

MEMORIAL RESOLUTION

RICHARD S. SHEVELL

(1909-2002)

Richard Shevell, a popular teacher of aeronautics at Stanford and well-known designer of commercial airplanes, died at his home in Atherton on April 21, 2000. He was 79.

Richard S. Shevell was born in New York City on June 6, 1920. He loved airplanes as a boy, sketching designs in a second-grade schoolbook, and pursued this passion throughout his distinguished career as one of the country's leading aeronautical designers. He attended Columbia University, earning a bachelor's degree in mechanical engineering in 1940, then moved to Pasadena where he studied aeronautical engineering. He received a master's degree in 1941 and an engineer's degree in 1942 from the California Institute of Technology, where he met his wife, Lorraine King. They were married for more than 50 years.

In 1942, Shevell joined the Stability and Control Group at Douglas Aircraft and began to work on missile aerodynamics. At the age of 25 he was assigned responsibility for the complete aerodynamic design of the first Nike Ajax missile. In 1959, he was appointed chief of the Aerodynamics Section, in charge of the aerodynamic development of the DC-9. Among his many contributions to aerodynamics during this time was the invention of small devices called vortilons that improve aircraft performance and safety at low speed, and that are used on many aircraft today. The DC-9 was produced in many versions, including the MD-80 and MD-90, after Douglas Aircraft Company became McDonnell Douglas, and now the 717. The forty years of success for this design is just one measure of the tremendous influence that Shevell has had on commercial aviation. In his time at Douglas he was recognized not just for his technical excellence, but for his great personal skills, and was admired by corporate presidents and his engineering aides at the same time.

Shevell was appointed director of the Commercial Advanced Design Department at Douglas in 1967, and oversaw development of the DC-10 aircraft. The first flight of the DC-10 took place the summer of 1970, about the same time that Shevell came to Stanford on what was to be a one year leave. Instead it was the beginning of a seventeen year career as a faculty member of the Aeronautics and Astronautics department.

Shevell continued his aeronautics research at Stanford, serving as principal investigator on many projects for the National Aeronautics and Space Administration and for the Department of Transportation. He combined an enthusiasm for the future with a level of skepticism that made him a much sought-after advisor. A member of numerous technical and advisory committees for NASA, AGARD, and professional societies in the 1970's and 80's, he became known for his wit and ability to communicate with people that made even the most mundane meetings pleasant. The greatest curmudgeon on one of the many committees he chaired would be disarmed by his sense of humor, as he peppered any

gathering with a collection of puns and jokes that evoked simultaneous groans and an instantaneous sense of affection for this unique man.

"He reveled in technological accuracy and engineering design, but his success was the way he worked well with people," said his son Steven, "He always had a sense of humor about everything. He infused an enthusiasm for any task, from the most minor to the most important, with humor and humanity."

His down-to-earth humor and accessibility also made him a favorite among students at Stanford. He taught courses in aircraft systems design and transportation analysis along with introductory courses in aeronautics and astronautics and an ethics course on the role of the engineer in modern society. He collected his notes for one of these courses to create a popular textbook, "Fundamentals of Flight." First published in 1983, it is still used at Stanford and around the world. He was able to convey to his students all aspects of aeronautics, from airplane structures to propulsion systems to economics, with both technical depth and great common sense. He also was one of the first members of the engineering faculty to introduce personal computers into teaching, writing his own programs in the 1970's for airplane analysis.

He served as advisor and mentor to many graduate students and young faculty, willing to talk in his office for hours about low noise aircraft, transonic aerodynamics, politics, or his granddog, interrupted occasionally a phone call from Lorraine, which he'd always answer, "Oh... Hello Sweetheart!"

Shevell retired from Stanford in 1987 but maintained an active role in the aerospace community through committee work, consulting, and newsgroup postings, where he quickly became known by thousands of on-line students of aviation as the expert on matters related to airplanes and aeronautics. He also maintained close ties with his colleagues and former students, calling from his home even in failing health to talk about the latest research he had read about, the new computer he bought, and to ask if they had heard the one about the priest and the rabbi...

Richard and Lorraine were also involved in volunteer community service work. They earned the Volunteer Couple of the Year award at the Jewish Community Center in Palo Alto, served on the center's board, and played a leadership role in the Hillel Foundation at Stanford.

Shevell is survived by his three children and two grandchildren; he is remembered fondly for his insight, expertise, common sense, warmth, and humor by many generations of students, colleagues, and internet acquaintances.

Committee:

Ilan Kroo, chair
Robert Cannon
Holt Ashley