



University of California: In Memoriam, 1999

David Krogh, Editor

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Preface

Colleagues, Friends, and Family Members:

We the faculty of the University of California Academic Senate have produced this volume of *In Memoriam* to honor our recently deceased colleagues. It is our hope that these memorials will serve as fitting tributes to these departed friends, who served the University so well.

—Lawrence B. Coleman, Chair, UC Academic Council

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Shlomo Alexander, Physics: Los Angeles

1931-1998

Professor of Physics & Astronomy, Emeritus

The UCLA Physics Department learned with shock and regret of the death of our distinguished colleague and friend Shlomo Alexander. We are deeply saddened and wish Esther and Shlomo's children and grandchildren well in dealing with their loss.

Shlomo was a Visiting Professor in the UCLA Physics Department between 1977 and 1985. He joined the UCLA faculty in 1986 and retired to emeritus status in 1994. Shlomo's work at UCLA spanned many years; he collaborated with a large number of colleagues and made an indelible impression on the department. We can only highlight some of his many contributions.

During the second half of the 1970s, Shlomo was a frequent visitor at UCLA. He collaborated with Professors Ted Holstein and Ray Orbach of our department on transport and excitation dynamics of one-dimensional disordered systems. This work culminated in the classic *Review of Modern Physics* article of 1981 of which Shlomo was first author. This article has remained a cornerstone of the literature on transport in one dimension. Shlomo made a major contribution to the theory of melting with J. McTague of the UCLA Chemistry Department in 1978. He showed how Landau theory could be used as a practical tool for studying the melting transition. Current local density theories of melting are strongly influenced by Shlomo's efforts and deep understanding of Landau theory. He applied this work to colloidal crystals together with Paul Chaikin, G. Morales, and Phil Pincus of the Physics Department in 1982. In this paper, they solved an important riddle—why the measured effective charge of colloids often was

very small compared to the bare charge—by introducing the concept of charge enormalization by condensation.

Shlomo continued to work on the dynamics of excitations in disordered systems, in particular fractal structures. With Ray Orbach, he developed in 1982 the famous "Alexander-Orbach" conjecture, concerning the density of states of excitations on fractal lattices—one of the most quoted condensed-matter theory articles of those years. Shlomo and Orbach continued to develop the “fracton” concept, which they applied to aerogels with E. Courtens.

After joining the UCLA faculty, Shlomo worked (with Tang and Bruinsma) on a geometrical model for non-equilibrium crystal growth that currently is being used extensively. He also made a profound contribution to the literature on electrolytic systems. During his last years at UCLA, Shlomo was occupied with developing a new, fundamental description of the elastic properties of disordered materials like gels, work that would culminate in his recent pioneering study in *Physics Reports* on this subject.

Shlomo's work was characterized by his profound intuition for condensed matter systems, in particular in terms of geometry, symmetry, elasticity, and crystal structure. But beyond his scientific talents, his great humanity and spirituality surrounded him with a grace we will never be able to forget.

Robijn Bruinsma

Lawrence James Andrews, Chemistry: Davis

1920-1999

Professor Emeritus

Dean of the College of Letters and Science, Emeritus

Lawrence J. Andrews, who played a major role in the development of the Davis campus, died in his home in Davis of an apparent heart attack on February 15, 1999, at the age of 78. Larry was born on September 27, 1920, in San Diego, California, and attended the public schools in Long Beach, California. After graduating from Long Beach Polytechnic High School at the age of 15, he completed a chemistry major on the Berkeley campus with a B.S. degree, and then earned M.A. and Ph.D. degrees at UCLA, the latter at age 22. His doctoral research was in the field of organic chemistry under the direction of Professor William G. Young.

Following work at Oak Ridge, Tennessee, on the Manhattan Project during World War II, Larry joined the chemistry faculty on the Davis campus in 1945. Starting as an Instructor and Junior Chemist, he moved rapidly through the academic ranks, becoming a Professor of Chemistry and Chemist in the Experiment Station at age 36.

During his early career Larry's research focused on the mechanisms of allylic rearrangements, and on the synthesis of compounds related to vitamin A. He then began an extensive research program in collaboration with Professor Raymond M. Keefer on molecular complexes—primarily complexes in solution between unsaturated organic molecules and the halogens, interhalogen compounds, and various metal ions—which included both kinetic

and equilibrium studies. Other areas of interest included the kinetics of electrophilic aromatic substitution reactions; Diels-Alder reaction kinetics; participation by nucleophilic ortho substituents in reactions at aromatic side chains; and radical bromination of substituted toluenes and related substances. Their work was supported at first by grants from the National Research Council and the Research Corporation, and later by a

series of grants from the National Science Foundation.

In 1964, Andrews and Keefer published the book *Molecular Complexes in Organic Chemistry* (Holden Day, publisher). Also in 1964 they were honored by the Academic Senate as Co-Faculty Research Lecturers for 1964-65. The report of the Faculty Research Lecture Committee stated, in part, "Their masterful application of advanced technical procedures and of complex mathematical formulae established an experimental quantitative basis for expansion of knowledge in the chemistry of unstable molecules in solution. When they started, there was little empirical evidence for the existence of complexes between many electron acceptors and unsaturated compounds. They not only demonstrated the existence of these complexes, but also measured equilibrium concentrations, thus providing a quantitative basis for further investigations. Their findings have drawn international recognition and have stimulated research in other laboratories on the theory of solutions."

Larry took his teaching duties very seriously. He was a popular lecturer at the undergraduate level, and many students carried out their doctoral research under his direction. Two of them later held faculty positions in the University of California: Sevgi S. Friedrich of our own department, and Charles E. Castro of the Nematology Department on the Riverside Campus.

Larry's early administrative duties included chairmanship of the Department of Chemistry (1959-62) as well as service on the Academic Senate's Committee on Committees and Committee on Budget and Interdepartmental Relations. During 1962-63 he was Acting Dean of the College of Letters and Science. Then in 1964 he was appointed Dean of the College, a position he held for 21 years.

Recently Peter A. Rock, Professor of Chemistry and Dean of the Division of Mathematical and Physical Sciences in the College of Letters and Science, characterized Larry's record as follows:

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"Over Andrews' 21 years as Dean, the College of Letters and Science experienced extraordinary growth, related in large measure to population growth, the challenge of the Sputnik era, and the rapidly expanding global economy. The 60's, the 70's and 80's went by as the College matured under Dean Andrews' design. The Davis skyline was changed by the construction of Recreation Hall, the music, drama and art complex, and other campus landmarks. By the mid-1980s the college had become the core collection of academic departments at the heart of this great research university.

"Dean Andrews' style was marked by his accessibility. He often ate his lunch at the Faculty Club, held receptions in his home, met with numerous faculty on a regular basis, and generally kept a high profile. His asset was his knowledge of the faculty and his skillful diplomacy. Even as the college grew to a size that strained its administrative structure, he remained available to and supportive of his department chairs and program directors, and kept abreast of the operational details of the numerous units in the college.

"Larry also maintained his research program and thereby established the model for the campus of a dean actively involved in both research and administration."

When Larry retired as Dean in 1985, faculty, staff, and friends established a fellowship prize in his name to recognize outstanding undergraduate students. Other honors included a Ford Foundation Fellowship at Harvard and M.I.T. (1953-54) and a Senior Fulbright Research Fellowship at the University of Hull, England (1967-68). Larry retired in 1988.

In 1944 Larry married Elizabeth Heggelund, whom he had met when they were both students at UCLA. She died in 1996. He is survived by their daughters, Robin A. Stanley and her husband John Quinn of Carmichael and Carol Groves and her husband James of Citrus Heights; and grandchildren Kyle and Kristin Groves of Sacramento.

Richard Barrutia, Spanish and Portuguese: Irvine

1925-1999

Professor Emeritus

Richard Barrutia, one of the founding members of UC Irvine's Department of Spanish and Portuguese, taught graduate and undergraduate courses in linguistics at UCI for 30 years. He designed Irvine's first language laboratory and was responsible for setting up self-instructional courses in certain foreign languages like Swedish and Swahili that could not otherwise have been offered at the time because of the small student demand. He also initiated a self-instructional course in Spanish based on his own invention: a small computer-like "black box" that provided branching techniques that are now widely used in computer-assisted language courses. A description of this project, which was his doctoral dissertation at the University of Texas, was later published in Germany under the title *Linguistic Theory of Language Learning as Related to Machine Teaching* (1969).

Throughout his career at Irvine, Richard enthusiastically promoted bilingualism programs. He was also instrumental in the establishment of the Master of Arts in Teaching Spanish. He was the first academic director of Irvine's Extension Program in English as a Second Language. In 1986, UCI's Alumni Association bestowed on him its Distinguished Teaching Award.

From 1976 to 1979, Richard chaired the Department of Spanish and Portuguese. He took pride in having helped recruit two other linguists for the department who rapidly attained international recognition: Tracy Terrell and Armin Schwegler. From 1973-1976 and 1985 to 1988, Richard chaired the inter-school Program in Linguistics. In the latter capacity, he successfully lobbied for the creation

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of the Department of East Asian Languages and Literatures.

Richard's research and publications were in the field of applied linguistics. His six-volume E.S.L. textbook *English for International Communication* was published in 1978 and was widely adopted, prompting the publication of a revised edition under the title of *New Perspectives*. He co-authored with Tracy Terrell *Fonética y Fonología Española* (1982) and co-authored with Armin Schwegler a completely revised edition that appeared in 1994. In 1969, Richard taught linguistics at the University of São Paulo in Brazil, which led to his being appointed one of the co-authors of the Modern Language Association textbook, *Modern Portuguese* (1971).

For many years, Richard participated actively in the American Association of Teachers of Spanish and Portuguese and was elected president in 1977. At the annual meeting held in Madrid that year, he was decorated by King Juan Carlos for his service to scholarship in Hispanic letters.

For many years, Richard was a strong supporter of the University of California's Education Abroad Program. He directed the E.A.P. Center in Mexico City from 1970 to 1972 and the Madrid Center from 1981 to 1983. He designed and directed the E.A.P. intensive second-year Spanish program in Morelia, Mexico in the summer of 1987. For over a decade starting in 1984, he was the worldwide coordinator of the E.A.P. intensive language programs. He was the Irvine faculty director for E.A.P. from 1989 on and continued in that position even after retiring in 1993.

