

**MEMORIAL RESOLUTION**  
**HAROLD M. BACON**  
**(1907-1992)**

Harold Maile Bacon, Professor of Mathematics Emeritus, died Saturday, August 22, 1992, at the age of 85, after 68 years at Stanford. When he retired in 1972, he had been a member of the faculty of the Department of Mathematics for forty years. He was a beloved colleague, an embodiment of the best in Stanford, and a bridge to Stanford's past.

Harold Bacon was born in Los Angeles on January 13, 1907, where his father, a Stanford graduate, was a city engineer. He enrolled at Stanford in 1924, received his B. S. in Mathematics in 1928, and was elected to Phi Beta Kappa. The following year he earned his M.S. in Mathematics with a Master's thesis, "Some Determinants and Quadratic Forms Arising in Statistical Problems," written under the supervision of Harold Hotelling, then an Associate Professor of Mathematics at Stanford. Bacon spent the next year working for an insurance company in the mistaken belief that he wanted to be an actuary.

Returning to Stanford the following year, he began work on his dissertation under the guidance of Harald Bohr, the famous Danish mathematician, who was visiting Stanford for that year. The dissertation, "An Extension of Kronecker's Theorem," was completed a few years later under the supervision of Professor J. V. Uspensky. Bacon was an Acting Instructor during this time, and in 1933 he became one of the three Instructors in Mathematics at Stanford. He was promoted to Assistant Professor in 1936. In 1946 he married Rosamond Clarke, the Director of Roble Hall for some years.

Thus began his long career supervising Stanford's undergraduate program in mathematics; he became the department's Director of Undergraduate Studies when that position was created in 1955, and continued in that role until his official retirement in 1972. He cooperated with the School of Education to organize a Master of Arts in Teaching with a specialty in mathematics. During World War II he served in the President's Office at Stanford in connection with the Army Specialized Training Program, an effort to provide some college training for young soldiers before they went overseas. When the School of Engineering organized its Undergraduate Council, the Dean asked Harold to be a member, even though he was not a member of that school's faculty. He served on the Council until retirement.

Harold Bacon was dedicated to teaching. His specialties were undergraduate education and institutes for the training of mathematics teachers. Although he insisted on high standards in his classes, his patience and genuine concern for his students won their respect and affection. He regularly tutored students in his office, where he was always accessible and willing to work problems on the board. Students, representing many generations at Stanford, became Harold's fast friends throughout his life. By advising and getting to know students, he guided many young people through the ups and downs of their lives. Ros and Harold opened their home to students and the families of students, who also became good friends.

Harold's quality as a teacher in the calculus program was evident from the beginning, not only his excellence in dealing with students in and out of the classroom, but also the care and rigor

with which he organized the material to be taught, and his careful supervision of teaching fellows and, later, junior faculty. His work in organizing the materials led to the publication of his classic textbook on "Differential and Integral Calculus" by McGraw-Hill in 1942. A second edition was brought out in 1955. In collaboration with Chester Jaeger he produced a shortened and more elementary text, "Introductory College Mathematics," in 1954.

Harold had a substantial role in faculty affairs. He was a member of the Stanford chapters of Phi Beta Kappa (President, 1947) and of Sigma Xi (President, 1955). He was a member and Secretary of the Board of Directors of the Bookstore from 1958 to 1960. He served on the governing board of the Faculty Club during the design of the new clubhouse in the late fifties. Some of the Board members proposed a shower in the men's room for use after tennis or other athletic activity. Harold's sense of symmetry was disturbed, and he insisted that, if there was to be a shower for men, there must also be one for women. Since Harold held to his principles, his fellow board members eventually conceded, and a women's shower was incorporated in the design. At the opening of the new clubhouse, the women's shower bore the hand-written label "The Harold M. Bacon Memorial Shower."

Harold helped establish the Northern California Section of the Mathematical Association of America in 1939. He was a member of the joint Committee on Mathematics Education of the Northern and Southern California Sections of the Association, and served on the Board of Governors of the Association from 1956 through 1959. Recognizing a lifetime devoted to undergraduate education in mathematics, the Association awarded him its Certificate of Meritorious Service in 1988.

In 1965 Harold was awarded the Lloyd W. Dinkelspiel Award for outstanding service to undergraduate education, and the Class of 1971 chose him as one of its three favorite professors, demonstrating the respect which undergraduates held for him.

Beginning in 1954, Harold, together with his friend and colleague George Polyà, organized a series of institutes for teachers of mathematics. These institutes, sponsored by the National Science Foundation, were directed by Bacon with Polyà as the star teacher. They began with the Stanford Summer Program for Teachers of Collegiate Mathematics in 1954-55, followed by Academic Year Institutes for High School Teachers of Mathematics in 1956-60. These were followed by a series of Summer Institutes for High School Teachers of Mathematics, several of which were conducted in Switzerland. These institutes continued, under Bacon's direction, until 1974.

Over the years a number of students from his classes later became Stanford faculty members, particularly in Engineering. By the time of his retirement in 1972, he had probably taught more Stanford undergraduates than anyone else in the history of the University, and many of the students he taught were children or even grandchildren of former students. It was quite common for members of the Mathematics Department, upon mentioning their connection with the department to some Stanford alumnus, to hear the response, "Oh, then you must know Professor Bacon."

