



## 2018-2019 Dedication: Paul A. Lotke, MD

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It is with great honor that we dedicate the 29th edition of the University of Pennsylvania Orthopaedic Journal to Dr. Paul A. Lotke, a tremendous surgeon and leader within the orthopaedic community for greater than 50 years. He is recognized as a foundational member of the University of Pennsylvania Orthopaedic Department and an essential figure that has guided the growth and development of the department into the present day.

Dr. Lotke is native to the greater Philadelphia area. Born and raised locally, he attended Cheltenham high school before moving on to Dickenson College, graduating in 1959 with a Bachelor of Science in physical chemistry. He thereafter attended medical school at the University of Pennsylvania, graduating in 1963. He recalled that orthopaedics was a field in which he had an innate interest, and furthermore, at that time the research components of the field seemed to be only primitively developed. As such, he saw this as an area in which he could have a great impact during his career.

His post-graduate medical training first started with a year of internal medicine at the University Hospital in Madison, Wisconsin. This was followed by a 2-year appointment at the Naval Medical Research Institute in Bethesda, MD, where his lab used canine models to define the parameters of rejection and limits of preservation in kidney transplants. After completion of this research appointment, Dr. Lotke moved on to a year of general surgery at Cedars-Sinai Medical Center in Los Angeles. His time in LA was interrupted by a 2-month stint in Russia on a cultural exchange program, where he would continue research in a lab dedicated to transplant work. After his time in Russia, he returned to Cedars-Sinai to complete his general surgery year, though during that trip abroad he had developed a deep appreciation for the value of international travel and service that would reappear later in his career.

After completing his general surgery internship, Dr. Lotke started his orthopaedic residency at the Hospital for Special Surgery in 1967. Among the most important lessons instilled in him during his residency was the concept of being a lifelong learner, a value that would continue throughout his career and no doubt drive his many advancements in the field of orthopaedics. Another significant component of his residency was the camaraderie among his fellow co-residents. In fact, on his arrival to HSS he met one of his senior residents, Dr. Malcom Ecker, who would himself become a pillar of the Penn Orthopaedic community. They developed a life-long

friendship during their residency that continues to this day. Dr. Lotke completed his orthopaedic residency in 1970, followed an additional year-long research fellowship at HSS completed in 1971.

After his residency and fellowship, Dr. Lotke returned to Philadelphia, taking a position at the University of Pennsylvania Orthopaedic Department. The department, under the guidance of Dr. Edgar Ralston at the time, was quite different in 1971, having less than 10 full-time physicians and operating out of a small office in the bottom of the Maloney building. Dr. Lotke, as with all of his colleagues at that time, started in general orthopaedics, but it wasn't long before his practice headed toward specializing in the knee. He noted that at the start of his career, the surgical options for knee arthritis were scarce and, when utilized, not well received. It was an area in which he saw great potential for development and improvement. He recalls, "I said to the chair at the time 'I'm going to know more about the knee than anyone in the city of Philadelphia' and I dedicated myself to that aim." Soon, he would push to develop the first specialty knee clinic at Penn. Dr. Lotke recalled that the idea was not easily sold to the department at first, as there was some resistance to specialty clinics at the time. After a bit of a "fight to get it started", Dr. Lotke became the director of the Knee Clinic, which was only the second specialty clinic in department history (the hand clinic was the first). As will become apparent, this specialty clinic was one of several prescient ideas Dr. Lotke pursued that would later become hallmarks of present day orthopaedics.



Figure 1: Dr. Lotke at his desk, buried in paperwork.

Dr. Lotke soon became a leader in knee replacements, having a significant impact on the development and progression of knee arthroplasty techniques throughout his career. He recalled that when the first total knee designs came to the market,

guides for their placement did not exist. Surgeons had only an angular rod to help judge the plane of the femoral cut, and a simple osteotome to judge the plane of the tibial cut. He was among the first vocal advocates for the idea that well-positioned components were vital for a good outcome. This concept is evidenced by many of his early publications, including the landmark paper “Influence of Position of Prosthesis in Total Knee Arthroplasty”, which was published in JBJS in 1977 and to this day remains among the most cited pieces of literature concerning knee arthroplasty. As he recalled, “implants that were put in well had better results, and those that were put in poorly failed quickly. Now this seems like a pretty obvious conclusion, but back in the 70’s that wasn’t known... this finding started the need to get good [guide] instruments in total knees so we could get reproducible results.” His work in this area was integral to the growth of the arthroplasty service at Penn, as well as to improving the technique of total knee arthroplasties around the world.