The son of Basque immigrants, Richard Barrutia was born in Salt Lake City and grew up in a small mining town on the site of present-day Park City. After graduating from high school, he enlisted in the Navy V-5 Program during World War II and became a flight instructor. A self-taught guitarist, pianist, and accordionist, Richard formed his own trio after the war and performed all over the Southwest for several years before deciding to enroll in college. He received a B.A. in 1958 from Arizona State University, a bachelor of foreign trade from the Thunderbird American Institute for Foreign Trade in 1959, an M.A. from Arizona State in 1960, and a Ph.D. in Spanish linguistics from the University of Texas in 1964. During his years as a graduate student, he taught linguistics in several National Defense Education Act summer institutes in the United States and in Quito, Ecuador. After coming

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to UCI in 1965, he continued teaching at summer institutes and gave workshops on bilingualism throughout the state of California and language acquisition seminars in several European E.A.P. centers.

After retiring in 1993, Richard began to devote more and more time to his own painting and to enhancing his collection of Mexican art. He worked as a volunteer docent at the Bower's Museum in Santa Ana, and together with his wife, Kathleen, joined the Collector's Council and promoted the painting of two large murals in the museum by the famous Mexican artist Raúl Anguiano. Richard's commitment to the arts and to the U.S. Mexican and Hispanic community are now being blended in the Barrutia Fund, established by Kathleen for the education of inner-city youth in the cultural arts.

Richard Barrutia was a unique human being who had the gift of communicating joy to all those who met him. During his walks around the campus, he would invariably brighten up the day for faculty colleagues and students, secretaries and administrators, gardeners and visitors. His cheery disposition and his apparently effortless talent as a musician and magician made him a most welcome guest at all UCI social gatherings. His positive outlook on life was epitomized by his favorite maxim: "There are no problems, only solutions."

Seymour Menton Armin Schwegler

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Floyd Dale Carroll, Animal Science: Davis

1914-1998

Professor Emeritus

Floyd Dale Carroll, Professor, Emeritus in the Department of Animal Science, died December 7, 1998, in Davis, California. Floyd enjoyed a long and productive career of teaching, research, and public service, both here and abroad. His career at UC Davis extended from 1939 until his retirement in 1981.

Floyd was the ninth of twelve children in a Nebraska farm family, a background which may well have contributed to his lifelong philosophy of service to others and his ability to get along with people of all ages and callings.

During his undergraduate years at the University of Nebraska, Floyd was involved in a variety of extracurricular activities; he was Captain in the Reserve Officer Training Corps and was a member of the honorary agricultural fraternity Alpha Zeta and the national Block and Bridle Club.

Following completion of the M.S. degree in meat science at the University of Maryland, Floyd came to UC Davis as a Teaching Assistant in 1939, teaching, among other courses, livestock judging and laboratory courses in biochemistry. His graduate studies were interrupted by three years of military service during World War II. In 1949, on completion of his Ph.D. in nutrition, he was appointed Instructor in what was then the

Department of Animal Husbandry, and rose through the ranks to the professorship in 1964.

Floyd's breadth of training and experience resulted in effective teaching of courses at all levels ranging through biochemistry, physiology, meat science, nutrition, livestock production, and the supervision of advanced student research. He earned the respect

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of colleagues and of students at all levels, and had the reputation of being well-prepared, accurate, and thorough in presentation. He was also noted for his concern for the well-being of his students, and was recognized as an excellent advisor.

Floyd's wife, Fran, whom he had met and married in 1944 and who survives him, shared his interest in students, and the Carrolls were well-known for the exceptional hospitality they extended in their home to students and visitors to the University. In addition, the Carrolls served as dorm parents in Malcolm Hall, a women's residence on campus, from 1965 to 1967.

Floyd used sabbatical leaves effectively to benefit his career and the University. His first sabbatical, in 1955, was spent at the University of Ceylon on a Fulbright grant. In 1963, he worked at the University of Hawaii on the USDA Western Regional Beef Cattle Improvement Program, contributing to research on nutrition and carcass evaluation. Subsequent leaves at the CSIRO Meat Research Laboratory in Brisbane, Australia, and in residence in Davis resulted in important papers on factors affecting meat quality and methods of assessing eating quality; these contributed significantly to improved USDA beef grading standards.

In addition to sabbatical leaves overseas, Floyd spent 1967-68 as a UC representative in Chile under the University of California- *Universidad de Chile Convenio*. With their proven interest in international agriculture and experience in foreign residence, Floyd and Fran proved to be excellent representatives. Chilean visitors over the many years since then have continued to speak highly of the Carrolls and of their contribution to the UC/UChile program. With their extensive foreign travel and keen interest in international livestock agriculture, Floyd and Fran Carroll were valuable ambassadors of international good will for the Davis campus. Throughout their years in Davis, they were of great service to foreign students, visiting scientists, and livestock producers.

At a dinner honoring Floyd on his retirement in 1981, the following sentence was printed in the program: "Two words which

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would characterize his career are 'versatile' with regard to research and teaching, and 'humanness,' the latter appropriately suggested by an individual from a foreign land to describe Dr. Carroll's relationship with people from all cultures."

G. Eric Bradford Robert C. Laben R. Lee Baldwin Jr.

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David T. Cattell, Political Science: Los Angeles

1923-1998

Professor Emeritus

David Cattell's retirement from the UCLA Political Science Department in 1988, after a service of 36 years, most likely attracted little attention on campus, except from a handful of his close friends. This was because David was one of the most fiercely private persons I have known. Unlike many of his colleagues, he was not prone to engage in lengthy gossip sessions in the faculty center. He was also fiercely independent, as witnessed

during his progressive illness when he refused his friends' help until he no longer could stand up and walk and had to use a wheelchair. David's independence, his penchant for privacy, and his inability or unwillingness to suffer fools gladly were further fueled by a certain shyness, which many who first met him took for hostility or indifference. This was a pity since, for the few of his real friends, David was truly a uniquely gifted person.

David was born in 1923 in Hinsdale, Illinois. He entered Amherst in 1941 but, like many of his generation, he quit college and joined what was then called the U.S. Army Air Corps. In 1943 he was posted to the Fukien province in China where for the next three years he was in command of a weather reconnaissance base. He returned to Amherst in 1946 and graduated *cum laude* the following year with a B.A. in history.

In 1947, David made a decision that was to determine his academic and scholarly career for the next 40 years. He enrolled at the newly established Russian Institute at Columbia, which pioneered a new sub-field in political science known as Soviet studies, and which became a breeding ground for several generations

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of specialists in Soviet/Russian area studies. David caught the eye of Philip Mosely, Director of the Institute and one of the early giants in the profession, who agreed to sponsor his doctoral dissertation, completed in 1953.

The dissertation, *Communism and the Spanish Civil War*, published in 1955 by the University of California Press, together with its companion volume, *Soviet Diplomacy and the Spanish Civil War* (University of California Press, 1957), turned out to be David's most significant scholarly accomplishments. Based on extensive archival research in England, Holland, and Spain, both books became minor classics and obligatory reading for graduate students and fellow scholars alike. Translated into Italian, they were reprinted by the Johnson Reprint Corporation in 1969.

David joined UCLA's Department of Political Science in 1952 as an Instructor, reaching the full professorship in 1966. He soon developed into one of the most effective undergraduate and graduate teachers, as testified by unsolicited evaluations. Especially his graduate students commented favorably on his commitment to excellence, the time he devoted to advising his students, and to his insistence on bringing out the best among his students. Many of the Ph.D. students he sponsored ended up at various universities around the country; one of them was Professor Edward Gonzalez, who retired in 1994 after teaching for 28 years in the UCLA Political Science Department. David also taught as an exchange professor in Leningrad (1966), Kampala, Uganda (1967), and Rio de Janeiro (1970).

From the outset, David devoted much effort and energy to university affairs, at both the campus and statewide levels. The highly laudatory letters from the President's Office in Berkeley and from chairmen of various Academic Senate committees at UCLA are among the most impressive testimonies to David's incessant efforts to raise the level of performance of academic self-governance throughout the system.

Not surprisingly, David's commitment to teaching and his university and community service took a rather heavy toll on his research. Nonetheless, he remained in the mainstream of research on the Soviet Union. In the late 1960s he began to focus on the critical issue of Soviet housing and urban affairs, and in 1968 he published *Leningrad: A Case Study of Soviet Urban Government*

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(Praeger, 1968), which became a model study of its kind. This was followed by a series of articles on various aspects of Soviet housing policies. His interest in teaching was reflected in the publication of *Comparative Politics: Institutions, Behavior and Development* (Mayfield Publishing Company, 1978), co-authored with Richard Sisson. Parkinson's disease, which began to affect him in the early 1980s, essentially spelled the end of his research. Still, he continued as editor of the well-known quarterly, *Studies in Comparative Communism*, which he had to relinquish for health reasons in 1990.

The above summary suffices to paint the picture of a devoted teacher, energetic Academic Senate committeeman, and a diligent researcher, but it says little of David as a highly cultured member of the UCLA community. As noted, this side of his character was less apparent except to his close friends.

What struck most of us was his generosity, which manifested itself in many ways: helping and advising his students, welcoming new faculty members, and giving much of himself to journal editing even when the state of his health made the latter most onerous. It was David who was instrumental in bringing me to UCLA 35 years ago and in helping my family and me to settle down and feel at home. His last act of generosity took the form of a sizable grant to the Political Science Department, which allowed it to establish a research fund for the junior faculty.

But there was more. For his intimate friends, David was, above all, a true gourmet—an excellent cook who delighted in preparing elaborate dishes from all over the world. Dinners at Cattell's were true feasts, greatly enjoyed by those lucky enough to be invited. The dinners were accompanied by excellent vintage wines as David was proud of maintaining a small but select cellar in his house in Pacific Palisades.

In addition to his culinary prowess, David had an eye for artistic excellence and his house contained many fine works of art, which he gladly displayed to his friends. By the time of his death, the collection, which he bequeathed to the UCLA Armand Hammer Museum, proved much more valuable than most of us would have expected.

Most of all, David will be fondly remembered by members of the Political Science Poker Group. For longer than we can recall,

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on the first Thursday of each month seven of us would assemble—first in David's house in Pacific Palisades, then in his condominium in Santa Monica—to play poker, drink beer, eat cold cuts, and gossip. Over the years, the membership of the group varied; some of its members died, some retired, others moved away. Yet new members were recruited and the group persisted until it could justly be called the longest floating poker game in Southern California—thanks, mostly, to David's hospitality.