At one time or another Harold Bacon served on nearly every committee of the Academic Council and was chairman of many. He was elected to several terms on the Executive Committee of the Academic Council and to a term on the Advisory Board. He was a member of

the Committee on University Policy from 1959 through 1964, and was elected to the first four Senates of the Academic Council. A partial list of his committee service is appended to this resolution. At the conclusion of its last meeting, in June 1972, the Fourth Senate of the Academic Council adopted the following motion:

"Faculty governance works only when faculty members devote time and effort to it. In the last forty years, our colleague, Harold Maile Bacon has served on uncountably many Committees, on the old Executive Committee of the Academic Council, on the Advisory Board, and on each of the first four Senates of the Academic Council. With his selfless devotion to students and the welfare of the University, he epitomizes the best in Stanford.

"The Senate of the Academic Council, therefore, expresses its thanks and appreciation to Harold Maile Bacon for his many years of effective service on behalf of faculty governance."

It was a regular practice for Harold to walk to his office nearly every day until shortly before his death. His campus home, a Stanford historical landmark, was built by Mrs. Harriet Dunn, cousin of Harold's father and a friend of Jane Stanford. Mrs. Stanford allowed her to build the home on what was then the outskirts of the campus. Both Harold and his father lived with Mrs. Dunn when they were students, and Harold continued to live there after he began his career on the faculty. Mrs. Dunn bequeathed the house to Harold, and it has been the site of much intimate hospitality from Harold and his wife Rosamond. Sitting in the elegant parlor of this house and hearing Harold relate an account of President Wilbur's peremptory dealings with the faculty Committee on Student Affairs, Harold's colleagues of more recent times might easily imagine that they too had been involved in affairs of Wilbur's time. Harold regularly had lunch at the Faculty Club, entertaining colleagues or friends or dining at the Members' Table, where he participated in the accounts of former days at Stanford. He had a wry sense of humor and often advised friends and colleagues to "trust in God, but vote the Democratic ticket."

Harold is survived by his wife Rosamond, his son Charles, his daughter-in-law Cynthia Dusel-Bacon, and his grandson Ian.

Harold Bacon was much beloved by all who knew him. His life was gentle and devoted to Stanford, an institution he loved. He possessed great integrity, holding himself, his students and his colleagues to high standards, tempered by his constant good sense, good humor, and the willingness and patience to take great pains helping others. For many of us he was the embodiment of the best in Stanford. We have lost not only a beloved friend and colleague, but also a significant connection to Stanford's past. He will be sorely missed.

Halsey Royden, Chair  
Richard W. Lyman  
Ralph Phillips  
Mary V. Sunseri  
H. Donald Winbigler

**Harold Maile Bacon**  
**Partial List of University and Public Service**

**University Service**

Stanford Chapter, Sigma Xi: Assistant Secretary-Treasurer 1940-42; Secretary-Treasurer 1942-45; Vice President 1948-49; President 1954-55

Executive Committee of the Academic Council, 1945-49

Graduate Study Committee, 1945-49

Committee on Student Affairs (Chmn), 1945

Faculty Member, Stanford Athletic Council, 1946

Elected President of Stanford Chapter, Phi Beta Kappa, 1947

Executive Committee of the Academic Council, 1955-57, 1958-64, (Secretary 1961-64)

Advisory Board, 1954-57

Committee on University Policy, 1959-64

Senate of the Academic Council, 1968-72

Committee on Public Exercises, 1951-56 (Chmn 1952-56)

Curriculum Committee, School of Humanities and Sciences, (Chmn) 1951-54

Member Interfraternity Board of Control, 1951-54

Committee on Admissions and Advanced Standing 1951-59 (Chmn 1956-59)

Committee on Graduate Studies, 1952-54, 1956-60

Committee on Teacher Education, 1958-59

Faculty Associate, Junipero, Wilbur, 1958-59

Director, Stanford Summer Program for Teachers of Collegiate Mathematics, 1954-55

Director, Academic Year Institute for High School Teachers of Mathematics, 1956-60

Director, Summer Institute for High School Teachers of Mathematics, 1961-75

Chairman, Committee on Graduation, and Director of Undergraduate Studies,  
Department of Mathematics, 1955-72

Chairman, Committee on Freshman Sophomore Instruction, Mathematics Department,  
1958-66

Provost's Committee to Investigate Coordination of Mathematics, Physics, and  
Engineering Courses, 1954-56

**External Service**

Joint Committee on Math Education of Northern and Southern California Sections of the  
Mathematical Association of America, 1947-52

California Subcommittee on Minimal Essentials in Mathematics for Engineering  
Education, 1951-52

Consultant on curriculum for USAF Academy (with George Sensabaugh, G Knowles, R. Walker), 1951-52

Member, Calif Subcommittee for the Study of the Content and Sequence for Grades 9 to 14, 1951-52

Board of Governors Mathematical Association of America, 1956-59

Consultant, Curriculum Committee, Math Department, Cubberly High School, 1957-58

Joint Committee on Teacher Education of Western College Association. 1958-59

Member and Sec. Board of Directors, Stanford Bookstore, 1958-60

Committee of Accreditation for US Naval Postgraduate School, 1959-60

Member, California Commission on Teacher Education (Calif Teachers' Assoc.), 1964-66

### **Honors**

Lloyd W. Dinkelspiel Award for outstanding service to undergraduate education, 1965

Certificate of Meritorious Service from the Mathematical Association of America, 1988