly Research Laboratories, 1976.
16. Wechsler L, Hoolihan C, Weimer MF. *The Bernard Becker Collection in Ophthalmology: An Annotated Catalog*, 3rd ed. St. Louis: Bernard Becker Medical Library, Washington University School of Medicine, 1996.
17. Enoch JM. Book review: *The Bernard Becker Collection in Ophthalmology: An Annotated Catalog*. *Optom Vis Sci* 1998;75:634.

Book Review: A Brief History of Bausch & Lomb's First 150 Years

A Brief History of Bausch & Lomb's First 150 Years: Perfecting Vision, Enhancing Life for 150 Years. Lee Sullivan. Bausch & Lomb, 2004. 72 pages. Hardcover.

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

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

This book was produced to commemorate the 150th anniversary of Bausch & Lomb. It is filled with photographs of Bausch & Lomb products and personnel. Toward the front of the book are one page biographies of founders J.J. Bausch and Henry C. Lomb. John Jacob Bausch was born in 1830 in Germany, and came to the United States in 1849. His name was originally Jacob Bausch, but he changed it to John Jacob Bausch, when he found that there was another person named Jacob Bausch living in Rochester, New York where he settled. Obviously a man of patience, Bausch had to wait several years before his optical business, started in 1853, began to turn a profit. Even though his business grew into a giant company, Bausch is said to have been friendly to all employees and did not expect deference to his position. Bausch died in 1926.

Henry C. Lomb was born in 1828, also in Germany, and, like Bausch, came to the United States in 1849. He worked as a carpenter in Rochester, New York, until joining Bausch in the optical business. His loan of sixty dollars to Bausch started their company. He fought in the American Civil War from 1861 to 1863, rising in the ranks from sergeant to captain. His Army pay helped keep Bausch's optical business going. When Lomb returned to Rochester from the Civil War, the business officially became known as Bausch & Lomb. Lomb showed great concern for employee welfare and worked on a number of philanthropic projects during his lifetime. He died in 1908.

The financial breakthrough for Bausch & Lomb was in 1866 when the company started manufacturing spectacle frames and optical instruments using Vulcanite from the American Rubber Company. In the mid 1870s, B&L started making microscopes and in 1880, they started manufacturing photographic lenses. In the 1890s, they began making telescopes and binoculars. Soon thereafter they were making slide projectors and naval gun sights. B&L's Scientific Bureau started in 1905, prior to which their research efforts were an informal family effort.

During World War I, B&L produced about three fourths of the approximately six hundred thousand pounds of optical glass needed by the U.S. military. During World War II, that amount increased to three million pounds of optical glass. B&L also produced aerial mapping camera lenses, projection equipment, Ortho-Rater vision testers, binoculars, range and height finders, spotting scopes, gas masks, and Ray-Ban goggles for the military in World War II. At one point during the war, employment at

B&L's Rochester plant was over ten thousand. After World War II, Ray-Ban sunglasses became very popular.

In the 1930s, B&L started manufacturing ophthalmic testing equipment. Among this equipment were the Ferree-Rand perimeter, Ortho-Rater vision tester, Universal slit lamp, Greens' refractor, and eye chart projectors. The 1950s were marked by production of various camera lenses, photographic filters, magnifiers, and other accessories, and the development of the CinemaScope lens for motion picture projection. Early in 1971, B&L started marketing its Soflens soft contact lens, the great success of which led B&L to become a Fortune 500 company in 1975. The last two decades of the twentieth century saw B&L change its direction, selling its interest in many of its traditional products and moving into the field of gas permeable contact lenses and extended wear soft contact lenses, as well as into various other health care areas, such as pharmaceuticals, microsurgical equipment, skin care products, and toothbrushes. Clearly not an in-depth history, this promotional book provides some entertaining browsing. The numerous photographs are attractively presented, and the text gives an overview of the major accomplishments of the company from its beginnings to the present.

Book Review: The Prism and the Pendulum: The Ten Most Beautiful Experiments in Science

The Prism and the Pendulum: The Ten Most Beautiful Experiments in Science.
Robert P. Crease. New York: Random House, 2004. xxiii + 244 pages. ISBN 0-8129-7062-4. Paperback, \$14.95.

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

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

I was drawn to this book because two of the experiments the author identifies as the most beautiful in science involve optics. One was Isaac Newton's (1642-1727) experiments with prisms showing that colors mixed together form white light rather than color being a distortion of white light. The other was Thomas Young's (1773-1829) double slit experiment showing the interference of light and suggesting its wave nature.