David died in his sleep in San Jose on July 10, 1998, from complications arising from Parkinson's disease. He is survived by a daughter, Jody; a son, Herbert; a sister, Ann Johnson; and his friends—all of whom will miss him greatly.

Korbonski Andrezej

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Robert A. Cockrell, Forestry: Berkeley

1909-1998

Professor Emeritus

Robert A. Cockrell, stalwart supporter of the Academic Senate and teacher of forestry and wood science at UC Berkeley for 41 years, died in San Rafael on October 10, 1998 following complications from a heart attack a year earlier. He is survived by his wife, Zylpha, and three sons, Findlay, Jeffrey, and Seth.

Born August 11, 1909, in Yonkers, New York, Cockrell attended the New York State College of Forestry at Syracuse, where he was a member of the varsity crew and received the B.S. (*cum laude*) and M.S. degrees in 1930 and 1931, respectively. He worked as a junior forester for the U.S. Forest Service in New Mexico and Texas in the summers of 1933 and 1934 while also enrolled in doctoral studies at the University of Michigan. He received a Ph.D. with a dissertation on wood anatomy in 1934 and immediately joined the forestry staff

at Clemson College, South Carolina. He resigned in 1936 to accept appointment as Assistant Professor of Forestry at Berkeley.

Although appointed as a specialist in wood science, his undergraduate teaching assignments for many years were dendrology, the introduction to the profession of forestry, and the orientation course in forestry for non-majors, plus teaching wood utilization at the forestry summer camp. In 1954, his teaching assignment was changed to the undergraduate course in wood science and identification. His students respected his meticulous preparation and high grading standards and appreciated his availability and personal interest. At the graduate level, he taught wood anatomy and

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physics, his primary areas of research interest. In 1947 he organized Ph.D. programs for two students in biophysics, which later became the prototypes for a doctoral program in wood science and technology.

Cockrell had a favorite story he told his students to illustrate the importance of wood science in everyday life. The huge hands on the four faces of the clock high up on the Campanile at the center of the Berkeley campus originally were made of solid wood. As part of ongoing maintenance, a steeplejack removed the hands for refinishing and discovered that one contained significant decay. Deciding that the wood looked like Douglas-fir, the repair crew cut out the decay and filled the void with a piece of Douglas-fir which was glued in place. When the hand was reinstalled, the clock remained pointing to 6 because the mechanism could not complete the upward journey to 12—the repaired tip of the hand was too heavy! When Cockrell was called in to solve the problem, he noticed that the hands actually were made of Sitka spruce, which looks like Douglas-fir but is 80 percent as dense. When the patch was replaced with Sitka spruce, the hand was again balanced and could be turned by the clock.

As a teacher of dendrology, Cockrell planted trees throughout the campus and collaborated with campus gardeners in protecting and maintaining Berkeley's extensive collection of native and exotic tree species. From 1954 to 1977, he served as custodian and curator of the worldwide collection of wood specimens on display in Mulford Hall.

He took leave from Berkeley from 1942 through 1945 to serve as a wood technologist at the U.S. Forest Products Laboratory in Madison, Wisconsin, in support of the war effort. In 1950 he served as an advisor to the American government in Japan.

While at Madison, he initiated the planning for the UC Forest Products Laboratory in Richmond, and upon his return to Berkeley led in this planning effort until the laboratory was completed, a founding director (Fred E. Dickinson) recruited, and the program initiated in 1954. Cockrell's close association with the laboratory continued to his retirement in 1977 and for many years afterward.

Cockrell's impressive level of service to the Berkeley campus involved numerous committees, administrative appointments, and

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the Academic Senate. His committee service included the committees on Building and Campus Development, Coordination with State Colleges, Student Affairs, Courses, Privilege and Tenure, and two committees that he chaired, the Chancellor's Advisory Committee on Joint Activities of Faculty and Alumni and the Undergraduate Scholarship Committee. He also served as secretary of the steering committee for the 11th All-University Conference. He was elected to five terms on the Representative Assembly and in 1962 to a two-year term on the Committee on Committees of the Berkeley Division. He served from 1954-1967 as Associate Dean of the Graduate Division for the Berkeley campus. He had a major leadership role in the Berkeley Division of the Academic Senate, serving as Secretary of the division from 1968-1977. After retirement, he continued to serve the senate as a member of the systemwide Committee on Rules and Jurisdiction (1980-87); as Chairman of the Berkeley Division Committee on Rules and Jurisdiction (1979-1987), and finally as Acting Secretary of

the Academic Senate for two years, 1987-89. He was elected to the Board of Directors of the Faculty Club in 1963 and served as President from 1966 to 1968.

Cockrell's research involved anatomy and physical and mechanical properties of wood. He developed an anatomical model, based on microfibril angle, to explain longitudinal shrinkage. He provided the basic information that led to acceptance of Monterey pine as a structural species in the United States. This species, also known as radiata pine, has become a major plantation-grown commercial timber species around the world. Cockrell also demonstrated that the strength properties of young-growth giant sequoia were at least as good as white fir and young growth redwood, leading to acceptance of giant sequoia as a candidate for rapid growth-plantation wood production. Perhaps he is best known for his authoritative *Trees of the Berkeley Campus* published with campus landscape architect Frederick Warnke.

Cockrell was an active outdoorsman who commuted to the campus by bicycle for many years and swam regularly at Harmon Gym. He completely rebuilt his home in Kensington, largely with his own labor, and maintained a steep hillside lot. He loved the Sierra Nevada and was an able mountaineer, climbing a number of peaks. As a member of the Sierra Club, he led high trips in the

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Sierra over the years. Those who accompanied him on the trail recall that he was a strong hiker and climber, hard to keep up with. All of the Cockrell family were gifted musically. Bob had a fine singing voice, a natural baritone. He sang with the Monks' Chorus at the Faculty Club throughout his career at Berkeley and also sang at departmental Christmas parties, at Forestry Club meetings, and around the camp fire.

Throughout his 62 years as a member of the Berkeley faculty, Bob Cockrell had a record of dedicated service to his students, to his department, and notably, to the Berkeley campus. His many contributions were recognized by the award of the Berkeley Citation in 1977.

Dennis E. Teeguarden W. Wayne Wilcox John A. Zivnuska

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James A. Cook, Viticulture and Enology: Davis

1920-1998

Professor of Viticulture, Emeritus

James A. Cook, Emeritus Professor of Viticulture in the Experiment Station at the University of California Davis, died August 9, 1998 at his home in Davis. Born on May 19, 1920 in the southern hills of Georgia, he was one of 10 children. He grew up during the Great Depression and learned the value of hard work at an early age. He graduated from Pomona High School in California and then attended Chaffey Junior College in Ontario, while working as an assistant chemistry lab instructor. World War II interrupted his education and he joined the Navy. While in the Navy he commanded a radar ship in the Pacific and participated in the battle of Okinawa. After returning from the Navy he received a B.S. degree in chemistry from UC Berkeley in 1947 and a doctorate in pomology from Cornell University in 1951. Upon completion of his Ph.D., Professor Cook was hired by the United States Department of Agriculture, where he worked from 1951 to 1953 in Orlando, Florida. In 1953, he was hired by the University of California Davis and was an Assistant Viticulturist and Lecturer in the Department of Viticulture and Enology from 1953 to 1957. From 1957 to 1964, he served as Associate Professor of Viticulture and in 1964 he attained the rank of Professor. He served as Chair of the Department from 1962 to 1966 and retired in 1984 as Professor, Emeritus. From 1984 until his death he resided in Davis.

Professor Cook was widely recognized as a world authority on mineral nutrition of grapevines. His research concentrated mainly on nitrogen, zinc, boron and phosphorus nutrition. He established

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the commonly used test to determine nitrogen deficiency and toxicity in grapes by analyzing leaf petioles taken during bloom. This work led to the development of threshold levels for nitrogen deficiency and toxicity in grapevines. He was the first to discover phosphorus deficiency in grapevines in California and developed fertilizer practices for overcoming deficiencies of phosphorus, zinc and boron in California vineyards. Professor Cook spent a sabbatical in Torreon, Mexico and was instrumental in developing their table and wine grape industry. His work in Mexico helped solve a wide range of soil problems. He also helped in the establishment of a grape variety collection, from which the Torreon growers could procure correctly identified and disease-free propagation wood. As a by-product of growing up in the South, Professor Cook enjoyed the “peculiar” southern muscadine grapes and helped establish a large collection in the campus vineyard. He was a co-author of the textbook *General Viticulture*, which was revised in 1974 and continues to be widely used throughout the world. He was a member of several professional organizations, including the American Society of Enology and Viticulture, American Society for Horticultural Science, American Society of Plant Physiologists, and Sigma XI.

Professor Cook was considered to be an excellent teacher and was responsible for teaching general viticulture in the winter and spring quarters for more than 20 years. He had the ability to motivate and inspire students to work hard and achieve their goals. One of his most important goals was to teach students how to grow grapes without going broke. His graduate students especially appreciated his willingness to recognize their contributions, his witty sense of humor, his warm heartedness and his genuine concern for their welfare. James Cook is survived by his wife, Bea; his five children, David, Steve, Cindy, Tom and Doug; six grandsons; one granddaughter; and many relatives including four surviving siblings.

Mark Kliwer Lloyd Lider Andrew Walker

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Eliot Corday, Medicine: Los Angeles

1913-1999

Clinical Professor

I first met Eliot Corday when I visited the old Cedars of Lebanon Hospital 30 years ago. Eliot was already a giant in cardiology and I was an internal medicine resident. But within a few weeks I came to see many of Eliot's wonderful human qualities: deep concern for his patients' welfare, an endearing sense of humor (admittedly with a penchant for bad puns), uncommon generosity, unrestrained enthusiasm for others' accomplishments, and intense loyalty. Later I learned that Eliot had a unique capacity to make things happen. No one helped more people than Eliot.

Eliot's achievements stand at the pinnacle of American cardiology in the 20th century. He was there when the subspecialty began, and he shaped its future. Eliot was born and raised in Alberta. He married Marion in 1940, when he graduated from the University of Alberta Medical School. After five years in the Canadian Air Force during World War II, he and Marion moved to New York City. There with Dickenson Richards, Eliot began research that led to the development of cardiac catheterization. Richards later received the Nobel Prize for this work. Still in New York, Eliot joined Dr. Arthur Master. Together they made the early recordings of the exercise ECG by having patients walk up and down two homemade wooden steps. They discovered that the ECG changed dramatically in patients with coronary heart disease. The Master's 2-step exercise test led to modern stress testing. Two groundbreaking contributions, and Eliot was only 32 years old.

