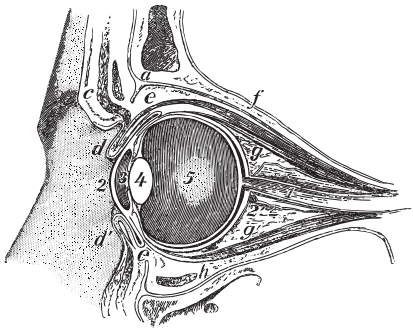
Vis a Tergo

THE FORCE BEHIND

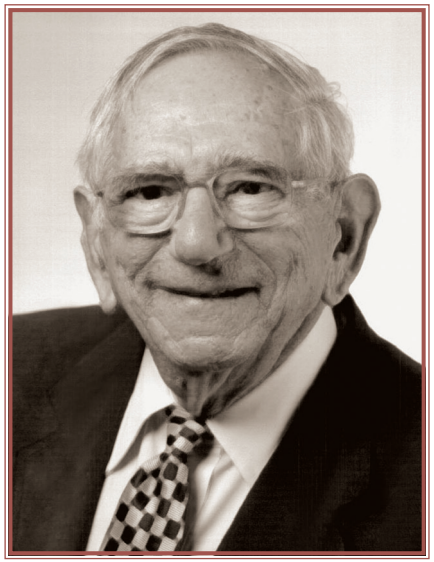


A History of the Eye Department

The First 100 Years

[*Speech 1973*]

JEROME W. BETTMAN, M.D.



JEROME W. BETTMAN, M.D.
1909 - 2006

Dr. Bettman was a long term member of the American Academy of Ophthalmology. Along with Dr. Bruce Spivey, he was instrumental in the conception, development, and implementation of the Academy's Code of Ethics, serving as Chairman of the Ethics Committee from 1984-1988. Dr. Bettman was a key figure in maintaining the Ophthalmology Program at Pacific Medical Center, known today as CPMC.

One century ago, in 1873, this Department of Ophthalmology was founded. During this period of 100 years, the Department has always been one of the best in Western America. This great stature was achieved and maintained without state funds and often without adequate physical facilities. Why has this occurred, and why is it now one of the outstanding Departments in Western America?

I believe that the most important factor has been the *vis a tergo,* the force behind. It is this force and the people associated with it that we will discuss today.

The first great historian, Thucydides, said that a good historian must have two attributes: He must have personal knowledge of the situation, and he must tell the truth. Thucydides confessed that he found it a bard task to establish the exact truth, and I heartily concur. It has been my good fortune to know personally every head of this Department, or his immediate family.

The first chartered college of the Pacific Coast had existed from 1858 until 1864, as the medical department of the University of the Pacific. This college had been founded by Elias Samuel Cooper, but dwindled with his death in 1862, and when Toland founded his medical college in 1864 (the precursor of the University of California), it absorbed the remainder of Cooper's school. Elias Samuel Cooper was an aggressive man who could not be accused of hiding his light under a bushel. He advertised his ophthalmic and orthopedic dispensary widely. He was sued for $25,000 by a patient on whom he performed the first successful Caesarean in California.

The Medical Department of the University of the Pacific was revised in 1871 and listed Levi Cooper Lane (nephew of Cooper), as acting professor of ophthalmology and otolaryngology, as well as professor of surgery, surgical anatomy and clinical surgery.

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In 1873, Adolph Barkan became the first professor of ophthalmology and otolaryngology. Born in Hungary in 1845 (the family name had been Barkanyi), he obtained an M.D. degree from the University of Vienna in 1866 and came to San Francisco in 1869 bringing with him outstanding ophthalmic knowledge along with Germanic attitudes, background, and discipline.

Let me set the scene in ophthalmology in 1873.

No local anesthetics were available. It would be 11 years before Kohler learned the value of topical cocaine from Sigmund Freud. Both ether and chloroform had been in use.

There was no known medical therapy for glaucoma.

Cataract operations had been described by Jacques Daviel over 200 years before, but much of the operation was conditioned by the absence of anesthesia, thus the essence was speed.

There was no treatment for retinal detachment.

Trauma was common. Frequent altercations over "mine and thine" were accentuated by the prolonged use of whiskey. The objects of the quarrel were usually a horse, a gold mine, or a woman.

At the time Doctor Barkan became head of the department in 1873, medical education was at a very low point. Entrance requirements to medical schools amounted to nothing worth mentioning. The old custom of apprenticeship was frequently followed. The apprentice gave his services as office boy, dispenser, and coachman in return for such teaching as the master could give.