Dr. Lotke was also a strong advocate early in his career for the use of aspirin for DVT prophylaxis in orthopaedics as opposed to other, more aggressive pharmacologic regimens. He remembers this as a “decade-long battle with the powers that be”, and “one of two or three topics” that took over his career. At the start of his practice, post-operative protocols were much more sedentary as compared to the present day, and as such the risk of DVT and PE was higher. As a result, pharmaceutical companies “overdeveloped” their pharmacologic regimens, but Dr. Lotke always felt that the side effects of these regimens were too great and under reported. He recalls using an aspirin regimen during that same time with good results and limited complications. With his data, he embarked on an aggressive campaign advocating for the use of aspirin, offering support for the medication regimen on a lecture circuit that spanned many universities and institutions. Ultimately, his efforts were realized when the American College of Chest Physicians first officially recommended aspirin for DVT prophylaxis, and in the present day his viewpoint continues to be supported by the American Academy of Orthopaedic Surgeons.

Dr. Lotke has devoted a great deal of his time abroad during his career working with Orthopaedics Overseas, visiting many different countries including Pakistan, Vietnam, and Bhutan, among others. He holds these experiences in high regard, recalling that these trips changed the lives of both him and his children, who would often accompany him on the trips. He continues to strongly endorse these experiences to orthopaedic residents and physicians as opportunities to not only give back to the community and help underserved populations, but also for personal growth and enrichment.

During his esteemed career, Dr. Lotke has held numerous leadership, editorial, and administrative roles, has been the recipient of many honors and fellowships, and held positions in several surgical societies. Highlights include roles as the chief of the Implant Service at Penn from 1977 to 2001, President of the Knee Society from 1992-1993, a member on the Board of Directors for Orthopaedics Overseas from 2001-2007, and a senior associate editor of Clinical Orthopaedics and Related Research from 2008 until 2014. He has authored



**Figure 2:** Example of one of Dr. Lotke’s handcrafted boats

over 150 original publications, over 50 editorials, reviews, and book chapters, and has been the author/editor of 13 different textbooks. He has been invited to visiting professorships around the world, most recently as the Honorary President of the Japanese Orthopaedic Society in Tokyo, Japan in 2007.

Dr. Lotke moved toward retirement in 2008, though he still enjoys regularly attending grand rounds and visiting professorships. In his retirement, he has become an avid woodworker, with extensive shops in both Pennsylvania and Maine. Among his more impressive achievements, he has crafted two boats, a 16 ½ foot Herreshoff sailboat and 17 foot Westport skiff (Figure 2), as well as many pieces of furniture. Another long-standing hobby of his is keeping several different types of animals at his Pennsylvania barn. At various times in the past he has bred llamas and sheep, as well as kept horses, dogs, cats, and chickens. To this day he still always has several chickens around, though he got out of the “llama game” long ago. He continues to enjoy spending time his wife, Dorothy Sue, and their three children and grandchildren.

Recalling his tenure at Penn, Dr. Lotke remembers this time with fondness and amazement at the extraordinary changes that have taken place since he first started, further stating that many of the most significant changes have occurred in the last several years. He was present during the leadership of 7 different department chairs, and notes that, while each of these individuals had a positive impact, “I don’t think I saw a chair that made as much of an impact as the current chair, Scott Levin. He has taken the department to a level that was not previously attainable.” When asked what advice he has for current residents, Dr. Lotke remarked “nothing I did when I was a resident, would I still do today. Everything changes... you have to be prepared for that, be willing to accept that, and be willing to make those changes throughout your career.” He further said that, while his career ventures onto editorial boards and leadership positions were rewarding, he also simply stated, “there was nothing more fun than operating”.

Dr. Lotke is an extraordinary figure in the field of orthopaedic surgery. He is a surgeon known for his exceptional technical skills, an inquisitive scientist who has published research with great impact across the orthopaedic community, a great humanitarian giving back to underserved communities internationally, and an advocate for driving the future of orthopaedic practice toward the best patient care possible. It is our great honor to dedicate this edition of the University of Pennsylvania Orthopaedic Journal to Dr. Paul A. Lotke.