Just 50 years ago, Eliot decided to move to Cedars of Lebanon. Here he embarked on two other lasting clinical innovations. Working

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with industry, Eliot played a central role in developing continuous ECG recordings in ambulatory patients. At about the same time, he began radioisotope studies that became the forerunner of modern nuclear cardiology. His contributions to four new fields—catheterization, stress testing, ambulatory ECG monitoring, and nuclear cardiology—made him among the best known cardiologists of our time.

Eliot's international fame, however, was not confined to his role in developing modern cardiology. He also took care of patients. Perhaps his best-known patient was Dwight Eisenhower, who had a heart attack, which Eliot treated, while President. Eliot was the consulting cardiologist for many of our nation's leaders. But whether his patient was famous or unknown, Eliot always put his patient's interest above all else.

In the 1960s Eliot was elected President of the American College of Cardiology (ACC). For the next two decades, Eliot and his close friend Michael deBakey were our nation's leading advocates for federal funding of cardiovascular research. Their efforts were remarkably successful—mortality from cardiovascular disease fell 52 percent in the next 25 years. At the same time, Eliot conceived an ACC program of international outreach. Over the next two decades, 75 faculties of U.S. cardiologists traveled to underdeveloped countries. As a participant, I discovered that Eliot had legendary status in cardiology throughout the world.

Eliot also organized televised live interchanges between American physicians and their counterparts in Russia, Hungary, the Middle East, and India. Seen by millions of people on public television in the Iron Curtain countries, these broadcasts had a remarkable secondary impact: they put a huge rent right in the middle of the Iron Curtain, and led directly to the historic visits of the Bolshoi and Kirov ballets, and to exchanges of masterpieces among the world's museums. The impact of his outreach programs must have been beyond even his imagination because it prompted this letter:

Sharing your knowledge and skills with physicians of other countries, you have served as an Ambassador of Goodwill. Your efforts dramatically demonstrate that America stands ready to work with others to help solve common problems. — President Ronald Reagan

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In the late 1960s, Eliot led the group that recruited Dr. Jeremy Swan as the new chairman of the Division of Cardiology. In the next few years Cedars-Sinai recruited cardiologists who subsequently became national and international figures: Willie Ganz, Kanu Chatterjee, Bill Mandel, Bill Parmley, George Diamond, PK Shah, Dan Berman, Robert Siegel, Noel Bairey-Merz, Frank Litvack, and Neal Eigler. Looking back, it seems astonishing that in one place, so many young physicians became so well known. But I know how much Eliot moved mountains to promote my own career, as do so many of the colleagues he leaves behind.

Eliot's humanity enveloped his family, patients, and colleagues, both here and around the world. If there is any truer measure of a man than what he does, it must be what he gives. Eliot's gift of himself to us and our times was freely given: he never asked for anything in return. He was a giant of a man, yet one who touched us all.

James S. Forrester

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Herbert Bashford Currier, Botany: Davis

1911-1999

Professor Emeritus

Botanist in the Agricultural Experiment Station

Herbert Bashford Currier died on November 5, 1999, in San Rafael after a long illness. Professor Currier was born on August, 16, 1911, in Richwood, Ohio, and graduated from West High School in Columbus, Ohio. He received his B.S. in 1932 from Ohio State University, Columbus, in education. He journeyed west to Logan where he obtained his M.S. in plant physiology in 1938 from the Utah State Agricultural College. Continuing west, he obtained his Ph.D. in plant physiology in 1943 from the University of California at Davis and Berkeley.

He worked as an Associate in Botany at the University Farm in Davis (which became the University of California at Davis) from July 1939 to October 1942. As the nation mobilized for war, the University Farm's need for faculty diminished as its student body contracted. Professor Currier worked as a research chemist at the Basic Vegetable Products Company in Vacaville, California, until March 1946 when he returned to Davis as an Assistant Professor of Botany and Botanist in the Agricultural Experiment Station.

Professor Currier's early research was in the broad area of weed control, a discipline that had its origins at Davis. Later, his interests took him to a study of phloem physiology. Here, his research focused on understanding how substances such as sugars, minerals and herbicides moved through plants in the phloem tissue. To accomplish this, he developed many of his own techniques for preparing plant tissue and viewing it microscopically. One such technique, a fluorescence staining method for detecting callose,

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became widely used by his colleagues. He served as an advisor to numerous graduate and undergraduate students, and his door was always open to colleagues who sought his advice. During his academic career, he and his graduate students authored more than 100 scientific papers and reviews.

Professor Currier was a member of Sigma Xi, the Botanical Society of America, the American Society of Plant Physiologists, the American Association for the Advancement of Science and the American Institute of Biological Sciences. He received two Guggenheim Fellowships to West Germany, in 1954 and 1961, and taught at the University of Goettingen in 1974 as a guest professor. From March 1967 to June 1969, he served as an Associate Dean in the University of California, Davis graduate division. He retired in 1977.

An avid Rotarian, Professor Currier was President of the Davis Chapter from July 1949 to June 1950. A talented musician, he was a charter member of the Davis Chapter of the SPEBSQSA (The Society for the Preservation and Encouragement of Barber Shop Quartet Singing in America) which formed in 1984 and sang regularly as the High Wheeler's Chorus group.

Professor Currier is survived by his daughter Susan of San Rafael, his son Paul of Davis, four grandchildren and two great-grandchildren. Donations in his memory may be made to the Alzheimer's Association, 2222 Watt Ave., Sacramento, California 95821.

Richard H. Falk David E. Bayer Bruce A. Bonner

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David Daube, Law: Berkeley

1909-1999

Professor

David Daube, one of the most remarkable figures of twentieth century scholarship, died on February 24, 1999. He was born in Germany on February 8, 1909, and received his education at the Universities of Freiburg,

Göttingen (Dr.Jur.), and Cambridge (Ph.D.). He was Lecturer in Law at Cambridge, Professor of Jurisprudence at Aberdeen, and Regius Professor of Civil Law at Oxford. He was a Fellow of Gonville and Caius College, Cambridge, and All Souls College, Oxford. He joined the Boalt Hall law faculty in 1970 as Professor-in-Residence and Director of the Robbins Hebraic and Roman Law Collections. At Boalt he taught Roman law, law of Bible and Talmud, and ancient law. He was a member of the American Academy of Arts and Sciences, the British Academy, the World Academy of Art and Science, the Göttingen Academy of Sciences, and the Bavarian Academy of Sciences, and a recipient of nine honorary degrees. His publications include *Studies in Biblical Law*, *The New Testament and Rabbinic Judaism*, *Forms of Roman Legislation*, *The Exodus Pattern in the Bible*, *Collaboration with Tyranny in Rabbinic Law*, *Civil Disobedience in Antiquity*, *Roman Law*, *Ancient Jewish Law*, *Ancient Hebrew Fables*, *Medical and Genetic Ethics*, and *Die Geburt der Detektivgeschichte*. His collected works are in the process of publication. His second wife, Helen Daube; his sons from his first marriage, Jonathan, Benjamin, and Michael; six grandchildren; and his stepchildren, Tina and Eric Smelser, survive him.

Tracing his scholarly genealogy to the 11th century legist, Irnerius, Daube displayed a breadth of learning and a degree of

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scholarly and human insight that captivated everyone who came into contact with him. A confluence of forces produced a person immediately recognizable as unique: a strictly orthodox Jewish upbringing that from boyhood included instruction in Aramaic and Hebrew, a *wissenschaftliche* education in the 1920s at the height of German university excellence, and a cultivation of his rare abilities by a number of outstanding scholars in the Cambridge of the 1930s and 1940s. His own deep skepticism about the limitations of what we can know in any field of endeavor, his penetrating intelligence, and his awareness and love of ordinary life prompted in him a need to express his truly novel ideas to a rich mix of audiences. The most sober of scholars bowed to his erudition and disciplined scholarship. His law students spoke of him as a “crafty analyst,” an “original observer,” and the “world’s oldest hippie.” They loved his learned and charming teaching, took such out-of-the-ordinary courses as Roman law and Talmud in droves, and knew theirs was an educational experience extraordinary in the legal world. A driver on the F bus between San Francisco and Berkeley always greeted him, “Good morning, Dr. Einstein,” and on one memorable occasion a driver picked him up outside Boalt Hall and drove him as sole occupant to his home in North Beach without stopping for any other passenger.

The variety of people Daube encountered and mesmerized with his engaging conversation, mischievous humor, and telling asides mirrored the character of his scholarship. The vast number and endlessly varied topics that he wrote on—from abstruse issues in Roman legal texts, biblical conundrums, Freud and Greek literature, the language of Shakespeare, terms for suicide down through the centuries, the verb “to sleep with” in the sense of intercourse, nursery rhymes, and Talmudic intricacies about informal marriages to transplantation of organs—revealed the range of his interests. He seemed to know everything, moved with consummate ease from one body of literature to another, and exploited details in a way that gave a distinctive stamp to any subject he turned to. His writings responded to trends in contemporary society and to issues that he confronted in his personal life. In scrutinizing such matters, he typically looked at the way in which thinkers of the past handled them, said something new about our understanding of what had gone before, and showed

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that the ancient perspective had relevance for modern life. For example, *Civil Disobedience in Antiquity*, his most readable book, was a response to the upheavals on the Berkeley campus in the late 1960s.

Daube had genius and the key to it was not his erudition, hugely impressive as that was (it was said of him in Oxford that he could easily have held chairs in five different disciplines). Certainly, the solidity of his scholarship was a crucial component. He adhered to the slogan, “text before tosh,” and his counsel to a select band of pupils not to leave their captured castles unattended he himself heeded. He quoted Christian

Morgenstern about how he loved to pick up flowers from the ground that others had carelessly let fall. Often those he picked up prompted a radical reappraisal of a well-established position. His work is perhaps best captured in a remark of Goethe to the effect that thinking is more interesting than knowing, but less interesting than seeing. He knew so much, his daily life for some six decades was dedicated to pondering one matter after another, but what motivated him most of all was, in the words of the distinguished biochemist Szent-Gyorgyi, “to see what everyone has seen and think what no one has thought.” The striving to be insightful gave to his life and works a luster and a sense of excitement that was wonderfully infectious. He represented humanistic values in a compelling way and there emerged a profound spirituality that linked with all religious traditions and with none.