Medical schools were a corporation of physicians bent on their own medical improvement. They petitioned the state legislature for the right to start a school and issue diplomas, and were subject to no regulation. The expenses were met by tuition. The teachers gave their services gratis, and any surplus in the treasury accrued to them as dividends.

Adolph Barkan remained as professor of ophthalmology through the period in which the Medical College of the University of the Pacific became Cooper Medical College in 1882 and when Cooper was absorbed by Stanford University as its medical school in 1908. He became emeritus in March 1911 and subsequently lived in Switzerland until his death.

The personal stories about Doctor Adolph are numerous and interesting. I shall relate only a few. During much of his tenure, San Francisco was still close to the gold rush days and was prosperous. It was the center of western medicine. Doctor Barkan's practice was so large that the patients received checks with numbers on them when they arrived at his office. No appointments were made. When the lunch hour arrived, the professor left his office at the Butler Building, but all the patients remained through the noon hour, so that they would not lose their places.

Doctor Barkan had some lovely Persian rugs in his office. One patient, a miner, was chewing his tobacco, and as he spit, he often missed the spittoon and hit the rugs instead. Doctor Barkan said nothing, but determined to take an additional pinch of gold dust for each bad shot. He did, and there was no protest.

Fees were high for the wealthy, and in the 1850s, the published charge for a cataract operation was $1,000. On one occasion, an owner of Mexican silver mines brought his child in with severe mastoiditis. A life-saving operation was performed. The bill was $10,000. It was paid, but Doctor Barkan worried for a long while that this was too high, and that the family would resent it. At Christmas, a beautiful silver service arrived as a t oken of their gratitude.

Doctor Barkan was the preeminent specialist in his field and because of this, immediately established the Eye Department as a leader. He laid the firm foundations for excellence that were to persist. He later expressed great satisfaction at the results of his efforts: Improved teaching facilities, paid professorships, and scientifically equipped clinics and hospitals. Be also said that the students were imbued with his own readiness to help the indigent blind.

By the end of his tenure, many significant changes had occurred in ophthalmology: not only cocaine, but novocaine were available as local anesthetics, new important glaucoma operations had been introduced along with new drugs, rubber gloves and diagnostic equipment.

Into this new milieu came the second professor of ophthalmology, Albert McKee. Doctor McKee was a local product; born in Stockton in 1862, he received his M.D. degree from Cooper Medical College in 1886. He, too, had European ophthalmic training, having studied at Berlin, Heidelberg, and the Royal Ophthalmic Hospital in London, he succeeded Doctor Barkan as chairman of that department.

Doctor McKee lived in Woodside. Every morning his horse, "Prince", took him to Redwood City in the fast time of 45 minutes, and thence, he commuted to San Francisco. (In the latter days of Doctor McKee's practice, "Prince" was supplanted by a "Tin Lizzie".) Here he spent a half-day in private practice, and a half-day in teaching and running the clinic. He remained until 1928.

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Doctor McKee's training at both German and English Centers, and previous experience as a general practitioner and as a department head at the University of California gave him a liberal perspective. He had encyclopedic knowledge, and was known as an excellent teacher. The very first beginnings of residents training were at the end of his tenure.

Doctor McKee was followed by Doctor Hans Barkan, the eldest son of Doctor Adolph, the first professor. Doctor Hans, of

loving memory to many of us here, assumed the chairmanship in1928. He had received his A.B. from Stanford, and his M.D. from Harvard. He then took his ophthalmic training in Vienna.

I entered ophthalmology six years after Doctor Hans became chairman. I will relate the state of the art and science as I knew it in the middle 1930s. Tertiary syphilis was common. There were no antibiotics or sulfa drugs.

Cataract extractions were performed according to the dictates of the Vienna School. The surgeon always sat at the patient's right side, facing the patient. A full Graefe incision was performed with the left hand if the patient's right eye was operated on, and with the right hand for the left eye.

Dr. Hans Barkan

The cataract operation of those days was a challenge to the resident who performed it, to his teacher, and to the patient. The resident was not permitted to do his first cataract until the first operating day (Wednesday) of his senior year. It was customary for the entire staff to be present on this occasion. I shall never forget Dohrmann Pischel's anxious breath on the back of my neck as I was making my first cataract incision with all the rest of the staff in attendance. It was the height of Viennese-conceived trauma.

The patient was kept in binocular pads for a week, and was expected to avoid movement of both limbs and bowels.