Early in the book the author gives his definition of a beautiful experiment. He claims that a beautiful experiment has three characteristics – depth, efficiency, and definitiveness: "...a beautiful experiment is one that shows something deep about the world in a way that transforms our understanding of it." Its "elements have to be efficiently arranged." And "a beautiful experiment should be definitive, revealing its result without need for further generalizations or inferences." (pages xviii-xix) The author suggests that "...the beauty of Newton's *experimentum crucis* had nothing to do with the colors produced by his prisms...but with how it reveals what it does about light....And the beauty of Young's experiment is not due to its rather mundane pattern of black-and-white stripes but to how these disclose something essential about light." (page 17)

Each of the ten beautiful experiments is discussed in a separate chapter. In addition to the experiments by Newton and Young, the other eight are: measurement of the earth's circumference by Eratosthenes (c.276-c.195 BC); Galileo Galilei (1564-1642) showing that objects of different weights fall at the same speed; Galileo's inclined plane experiment showing the acceleration of gravity; Henry Cavendish (1731-1810) and measurement of the mean density of the earth; Jean-Bernard-Léon Foucault's (1819-1868) pendulum showing the rotation of the earth; the oil drop experiment of Robert Millikan (1868-1953) to measure the charge of an electron; discovery of the internal structure of the atom by Ernest Rutherford (1871-1937); and the phenomenon of quantum interference of single electrons by various investigators and groups. In each chapter the author wrote about the particular scientist and the historical context of the experiment, and he sketched out the nature of the experiment.

After each chapter, the author presented an "interlude" of a few pages. These interludes address various issues in the philosophy of science, such as the contrast

between demonstration and experiment, imagination and creativity in the sciences compared to the arts, and the integration of science with popular culture.

In a final concluding chapter, the author suggested that science can still be beautiful today. He observed that "Almost all of the experiments in the top ten were done solo, or with the aid of a few collaborators, in a relatively short period of time. But the past half-century has wrought tremendous changes in the size and scale of science experiments. Today, physics experiments are routinely interdisciplinary and multinational, and often involve dozens of institutions and hundreds of collaborators; they may take years or even decades to complete." The book includes twenty pages of reference notes and a four page index.

Past American Optometric Association Presidents Remembered

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

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

Four former presidents of the American Optometric Association (AOA) passed away in December of 2007 and January of 2008. Don A. Frantz was AOA president in 1961-62, Lester Hussey in 1970-71, Robert E. Day, Sr., in 1973-74, and Harold Frank Demmer in 1981-82.

Don A. Frantz

Don Frantz was born in Iola, Kansas, in January 25, 1916, and died December 3, 2007. Frantz started doing lens surfacing, edging, mounting, and dispensing in his father's optometry office when he was in high school.¹ He attended the University of Chicago for two years and then completed a Bachelor of Science degree from Northwestern University. He graduated from the Northern Illinois College of Optometry in Chicago. In 1942, he established a practice in DeKalb, Illinois. That practice grew into a professional corporation with five outstanding optometrists, three opticians, and ten assistants.

My first experience with optometry, and subsequently my inspiration for going into optometry, was as a patient in that office in the 1960s. I was examined by one of Frantz's partners, Paul D. Randolph, 1964 Illinois optometrist of the Year and the son of the superintendent of the rural school district where my father was one of the principals. Their optometric practice occupied a two story building. Examination rooms were L-shaped with almost the entire wall at the "top" of the L serving as a projection screen. The screen was approximately six feet wide. During some tests the patient viewed stereoscopic color pictures which covered most of the screen. Standard optometric letters and charts could be projected into a blocked out portion of the color scene.^{2,3} So, for example, a check on the subjective refraction was done using a standard letter chart in the middle of a stereo color picture of a distant mountain scene.