Daube's influence is enormous worldwide. For instance, as one eulogist has said, after Daube's major, pioneering work on the Jewish context of the New Testament, “It would be misleading for anyone not to regard New Testament literature as Jewish literature of the first century of the Christian era.” The select band of young scholars who worked closely with him now hold leading positions in Roman law and biblical law throughout the United States, Britain, and Israel. His informal influence on the thinking of colleagues, friends, and students was powerful, even if incalculable.

Daube's collegiality at Boalt and elsewhere on the Berkeley campus was legendary. His generosity, his intense interest in other people, his intellectual seriousness and open-mindedness on all matters of controversy, his respectful delight in people of all points

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of view flourished here, and made others flourish. It was his genius to be genuinely close to a remarkable number of people, each somehow in a unique way. He brought his prodigious talents and his generous emotions to bear on his personal relationships just as he did on his scholarship. What he thus gave to his friends and the intellectual world will endure as long as they live and people read.

Calum Carmichael Robert H. Cole John T. Noonan Jr.

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Harmer E. Davis, Civil Engineering: Berkeley

1905-1998

Professor Emeritus

Harmer E. Davis, Professor of Civil Engineering, Emeritus, and founding Director of the Institute of Transportation and Traffic Engineering (ITTE), now the Institute of Transportation Studies (ITS), died December 24, 1998, in his sleep in the hospital in Walnut Creek, California. He was 93.

Harmer was born on July 11, 1905 in Rochester, New York. When he was a teenager his family moved to Southern California, where he completed his high school education in Huntington Park. He attended the University of California Berkeley, receiving a B.S. in civil engineering in 1928, and an M.S. in 1930. Upon completing the M.S. degree, he began his distinguished 43-year career of research, teaching, and administration at Berkeley as an Instructor in the Department of Civil Engineering.

Harmer's early research was directed to the engineering properties of concrete, soils, and asphalt paving materials. He was responsible for important phases of such projects as tests of structural models for the proposed San Francisco-Oakland Bay Bridge; extensive investigations of cement and concrete for the construction of Boulder Dam, Bonneville Dam, and other massive structures; and tests of the thermal stresses and plastic flow of concrete in large dams. During World War II he conducted research on the resistance of materials to shell impact and the brittle failure of ship plate.

Early on, Harmer recognized the importance of both soils and asphalt as engineering materials. He developed courses and established laboratories to ensure that civil engineering graduates

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would be knowledgeable in these two emerging fields. In 1947 when the California legislature established the ITTE at the University of California, Harmer was chosen to create and head this unit. He served as the director from 1948 to 1973, the time of his retirement. From 1949 to 1954 he chaired and developed the graduate teaching programs of the Division of Transportation Engineering, and from 1954 to 1959 served as chairman of the Department of Civil Engineering as well as the ITTE Director.

During the 25-year period he served as director of the ITTE, Harmer developed programs to serve transportation and public works engineers. He recognized that education comprises not only undergraduate and graduate instruction but also continuing education in a variety of forms. These included training programs through extension activities and contributions to various technical and professional organizations by which ideas and analyses are made available to those who can apply them.

Harmer participated in many activities of the National Research Council's Highway Research Board (now its Transportation Research Board) and served on its Executive Committee from 1956 to 1967, and 1969 to 1971; he chaired the group in 1959. He also contributed to a number of special ad hoc groups, such as the board's Long Range Planning Committee whose efforts led to a complete restructuring of the Board's activities. He received the Board's Roy W. Crum Award in 1959 and the George S. Bartlett Award in 1970.

In the summer of 1960 Harmer chaired an extensive study of national transportation research needs, sponsored by the National Academy of Sciences. He also served as a member of the engineering division of the Academy's National Research Council from 1961 to 1966, and as a member of its Executive Committee from 1961 to 1965. Harmer's service to other organizations such as the American Concrete Institute, the American Society of Civil Engineers, and the American Public Works Association was equally distinguished. In addition to his service to engineering-related societies, Harmer served on the Board of Directors of the California State Automobile Association from 1956 to shortly before his death, and was its president in 1975-1976.

Throughout his career, Harmer was committed to what he liked to call “people and ideas.” He never lost sight of the non-technological

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products and greater purpose of engineering education and research. One colleague described him as “principled, generous, remarkably open to diverse intellectual styles,” with “interests and curiosities” encompassing “an extraordinarily wide span of human knowledge.” Possessing this knowledge and vision, Harmer was able to sense upcoming trends and guide research and education to better prepare people to deal with emerging problems. Harmer “seamlessly integrated” two very different personae, in the words of a colleague, one that of a “hard-boiled engineer who viewed the world through a precise but limited lens” and the other that of a “soft-boiled citizen who viewed the world through a wide-angle lens because he cared about the state of things out there.” Despite a tough-minded appearance, Harmer was “always, always, the good guy—the guy with the easy manner, the offer to help, and the terribly corny joke.” Harmer's caring presence is sorely missed, particularly by all those in the institute community he worked so tirelessly to create.

Over the years Harmer received many honors. In addition to being elected to the National Academy of Engineering, he was the recipient of numerous awards from the American Society of Civil Engineers, including honorary membership and the James Laurie Prize; he was also elected to honorary membership in the American Public Works Association, and because of his extraordinary service to local government agencies, was made an Honorary Life Member of the County Engineers Association of California. Harmer's service to Berkeley and to the world was recognized through the award of the Berkeley Citation and the Distinguished Alumnus Award of the College of Engineering.

Harmer is survived by his wife, Phyllis Davis, of Walnut Creek, California, and three children: Lynn Davis of San Diego, Eugene Davis of Union City, and Willard Davis of Berkeley. His survivors also include five grandchildren and three great-grandchildren.

W. Homburger A. Kanafani C. L. Monismith K. Pister M. Webber

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Louis E. Davis, Management: Los Angeles

1918-1998

Professor Emeritus

During his career, Lou Davis was an important member of an international community that focused on the “quality of working life.” Born in 1918 in New York, Lou earned a B.S.M.E. from the Georgia Institute of Technology in 1940. He then went to the University of Iowa for a M.S. in engineering-psychology, which he received in 1942. At Iowa, he was fortunate to study under Kurt Lewin, a distinguished social psychologist who had recently fled Nazi Germany.

After a two-year Assistant Professorship at the Georgia Institute of Technology, he took several positions in private industry, working as an industrial engineer with Bell Aircraft, then Western Electric and finally Commar Products. In 1947 he was appointed to Berkeley's Department of Industrial Engineering, rising to Professor in 1960. At Berkeley, he published highly original research about the human impacts of automation and coined the term “job design” to embrace the notion of efficient and more socially effective alternatives to the prevailing industrial paradigm of scientific management. He helped implement these ideas during the post-war industrial recovery period, when he served as a senior advisor to O.E.C.D. countries under the Marshall Plan.

As an industrial engineering professor, Lou made fundamental contributions to the evolution of the “unit operations” concept that proved to be a fundamental building block of the Socio-Technical Systems (STS) method. In 1962-63 he was honored by an appointment to the Lucas Professorship in the Department of Engineering Production at the United Kingdom's University of

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Birmingham. In 1965-66 he was a Visiting Fellow both at London's Tavistock Institute and at Oslo's Work Research Institute where he worked closely with the founders of Socio-Technical Systems. In 1966 he and Tavistock's Eric Trist joined UCLA's Graduate School of Business Administration to provide leadership for a large number of junior faculty interested in this new interdisciplinary field. Later, as Chair of the department, he presided over the largest influx of new faculty in the history of the school. During his term as Chair 17 new faculty were appointed, most of whom had strength in disciplines that supported the Socio-Technical Systems development.

Lou's shop floor expertise provided an intimate knowledge of the American trade union movement and permitted him to draw support from both the United Auto Workers and various corporate sponsors in developing UCLA's Quality of Work Life (QWL) Program. Initially funded in 1972 by the Ford Foundation, the QWL Program continued with further funding from Ford and the U.S. Department of Commerce. In 1975, it became the Center for Quality of Working Life at UCLA's Institute of Industrial Relations. Under Lou's direction, the center's work blended concerns for the impact of work on life and life on work and is one of the many foundations of current “Work/Life” programs. For the next five years, the center drew national attention to pioneering work being done in the creation of highly effective organizations: entities designed along radically different principles—flatter, more responsive and economically viable, based on

intensive worker participation and balance between the requirements of people and technology. The hundreds of managers, union leaders, policy makers, and academics who attended the center's annual "short course" on organization design between 1974 and 1980 would make a good "Who's Who" list of leaders in organizational innovation in the United States, Canada, Mexico, Europe and Australia. Lou and his center colleagues were at the forefront of innovations that had a lasting impact on many U.S. corporations.

A respected author, Lou published 44 professional articles and 11 book chapters. He was most acclaimed for his classic "*Coming Crisis for Production Management*" (1971), and his three

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books: *Design of Jobs*, co-edited with James Taylor (1972), and *Quality of Work Life*, Volumes 1 and 2, co-edited with Albert Cherns (1975). In addition to his academic contributions, Lou was known for his less academic and colorful "war stories" about industrial life. This example is amongst the most poignant. In the first years of World War II, Lou was working at AT&T's Bell Labs in lower Manhattan. They had just received one of the first radar devices, secretly transported from Britain by submarine. The need to get this radar into large-scale production was urgent. Lou was part of a team responsible for quickly establishing the Bell Labs' assembly line for manufacturing these devices. Having no information but a parts list and electrical schematics, Lou and his colleagues simply disassembled the device while photographing the process step-by-step (an approach that would be refined later to become "reverse engineering"). An assembly line was then created with prominently displayed photos at each workstation. Next, appropriate parts were piled at each station, along with simple tools required. The final step in this work system was to position newly hired, inexperienced, and largely unskilled workers (often the wives and mothers of servicemen) at each station. There was neither training, nor any particular safety standards, but plenty of encouragement to work hard for the war effort. Hours were long, conditions strenuous, and minor injuries plentiful but the radar systems were produced. While proud of their patriotic spirit, Lou said he also felt ashamed to have been the designer of the repetitive, tedious jobs these women were forced to perform. In the words of his former UCLA colleague, Jim Taylor, "Lou's view of his profession changed forever at that time. In a way, his subsequent efforts to improve job design became his atonement. He succeeded magnificently, but his many achievements in supporting and creating systems for improving the quality of working life took him, and us, far beyond the mere design of jobs."