The teaching was excellent. Separate visiting staff members to teach medical students and for residents were present every afternoon. The surgical teaching was done entirely by Doctor Barkan and Doctor Dohrmann Pischel. This was a great advantage. We learned one good technique from superb teachers who thought first of the patient, and then of the resident, and of little else.

Doctor Pischel would come at any hour to help a resident even with minor surgery. He was indefatigable and gave of his time and great teaching skills in an unstinting manner. These two were to be remembered throughout our lifetimes as the standard of what great teaching should be. Although Doctor Pischel became head of the department after Doctor Maumenee, his contributions were made for decades before that.

Dr. Dohrmann Pischel

Doctor Hans' brother, Otto Barkan, became justly famous for his contributions to surgery where he had a microscope attached to a football helmet, which he wore in the operating room.

Doctor Hans Barkan's contributions were of a different sort. The names of some of these are Max Fine, Ernest Denicke, Robert Shaffer, Earle McBain, Bud Saloman and Arthur Jampolsky. I, too, was privileged to be in this group. Doctor Barkan was loved by all. Doctor Hans was not only a fine teacher and a gentleman of great culture, but he had a good sense of humor.

Permit me to cite just one example. After one of my children had married and was about to acquire a house and needed a loan, I phoned Doctor Barkan's son, who was with a bank. He reminded me of what his father used to say: "Children never really cost you a lot of money until they become self-supporting."

These were good days, but not without disappointments. Phil Thygeson came to us with the intention of establishing the Proctor Foundation. He had been a Stanford Medical student; and this was his first choice. We received a cash advance $25,000, and I hurriedly published two papers, "From the Proctor Foundation at Stanford", to enhance the chance of getting the entire fund. Negotiations were underway to establish whether Mrs. Proctor would have a representative on the board, and how much space would be allotted. The negotiations went on and on, and on. Finally, Dr. Thygeson went to the University of California. Within three days, the Proctor Foundation was irrevocably assigned to the University of California. Dr. Thygeson had said that he would go to whichever university did not receive the Proctor funds, but we lost him too.

Doctor Hans' brother, Otto Barkan, became justly famous for his contributions to surgery where he had a microscope attached to a football helmet, which he wore in the operating room.

When Doctor Barkan became emeritus in 1949, the chair went to Alfred Edward Maumenee. It was evident at the very outset that he was destined to become one of the great figures in world ophthalmology.

Doctor Maumenee represented a totally different school of ophthalmology. He brought a mass of new ideas and refreshing new approaches, but with the same dedication to teaching and scientific honesty that we had always known. Ophthalmology on the entire Pacific Coast benefited by his presence. After only six years, he was called back to the Wilmer Institute as its chairman, but his imprint will long remain on this Department on Clay Street.

Dohrmann Pischel succeeded Ed Maumenee as chief. His ability as a teacher has already been discussed, his leadership in the field of retinal detachment is known by all.

The days of Stanford in San Francisco were coming to an end and the medical school was moved to Palo Alto in 1959. The burden of preserving a Department of Ophthalmology on Clay Street fell to me.

76% of the Stanford faculty elected to remain in San Francisco. Stanford was willing to permit us to use and eventually possess the structures that comprised their San Francisco School, but they were to take all equipment, and made the stipulation that we in San Francisco could not solicit funds.

Several of us met at the home of Henry Gibbons III, the grandson of the first professor of medicine. If Stanford could be persuaded to retain their half of the San Francisco General Hospital and the Veterans Hospital for our use, we would have plenty of material to enable us to carry on with a teaching institution. For reasons of their own, Stanford would not.

I shall not forget that dismal night of the second meeting at the home of Henry Gibbons. It was one of those bone-chilling foggy nights in San Francisco. We had lost the San Francisco General and the Veterans Hospitals; Stanford was to remove all equipment; the Clinic was always a money-losing venture, but now, we were not permitted to solicit funds. We had fallen upon evil days!

I did not wish to be present the day that the moving vans emptied our clinics, but when I went there that evening, I found nothing but the dust of the ages. We had nothing left except a great teaching faculty and a group of top residents headed by Alan Scott. The optimism of Henry Gibbons almost seemed ludicrous, but he was right.

This was not a time for pride or pusillanimous. We could not solicit funds, but we could beg for equipment. I went to the optical companies with the forthright statement that I needed an entire clinic equipped, but could not pay a penny for it. Jenkel Davidson offered to do it on an all or nothing basis. I was delighted to give them an exclusive.

