# PAO-LU HSU 1909-1970

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Pao-Lu Hsu was born in Peking in 1909 and obtained his B.Sc. degree from Tsing Hua University in 1933. He spent the years 1936–1940 at University College, London where he received a Ph.D. in 1938 and an D.Sc. in 1940. From London he returned to China to accept a professorship in the Department of Mathematics at Peking University.

The war years were difficult (letters from 1943–44 to Professor Neyman in Berkeley mention starvation), but Hsu continued his research. Efforts to bring him to the United States finally succeeded, and in 1945 he arrived just in time for the First Berkeley Symposium on Probability and Statistics. A semester of teaching at the University of California was followed by a semester at Columbia. This was the year in which Hotelling moved from Columbia to North Carolina, and he offered Hsu an associate professorship in the department he was creating there. Thus Hsu spent 1946–47 in Chapel Hill from where—in spite of many efforts to keep him in America—he returned to his professorship at Peking University.

Professor H. F. Tuan of Peking University informs us that Hsu died in his home on the campus of Peking University on December 18, 1970, from chronic tuberculosis. There was a memorial meeting in his honor.

Hsu was born into a mandarin family from the famed lake city of Hangchow, but was brought up in Peking. Perhaps because of this background he spoke the "common" (or "official") dialect with an interesting soft overtone. In appearance and carriage he was a Chinese scholar in the classic mold. His British education formed his taste in mathematics; he preferred the hard and concrete to the general and abstract. Setting even higher standards for his own work than for others, he would temper his critical sense with a gentle mocking humor. He could work feverishly on research for spells, but used to lament that life's diverse interests conflicted with a single-minded devotion to science. He enjoyed the company of men and women of the other culture and was versed in traditional Chinese letters. A particular hobby was chanting the musical drama of the Yuan dynasty with a small group of connoisseurs accompanied by ancient instruments. Partly owing to fragile health he never married but apparently came close to it. He returned to China in the summer of 1947, shortly after the Communist victory, despite offers of positions in the U.S. by A. Wald and others. He was looking forward to being part of the emerging new society in his homeland. In his last years he was too ill to get around but continued to teach from his room. The Chinese scientific community

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gathered to pay homage to him at his funeral. Apart from his published papers and a few remarks given us by an old friend, we are unable to obtain further information about Hsu's life and work in the twenty some years he lived in Peking.

Hsu is affectionately remembered by many students and colleagues as a gentle, shy and modest man who was reticent about his personal life, but had a strong influence as a teacher and model of a scientist. Isadore Blumen, who was a student of Hsu during his year at Chapel Hill, writes: "It was Hsu's insistence on simplicity combined with depth of understanding, clarity without avoidance of difficulty, and above all a deep and obvious but unspoken commitment to the highest goals and standards of scholarship which attracted us to him". Ralph Bradley remembers Hsu's lectures as "models for the future", and Herbert Robbins says "he was unforgettable, and I fear irreplaceable". While Hsu may not have been the formal supervisor of any Ph.D. students he strongly influenced a number, among them Kai-Lai Chung, Sen-Ming Len and Shou-Jen Wang before he came to the West, and Isadore Blumen, Albert Bowker, Erich Lehmann and Ingram Olkin in the U.S.

Hsu's statistical work was concerned primarily with inference in univariate and multivariate linear models and with the associated distribution theory, both exact and asymptotic. A more detailed discussion of this and his probabilistic work follows.

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