Even after retirement Lou stayed firmly connected to his academic roots and intellectual passions. His retirement years were ones of continued activity in consulting and academic pursuits.

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In addition, he joined the Plato Society and was very active in the educational program at Temple Sinai. Lou survived his first wife Edith and in turn is survived by his son John, daughter Carol, wife Nancy, and some quite wonderful grandchildren.

Richard Goodman Joel Fadem Marvin Hoffenberg Archie Kleingartner

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Richard Eakin, Zoology: Berkeley

1910-1999

Professor Emeritus

Richard Marshall Eakin was born on May 5, 1910 in Colorado and attended schools there and in Oklahoma. He was introduced to the anatomy and physiology of the English language by a good old-fashioned teacher, and later in high school to Shakespeare and to classical music. He graduated from Tulsa High School in 1927 and enrolled in the nearby University of Tulsa to prepare for a career in the clergy. His courses included theology,

speech, and Greek, supplemented by weekly chapel. His clerical trajectory was diverted, however, by a gifted and dedicated teacher of zoology, Professor Harvey Chase, who steered him, albeit slowly, into a long and distinguished career as a zoologist.

Eakin moved to Berkeley in 1929 at the beginning of the Depression and lived there with his grandmother. He enrolled in the University for his junior and senior years, thus beginning a 69-year association with the University as student, teaching assistant, faculty member, and Professor, Emeritus. He learned well from his Berkeley chemistry Professor, Joel Hildebrand, the niceties of showmanship on the lecture platform; and from the long-time chairman of the Zoology Department, Charles Kofoed, he learned the effectiveness of blackboard artistry—along with the consequences of lack of executive finesse. His graduate studies in Berkeley were overseen by J. Franklin Daniel, then Chair of the Zoology Department, an authority on sharks, and a researcher in experimental embryology. His Ph.D. thesis analyzed the results of laboratory manipulations of the developing embryos of salamanders and frogs. Following a post-doctoral year (1935-36) in

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Germany in the laboratories of Professor Hans Spemann, a Nobel laureate and experimental embryologist, and Professor Otto Mangold, Eakin joined the Berkeley faculty in the Department of Zoology in 1936. In 1942, Department Chair Franklin Daniel suffered a mild heart attack and appointed Eakin to serve as Acting Chair. Daniel, however, retained some control by dictating instructions to his fledgling replacement from his bedside. Daniel's second heart attack was fatal. In due course, University President Sproul appointed this 32-year-old Assistant Professor to serve as chair of a department that was already replete with distinguished scientists and destined to become one of the more respected zoology departments in the nation.

Eakin's career may be segmented into three interwoven strands: administration, research, and teaching. He distinguished himself in all three activities. The Zoology Department that he chaired from 1942 to 1948 and from 1952 to 1957 became widely recognized for its excellence. Those of us hired by him are warmed by such strong evidence of his perspicacity. Noteworthy in his leadership of the department was the introduction of democratic practices into what had been an autocratic regime for many decades. His honest, even-handed leadership led to an easing of longstanding tension between the Zoology and the Botany Departments, and between Zoology and the Museum of Vertebrate Zoology. Intradepartmental feuds rarely surfaced after the Eakin years. The eventual division of “his” department into separate units, Integrative Biology and Molecular and Cell Biology, left him undecided as to where he belonged. Initially, as a cell biologist, he became affiliated with the latter; however, he soon returned “home” to Integrative Biology.

During his long association with the University, Eakin was unable to resist the call to serve on many important Senate committees, was an assistant dean, editor of several distinguished scientific journals, and served as President of the American Society of Zoologists and the Western Society of Naturalists. He played an important role in the founding of the Sagehen Creek Field Station near Truckee, California, the Cancer Research Genetics Laboratory, and the Bodega Marine Laboratory. He was tirelessly supportive of his wife Mary's duties as Associate Minister of the First Congregational Church in Berkeley. In later years he wrote a definitive

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history of the Zoology Department as well as of his church. Even after mandatory retirement at age 67, he donated his skills in the teaching of embryology at three primarily Afro-American colleges in the South: Tougaloo College in Mississippi, Talladega College in Alabama, and Fisk University in Tennessee. In general, Eakin was notably sensitive to social issues: attacks on academic freedom and freedom of speech, the threat of war and militarization, and racial injustice concerned him deeply.

In addition to his substantial administrative and teaching duties, Eakin made an enduring mark in the fields of anatomy, embryology, and electron microscopy. Starting from experimental manipulations of amphibian embryos, he was attracted to a study of the eyes of various unusual creatures, and then was drawn into

the new world of electron microscopy. He was one of the first practitioners of this technology on our campus, developed impressive skills in the preparation and photographing of tissues, and made significant contributions to our understanding of the role of several little-understood photoreceptors, especially the mysterious third eye or pineal gland of reptiles. During his long and productive research career, he published three books and more than 200 scientific papers.

Eakin never lost sight of the fact that his primary duty was teaching, and he let nothing compromise the quality of his presentations. His lectures in embryology, for example, one of the core courses in the Zoology curriculum, were presented in the Life Sciences Building's largest lecture hall. Each year he made sure that his lectures were scheduled for 1 p.m., because the hall would be empty during the lunch hour, giving him ample time to cover the blackboards with his exquisite drawings and diagrams. Many students brought their lunches and then admired and copied into their notebooks this embryological feast. Many faculty colleagues interested in embryology also attended his course, which was widely recognized as a display of the art of teaching.

Zoology 10, the “culture” course for non-majors was also one of his favorite offerings, a course where he could mix science with favorite homespun philosophical thoughts. It was here that one day in 1970 he succumbed to the temptation to invite William Harvey, a famous scientist who had discovered the circulation of the blood in 1628, to be a guest lecturer. Eakin then

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disguised himself as that Elizabethan scholar and delivered a lecture, much of it in Harvey's own words. Imagine the doubts, the anguish, the fear that must have haunted him before that first performance. Would he be laughed off the stage? One rude cynical student could have shattered the whole scene. Mercifully, the happening was a spectacular success and led to other “guest lectures” in which he impersonated such eminent scientists as Gregory Mendel, William Beaumont, Charles Darwin, Louis Pasteur, and Hans Spemann. These performances were repeated again and again, not only in Zoology 10, but in guest appearances before appreciative audiences in many parts of the country, and were published in a marvelous little booklet entitled *Great Scientists Speak Again* (1975). It is little wonder that he was awarded the first Senior Citation for Distinguished Teaching (in 1963), the ASUC Award for Outstanding Teaching (1968), and finally, upon his retirement in 1977, the prestigious Berkeley Citation.

A final reminder of his impact on the tribal culture of our times appeared in an Oregon newspaper a month before his death. To illustrate a report on a decision by the Kansas legislature to downplay the “theory” of evolution in local schools, the newspaper presented a photo of Darwin. But it was not the real Darwin; it was Eakin made up to impersonate Darwin! The *Berkeleyan* in its obituary of Eakin also used a similar photo of the Darwin impersonator, but in a spirit of admiration, not ignorance.

Eakin is survived by two children, David and Dottie, born to his first wife, Mary, who died in 1980; by his second wife, Barbara, who is a distinguished electron microscopist and Professor, Emeritus at the University of California San Francisco; and by her children, Janet and Jean.

Howard Bern Oliver Pearson Fred Wilt

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Harry H. Eckstein, Political Science: Irvine

1924-1999

Distinguished Research Professor, Emeritus

Harry Eckstein, Distinguished Research Professor in the Department of Political Science, the University of California Irvine, died on June 22, 1999, of heart failure. He was one of the most prominent and respected

social scientists of the second half of the twentieth century. The sweep of Eckstein's intellect and the depth of his learning were all but unique in a discipline that has experienced increasing specialization. His reputation is based, in part, on sustained, cumulative, innovative contributions to understanding the bases of effective (stable) democracy, the nature of authority relations, and culture as an organizing concept for the rigorous study of politics; and, in part, to the unusual trait of having made important, at times seminal, contributions to a host of diverse subfields of political inquiry. Moreover, he wrote critically important work for understanding particular political systems—most notably Britain, but also Norway, and in recent years he wrote on democratization in post-Soviet Russia.

Eckstein was a Fellow of the American Academy of Arts and Sciences (1970-99), Fellow of the Center for Advanced Study in the Behavioral Sciences at Stanford (1958-59), Guggenheim Fellow (1974), Program Chair (1966-67) and Vice-President of the American Political Science Association (1981-82), editor (1960-63) and member of the editorial board of the journal *World Politics* (1960-80), a founding member of the editorial board of the journal *Comparative Political Studies* (1966-99), the IBM Professor of International Studies at Princeton University (1969-80), and, finally, Distinguished Professor (1980-93) and Distinguished

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Research Professor (1993-99) of Political Science at the University of California Irvine.

Many of Eckstein's writings are standards of political science and required reading for students. In 1992, a number of his important articles were compiled and published as the book, *Regarding Politics* (University of California Press). He wrote and edited nine other books. In August 1998, *Comparative Political Studies* published "A Tribute to Harry Eckstein," a special issue devoted to his influence on the field. No other American political scientist has been honored by a political science journal in this way.

Harry Eckstein was born on January 26, 1924, in Schotten, Germany. His family suffered the horror and dislocations of the Holocaust. In 1936, at the age of 12, Eckstein left for the United States as part of a group of 500 German youths selected for immigration on the basis of intelligence tests administered by American authorities. Although his sister, Ilsa, later escaped Germany and eventually settled in the United States, the rest of his family perished in concentration camps. Eckstein spent his adolescent years in Columbus, Ohio.

Recognized as a brilliant student, Eckstein was awarded a scholarship to Harvard University, where he earned bachelor of arts (1948, *summa cum laude*), master's (1950), and doctoral (1953) degrees in political science. World War II interrupted his undergraduate training, and he served a stint in the Pacific theater. His doctoral dissertation was published as *The English Health Service* (Harvard University Press and Oxford University Press, 1958) It was quickly followed by his study of the British Medical Association (*Pressure Group Politics*, Stanford University Press, 1958) which helped focus the field and remains one of the best examples of interest group analyses to this day.