There were a number on our own executive committee who felt that this institution, at first known as San Francisco Stanford and then as the Presbyterian Medical Center, should not have the burden of a residency training program and an out-patient department. A few of us felt that the only thing that would differentiate us from just another hospital was the residency program and its necessary adjunct, the clinic. As is frequently the case, a vociferous and dedicated minority carried the day.

Many patients assumed that the clinic was permanently closed. Advertising became essential. We posted signs on the exterior of the buildings.

Fortunately, one of our former residents, Bomer Brugge, was in charge of the Alameda County (Highland) Hospital. Our residents could go there for surgical material. Through the combined efforts of Dohrmann Pischel, William Swett and Al Brinkerhoff, we were able to share the Southern Pacific Hospital, now Harkness Pavilion, with the University of California. An affiliation was also made with Children's and Mt. Zion Hospitals. We now had access to adequate teaching material!

Funding was difficult indeed; personal friends who headed the NIH committees told me frankly that no funds for training or teaching would be assigned to an institution that did not have a university connection. Plenty of money was available for research, but the American Congress, dazzled by such great achievements of research as a long list of new antibiotics, atomic energy, etc., failed to recognize the need for continued excellence in clinical teaching, including the teaching of patient care.

But we could teach and did. We gave five post-graduate courses each year, and with one exception, had no guest lecturers. The profit supported the department. We gave courses on everything that might attract ophthalmologists: Cataract operations, retinal detachments, muscles, keratoplasty, ocular injuries, highlights, etc.

The support of the Lions Clubs was acquired. Initially humble, their contribution has grown steadily. Gentle persuasion, patience, and teaching to this lay group was rewarding.

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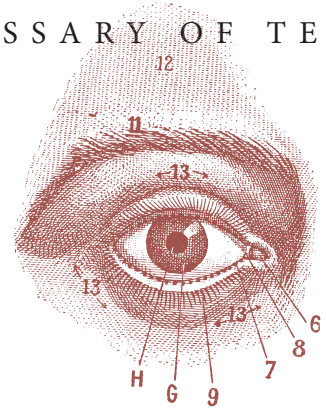
The Eye Department had passed its nadir, its perigee and was again on the ascendancy.

The accomplishments of my successors, Arthur Jampolsky and Bruce Spivey, are so current and so obvious that they need little comment from me. They have done, and are doing, great things. New buildings, sophisticated instrumentation, more research space, research fellows, full-time teachers and guest lectureships. All of these combine to again make a great de-

partment, far, far better than we ever had in those difficult and discouraging days when we had lost the Stanford aegis, but had not yet found the Pacific.

The achievements of my successors have again made this institution one of the outstanding ones in the country. I would caution you to remember, however, that there are other institutions with even larger buildings, more equipment, and research space, but many of these do not have our great teaching tradition. It is this teaching tradition that will place this Department a bit above many of the modern institutions; you have this force from behind, this *vis a tergo.*

GLOSSARY OF TERMS



Conjunctiva: Mucus membrane that lines the posterior aspect of the eyelids and the anterior sclera (white part of the eye)

Cyclodialysis: Surgical procedure, pathologic change. Separation of ciliary body from sclera. May result from surgical procedure to control glaucoma (to establish a communication between anterior chamber and suprachoroidal space) or after blunt trauma to the eye.

Endophthalmitis: Extensive intraocular infection

Episcleral: Connective tissue

Eserine: Anti-glaucoma drug

Goniotomy: Surgical opening

Iridectomy: Operation that re-establishes communication between the posterior and anterior chambers

Iridencleisis: Surgical procedure. Creation of a permanent drainage route out of anterior chamber (now obsolete)

Keratoplasty: Corneal grafting

Ophthalmic neonatorum: Conjunctivitis in the newborn

Optic atrophy: Optic nerve degeneration

Palpebral: Pertaining to the eyelid

Physostigmine: Anti-glaucoma drug

Pilocarpine: Anti-glaucoma drug

Slit lamp: A combination light and microscope for examination of the eye

Scotoma: A blind or partially blind area in the visual field

Tonometer: An instrument for measuring intraocular pressure

Trachoma: Serious infectious keratoconjunctivitis

Trephine: Surgical instrument—cutting tool that makes a circular hole in eye tissue, e.g., a corneal "button" from donor and recipient eyes during a corneal transplant. Surgical procedure—small (2mm) hole through the sclera at the limbus, for treatment of glaucoma (used prior to 1960)

Uveitis: Inflammation of one or all portions of the uveal tract

Pacific Vision Foundation

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