Frantz served the AOA in many capacities, Chairman of the Committee on Practice Management, eight years as the Secretary of the Council on Optometric Education, and Chairman of the Long-Term Planning Committee.⁴ He was a lecturer and author for the Optometric Extension Program, frequently writing on practice management topics, and a Fellow of the American Academy of Optometry. He taught practice management at Illinois College of Optometry, and spoke at many other schools and colleges of optometry. I was fortunate to hear one of his inspiring talks when I was a student at Pacific University College of Optometry in the early 1970s. Perhaps the most memorable part of his presentation was the story he told of his examination of a woman who had been thought to be blind. He described how he found that the woman

had about twenty diopters of hyperopia and a very high amount of astigmatism and was able to help that woman see as she had never seen before.⁵

Lester R. Hussey

Lester Hussey was born June 23, 1912, and died on December 21, 2007. Hussey attended high school in Spokane, Washington.⁶ In 1934, he completed a B.S. degree from Whitworth College with a major in math.^{7,8} He graduated from Los Angeles College of Optometry in 1938, and he established a practice in Spokane, Washington.⁹ He completed additional study in education at Gonzaga University.⁷ He served in the United States Navy from 1943 to 1946. Hussey was president of the Washington Optometric Association from 1958 to 1960, and he was their Optometrist of the Year in 1960. He served the American Optometric Association for 32 years in various roles, including work on the Insurance Committee, the Department of Public Health, and the Department of Organization. During his AOA presidency (1970-71), Hussey worked to reorganize the AOA's departments and committees.¹⁰

Robert E. Day, Sr.

Robert Day was born in Van Alstyne, Texas on May 19, 1924, and died on January 11, 2008. He served in the United States Army Air Corps from 1943 to 1946.¹¹ He earned a B.S. degree in physics from North Texas University and graduated from Southern College of Optometry in 1949.^{12,13} Day practiced in Garland, Texas from 1950 to 2000. He became president of the Texas Optometric Association in 1963 and Chairman of its Board of Directors in 1965.¹³ He was a Fellow of the American Academy of Optometry, and received an honorary Doctor of Ocular Science degree from Southern College of Optometry in 1974. He was president of the AOA in 1973-74.

Harold Frank Demmer

Harold F. Demmer was born in Cincinnati on December 11, 1926, and died on December 26, 2007. He was in the United States Air Force from 1945 to 1946, and served in Okinawa during World War II.¹⁴ He attended the University of Dayton and graduated from Southern College of Optometry in 1954.¹⁵ He practiced in Houma, Louisiana. He served as a president of the Louisiana State Association of Optometrists and was their OD of the Year in 1969. He was AOA president in 1981-82.

References

1. Anonymous. Profiles of personalities in optometry: Dr. Don A. Frantz, AOA President Elect. J Am Optom Assoc 1960;32:314.
2. Frantz DA. Natural color stereoscopic refraction. J Am Optom Assoc 1959;30:471-476.
3. Frantz DA. A review of three-dimensional refraction. Optom Weekly 1966;57(1):23-30.
4. Anonymous. Frantz: noted educator, author. AOA News January, 2008;46(9):15.
5. Frantz DA. Thorough refraction makes blind woman see: a human interest story. J Am Optom Assoc 1960;32:318-319.

6. Anonymous. Personalities in optometry: Dr. Lester R. Hussey, AOA Trustee. J Am Optom Assoc 1964;35:140.
7. Directory of the American Optometric Association. St. Louis: American Optometric Association, 1972:164.
8. Anonymous. Introducing A.O.A.'s new president. J Am Optom Assoc 1970;41:610-611.
9. Anonymous. Hussey served AOA 32 years. AOA News January, 2008;46(9):15.
10. Gregg JR. American Optometric Association: A History. St. Louis: American Optometric Association, 1972:329.
11. Anonymous. Day served 1973-74. AOA News February 4, 2008;46(10):8.
12. Directory of the American Optometric Association. St. Louis: American Optometric Association, 1972:75.
13. Anonymous. Profiles: Robert E. Day, O.D. J Am Optom Assoc 1967;38:1050.
14. Anonymous. Demmer prominent in La. AOA News February 4, 2008;46(10):8.
15. Directory of the American Optometric Association. St. Louis: American Optometric Association, 1972:77.

Instructions to Authors

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

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

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

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

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

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

Acknowledgments should be placed between the text of the article and the reference section. Sources of support, such as grant funding or other significant

assistance, should be acknowledged. The assistance of persons who contributed to the work may also be acknowledged.

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

Journal articles:

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

Section in a single author book:

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

Chapter in a multi-author volume:

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

Citations to articles in *Hindsight: Journal of Optometry History* should be given as follows:

Bennett I. The story behind Optometric Management magazine. *Hindsight: J Optom Hist* 2007;38:17-22.

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

Optometric Historical Society Membership Application

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

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

Bridget Kowalczyk
Secretary-Treasurer, Optometric Historical Society
International Library, Archives, and Museum of Optometry
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.