Internal War (Free Press, 1964) was a truly pioneering study that drew attention to the need for and thereby stimulated systematic study of civil strife and revolution. Later, in a frequently reprinted article ("On the Etiology of Internal Wars," *History and Theory*, IV, 2, 1965), he sketched out what was to become an influential and widely read research paradigm, which, among other critical contributions, clearly disentangled what had been total confusion between the "preconditions" and the "precipitants" of civil strife.

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In addition to Eckstein's substantive and theoretical contribution, epitomized by the work on the English national health service, interest groups and internal war, one cannot ignore his important contribution to the methodology of comparative politics, best exemplified by his work on the case study as an approach to empirical theory. "*Case Study and Theory in Political Science*" (in Greenstein and Polsby, eds., *Handbook of Political Science*, 1975) demonstrates the special utility of "crucial case studies" in testing theory, thereby undermining the accepted wisdom in comparative research that the larger the number of cases the better.

The research described so far is a corpus of work which could both explain and justify Eckstein's international reputation. However, we have not yet considered his central contribution: explaining effective democratic government and analyzing the nature of authority relations. His classic monograph, *A Theory of Stable Democracy* (Princeton, 1961) sketched out the basic tenets of “congruence theory,” which was to become one of the most important and innovative contributions to understanding democratic rule. Put in an overly simple way, the essential idea is that a country where parent-child, teacher-student, and employer-employee relations are authoritarian cannot establish durable democratic government; such a regime requires democratic social authority relations, increasing resemblance to democracy as one moves from social units quite distant from the government—for example, the family and primary school—to ones which are close—such as work organizations, voluntary associations and political parties.

The monograph developed this basic idea and showed that it seemed to fit most extensively studied democracies. Next, Eckstein researched and published a case study on a rarely studied democracy, Norway, designed to serve as a plausibility probe for the theory (*Division and Cohesion in Democracy*, Princeton University Press, 1966).

On this foundation, Eckstein undertook the task of clarifying and developing the concept of authority. Soon this became a major independent endeavor. Many scholars had long suggested that a rigorous, scientific study of politics could not be confined to the sphere of government. Rather, the discipline would have to be centered on an eminently political phenomenon; influence, power and authority were commonly referred to as the most plausible

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candidates. Until Eckstein, however, this call was not heeded, even by those who issued it. He took the challenge seriously, producing an important body of scholarship arguing that political science should focus on the study of authority. He also produced a magisterial (although largely ignored so far) work implementing the idea: *Patterns of Authority*, co-authored with Ted Robert Gurr (Wiley, 1975).

The attention to authority led to a number of essays on political culture (including “*A Culturist Theory of Political Change*,” *APSR*, 1988) and social science as a “cultural science.” In 1998, he edited and contributed chapters to the book, *Can Democracy Take Root in Post-Soviet Russia?* (Rowman and Littlefield), and published an article in *Comparative Political Studies* on the nature and scope of comparative politics.

Eckstein began his teaching career in the Government Department at Harvard where he served as an Instructor and an Assistant Professor (1954-58). He moved to Princeton to serve as an Associate and Full Professor (1959-69), when he was named the IBM Professor of International Studies, an endowed chair that he held from 1969 to 1980. In 1980, he moved to the School of Social Sciences at the University of California Irvine, where he was UCI's first Distinguished Professor, a program designed to draw senior scholars of international reputation to help build the new university.

Eckstein continued to be an active scholar and colleague until the eve of his death. Moreover, he was an energetic participant in university life at Irvine, where he served as founding Chair of the Department of Politics and Society, helped to establish the UCI Center for the Study of Democracy in 1995, and organized many of the center's activities in recent years. Barely a week before he passed away, Eckstein completed teaching his last course, Political Culture. His loss will be felt by the many graduate students he was still supervising, the undergraduates with whom he met regularly in his office, and by his many colleagues, at Irvine and around the world, who relied on him for wisdom and counsel.

Eckstein was a passionate, serious man. He loved music deeply, and played the violin and viola nearly all of his life, often in string quartets made up of friends and colleagues. He followed international soccer and cricket avidly, and in recent years could be found surfing the net to keep abreast of recent friendlies and test-matches.

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He was an excellent poker player, a game that he mastered in the Army, and he won far more than he lost. Eckstein's conversation, perhaps the most endearing feature of his personality, was always serious and erudite. He seemed to be interested in, and to know an astonishing amount about, any topic that might be raised. He was a deeply committed scholar and a true gentleman who treated all members of the community—from the most accomplished of scholars to struggling undergraduates and members of the staff—with kindness, sincerity, and courtesy.

We have set up three memorials in an attempt to perpetuate his memory within the Department of Political Science and the School of Social Sciences and express our very high regard for him. The department's meeting room has been renamed the Harry Eckstein Common Room and the Center for the Study of Democracy at UCI has created a lecture series in his honor. Furthermore, we have established the Eckstein Memorial Fund, which will provide financial assistance to graduate students conducting research towards the completion of the Ph.D. in political science at UCI. Through these efforts, we hope Eckstein's intellectual creativity and commitment to the rigorous study of politics will continue to serve as an inspiration for all of us.

Mark P. Petracca William R. Schonfeld Alec Stone Sweet

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Patrick E. Elvander, Biology: Santa Cruz

1950-1998

Lecturer

Dr. Patrick Elvander, a popular Lecturer in the Biology Department at UC Santa Cruz died unexpectedly from pneumonia at his home in San Jose, California, on Monday, October 5, 1998. He was 48.

Patrick was a plant systematist whose specialty was the family Saxifragaceae and more specifically the genus *Saxifraga*. He was an authority on both the family and the genus and his research was funded by grants provided by the National Science Foundation and the Smithsonian Institution. He was a member of several professional societies including the American Society of Plant Taxonomists, the Society of Systematic Biologists, California Botanical Society, American Museum of Natural History and the Nature Conservancy.

Patrick received his B.A. in botany from Pomona College, Claremont, California. He graduated *cum laude* in 1972 and was elected to Phi Beta Kappa. He received his M.S. in 1975 and his Ph.D. in botany in 1979 from the University of Washington. Before coming to UCSC in 1981, he served as a consultant for the U.S. Forest Service, the Department of Botany at the Smithsonian Institution and taught courses at the University of Washington Seattle and at Oregon State University Corvallis.

While at UCSC, he served as Academic Preceptor for Crown College from 1983 to 1993 where he was responsible for advising students on their academic performance; he served as Chair of the Phi Beta Kappa selection committee and was an officer and charter member of the UCSC Chapter of Sigma Xi. He was an officer in the California Botanical Society and did research at the Smithsonian

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Institution in his summers. In 1987, he was nominated for the Phi Beta Kappa Undergraduate Teaching Award and he was also nominated for the 1995-96 Excellence in Teaching Award.

Patrick presented numerous papers to the American Association of Botanical Gardens and Arboreta, American Society of Plant Taxonomists, Western Society of Naturalists and the American Institute of Biological Sciences. He authored several publications on *Saxifraga* and the Saxifragaceae in *Vascular Plants of Arizona*, the *Journal of the Arizona-Nevada Academy of Sciences*, *Systematic Botany Monographs*, *Madrono*,

Introduction to The Jepson Manual, The Jepson Manual: Higher Plants of California, and Flora of North America. He had revised the Saxifragaceae for the new edition of *The Jepson Manual: Higher Plants of California* published in 1993. At the time of his death, he was in the process of revising the Saxifragaceae for the more encompassing *Flora of North America*.

Patrick was an especially well-liked biology Instructor. He was an enthusiastic lecturer who inspired and motivated many students to study plants. His students reported him as very “approachable” giving them his “undivided attention” and said he was “willing to listen.” He was extremely knowledgeable not only in the field of plant systematics but in the field of botany in general. He taught classes in systematic botany, plant anatomy, plant evolution, biology of the fungi, field botany and general biology among other courses. He actively participated in programs offered by the UCSC Arboretum and he regularly gave public lectures at the UCSC Farm and Garden, the UCSC Arboretum and for the California Native Plant Society.

Students consistently said Patrick was an excellent teacher, finding him exceptionally articulate and well organized. Students stated that his lectures were delivered with professionalism, humor, grace, and style. They were often seasoned with the historical background of the subject, material not usually found in the texts. He encouraged questioning; his responses were always carefully considered. Department members and his students truly miss this superb educator, scholar, and friend.

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Patrick was especially talented in vocal music. He had been a member of the bass section of the San Francisco Gay Mens' Chorus for the past 15 years. He especially enjoyed participating in the performances and tours that were sponsored by the Chorus.

Lynda J. Goff Linda Locatelli

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Julian Eule, Law: Los Angeles

1949-1997

Professor

Julian Eule was everything—spectacular teacher and mentor, inventive scholar, and wise colleague, friend, husband, and father. He had a passion for life; in whatever he touched—scholarship, teaching, a good dinner, a basketball game—there was a remarkable enthusiasm, a sense of wonder. His near-death in his thirties made him even more determined to live his life focused on what mattered: his family, his colleagues, his students, his scholarship. He became a great example to all who knew him.

When Julian joined the Law School faculty, he already had a distinguished record of accomplishment. After graduating from Cornell Law School in 1973, he clerked for the Federal District Court in the Southern District of New York, and later for Judge Ellsworth Van Graafeiland of the U.S. Court of Appeals for the Second Circuit. He was in private practice with Sherman & Sterling in New York City and of legal counsel to Connecticut Governor Thomas Meskill. He received an LL.M. degree from Harvard Law School in 1977, and then joined the Temple University law faculty. At Temple, he wrote two major articles, served as acting university counsel and law school counsel, and engaged in appellate advocacy in the federal circuit court and the United States Supreme Court. He joined the UCLA Law School faculty in 1984.

It would be hard to exaggerate the impact of Julian's teaching. At Temple, he was voted Most Outstanding Professor by the class of 1980. At UCLA, he received the Rutter Award for Excellence in Teaching in 1988. Three times the graduating classes (1988, 1990, and 1992) selected him the Professor of the Year, a record

matched by

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only one other professor. Julian was spectacular in the classroom. In his words: “I try to make my classes 'fun'—hook the students into coming and paying attention and then—boom, if I do my job right, I capture them with my enthusiasm.” After class, hallway gatherings often lasted nearly an hour. Student comments in the evaluations reflected the passion and consideration that Julian brought to the students: “This guy is one of the most pleasant, informative, and interesting teachers I have ever had. . . .” And beyond the classroom, Julian was a caring, thoughtful advisor: “I benefited enormously from his wisdom and advice in ways that will continue to influence my legal career many years down the line.”

Julian's writing centered on major issues in constitutional law—the centrality of process values, ranging from the commerce clause to entrenchment and retroactivity, the constitutional significance of speaker diversity, and the constitutional pitfalls of the referendum and initiative process. He was deeply concerned with the fundamentals of democracy in a republican form of government with judicial review. Julian was directly engaged with the issues of race and the importance of diversity. At a number of points, he addressed the issue of protecting minority interests and diversity of viewpoints. In his final article, which Dean Jon Varat completed, Julian explored the issues of regulating hate speech by private universities. Professor Ken Karst said of this work: “He was serious in his writing, but never solemn. I love reading his stuff—probably because Julian the citizen, Julian the man, shines through at every turn.”

Above all, Julian was an exemplary community builder. He cared about people and he cared about the institution. He loved to talk, but as Professor Ken Karst put it, “[H]e didn't talk at you; he had a conversation, and that meant listening and trying to respond to your concerns.” For Julian, a conversation was “an expression of affiliation, of community. . . .” During his term as Associate Dean, Julian recruited eight members of the faculty. In addition to their qualities as scholars and teachers, they all reflect Julian's deep concerns and talents for institution building. And this is one of his enduring legacies. In so many ways, Julian was a community builder of such immense proportions that many of our law school faculty and staff felt privileged to work with him. Julian appreciated them as interesting individuals and as committed persons.

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The Law School community—faculty, students, and staff—loved him and would go to any length to help him make UCLA a better institution.

Julian, his wife Carole, and his children, Lisa and Brian, were great companions. They had an active social life and many very good friends. All of us who were privileged to be among them enjoyed Julian's fun and enthusiasm. In every respect, he continues to be in our minds and hearts.

Joel F. Handler Gillian Lester Susan Westerberg Prager David Sklansky Jonathan Varat

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Kurt Engelberg Forster, Engineering and Applied Science: Los Angeles

1915-1999

Professor Emeritus

Kurt Forster, a longtime member of the UCLA faculty, died March 11, 1999 at the age of 83, due to the consequences of a stroke he experienced in the fall of 1998. He is survived by his wife, Vera Masters, and two daughters, Susanne and Nina.

Kurt grew up in Vienna and received his Ph.D. in physics from the University of Vienna where he completed a thesis on photoelectric rectification in crystals. Soon afterwards, he fled from Austria, thereby escaping the Holocaust, which claimed his father and other family members. After arrival in this country, he served as a meteorologist in the U.S. Army Air Corps from 1942 to 1946. Following World War II, he became a researcher at the Jet Propulsion Laboratory at Cal Tech and contributed to the important efforts made there to understand supersonic flight. He began his academic career at UCLA in 1947 as a Lecturer in the Department of Physics and then in 1948 he joined the recently established College of Engineering, headed by Dean L.M.K. Boelter. Kurt was initially a member of the Division of Applied Mechanics which, following several reorganizations and name changes, developed eventually into the present Department of Mechanical and Aerospace Engineering. He retired in 1985.

Kurt was active in several different areas of teaching and research during his career. During his time at JPL, he was among the first to apply the mathematical theory known as the method of characteristics to axially symmetric, and nearly axially symmetric, inviscid supersonic flow. The numerical results this obtained

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represented a considerable improvement over results obtained by linearized flow theory, especially for the case of blunt bodies, and allowed predictions for a wider family of body configurations and flow conditions than covered by the very limited experimental results existing at that time. He also analyzed the dynamic stability of the WAC Corporal, one of the early high-altitude recoverable rockets. His work in these areas, however, was classified and never published openly. After joining the Department of Engineering at UCLA, Kurt became involved in research on nuclear engineering with the support of Dean Boelter. He focused on the growth with time of vapor bubbles in superheated liquid and was able to predict a growth that agreed very well with experimental data. He then used the results to investigate boiling heat transfer. His work in this area, which was reported in both engineering and physics journals, has been described by Professor Vijay Dhir, current chair of the MAE Department and an authority on boiling heat transfer, as having been “seminal and of great importance.” During this period, Kurt received a Guggenheim Fellowship, which allowed him to be a Visiting Professor at the University of Tokyo in 1958, after which he completed a round-the-world trip.

During the 1960s, Kurt became active as a consultant to the Lockheed Corporation and TRW Systems in the area of astrodynamics. He published research articles on the satellite dynamics and the lunar trajectory problem (an example of the three-body problem). During part of this period, Kurt served as chair of the education committee of the American Astronautical Society and as an adviser to the U.S. Air Force Office of Scientific Research during 1964-66.

Because of his broad knowledge and Dean Boelter's emphasis on fundamentals, Kurt taught a variety of engineering courses, but he focused on courses in dynamics and applied mathematics during the latter half of his career. At different times, he served on Ph.D. field committees in dynamics, astrodynamics, fluid mechanics and applied mathematics. Kurt was always an interested participant in departmental activities and a valuable and ready source for advice. His influence upon his students was great as indicated by one of them, Ralph Greif, who is now Professor of Mechanical Engineering at UCB.

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“Kurt Forster is remembered as a teacher, as a mentor, and as a friend. In his course on engineering analysis, Kurt Forster chose the textbook *Partial Differential Equations in Physics* by Arnold Sommerfield. Kurt completely understood that his course would set a high standard for his students, and his course reflected his depth and comprehension of the material and the field of study. He created an academic environment that was stimulating and inspired his students to grapple in depth with the basic concepts. Carrying out research with Kurt Forster was a unique experience. His understanding of physical phenomena was so impressive. His analytical abilities and comprehension of transport phenomena were immense; one spent days unraveling and expanding on his thoughts. Forty years later his intellect and talents are clearly remembered along with his

kindness and generosity.”

Although Kurt spent the majority of his life in the United States, he remained very much a European in regard to his interests and style. He had an extraordinary breadth of knowledge in nonscientific as well as scientific matters and greatly enjoyed talking about any topic of interest to him. Kurt had a deep appreciation of classical music, especially for composers associated with Vienna such as Mozart, Schubert and Mahler. He enjoyed traveling in Europe, accompanied by his wife Vera. Kurt had strong opinions and beliefs which he was always willing to express and defend; he had little tolerance for hypocrisy and superficiality. However, Kurt was also a very humane and compassionate person. Kurt made a lasting impression upon many who knew him and will greatly miss him.

Robert E. Kelly

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Heinz L. Fraenkel-Conrat, Molecular and Cell Biology: Berkeley

1910-1999

Professor Emeritus

UC Berkeley lost one of its renowned scientists upon the death of the molecular biologist, Heinz L. Fraenkel-Conrat on April 10, 1999.

Fraenkel-Conrat took part in the creation of the novel discipline of molecular biology by addressing some of its most fundamental questions. In the early 1950s, none of these questions was more urgent than whether the genes responsible for the transmission of an organism's hereditary characters are composed of the structurally diverse proteins, as was generally believed to be the case, or, as few people then considered possible, of the structurally monotonous nucleic acids. A brilliant protein chemist by training and a virologist by choice, Fraenkel-Conrat was in a unique position to answer that question. He had just shown in 1955 with colleague Robley Williams that tobacco mosaic virus (TMV) could be disassembled into protein and ribonucleic acid (RNA) molecules, and then could be reassembled without loss of virulence for tobacco plants. True to his expertise, Fraenkel-Conrat used a chemical strategy to find out which of those molecules was the TMV gene. He tested the proteins without RNA and the RNA without the proteins on tobacco plants for their ability to function as an infectious virus would.

Contrary to Fraenkel-Conrat's expectation, it was clear by 1957 that nucleic acid was the gene, functioning like a virus, and that the proteins were just the coat of these genes. According to the *New York Times*, “This was not an entirely happy discovery for Dr. Fraenkel-Conrat, who had sided with those scientists who believed that the tobacco virus' infectivity was contained in its

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protein coat. 'I'm a protein chemist,' he told Mr. Williams when he was being interviewed for the book [*Virus Hunters* by Greer Williams]. 'I hoped protein was the determining factor. It was against my personal inclinations to have a greater interest in nucleic acid'” (*New York Times*, Sunday, May 2, 1999).

It is the hallmark of a great scientist to be able to drop a popular but unproductive hypothesis in the face of contradictory results and to make the most of his results while the ball is in his court. And that is exactly what Fraenkel-Conrat did. Soon he set out to break the genetic code, i.e., how genomic nucleic acid is translated into proteins, using his monopoly on the only defined RNA genome of its time, the RNA of TMV. For that purpose the complete sequence of the 158 amino acids of the viral coat protein was determined by 1960. It was the biggest protein to be sequenced at that time. Fraenkel-Conrat and his colleagues then mutated the viral

RNA in test tubes with various chemical mutagens, packed it back into viral coat proteins and infected tobacco plants with the artificially mutated and reassembled viruses. Whenever a mutant viral phenotype appeared, the viral coat protein was again sequenced and the mutant amino acids were matched with the chemically mutated nucleotides of the RNA in an effort to break the genetic code. Although Fraenkel-Conrat did not quite win that race, he showed the way. In fact, Marshall Nirenberg, who did win that race, had learned the techniques of handling protein-coding RNA in Fraenkel-Conrat's laboratory.

Fraenkel-Conrat was born on July 29, 1910, in Breslau, Germany, where his father—the discoverer of the corpus luteum as the source of progesterone in pregnancy—was a professor at the medical school. He received a medical degree from the University of Breslau in 1933. Subsequently he moved to the University of Edinburgh for a doctorate in biochemistry, which he received in 1936. There he met fellow biochemist Sir Alexander Todd, who later received the first Nobel Prize for nucleic acid structure. He spent the following two years at the Rockefeller Institute in New York City, where he was trained in protein chemistry, and at the *Instituto Butantan* in São Paulo, where he studied the activity of snake venom enzymes that would become essential for his later work on nucleic acids. Fraenkel-Conrat settled in California in 1938, first working at UC Berkeley's Institute for Experimental

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Biology, then (in 1942) moving to the U.S. Department of Agriculture's Western Regional Research Laboratory in Albany. In 1951 he was picked by the first Nobel laureate for virology, Wendell M. Stanley, to join UC Berkeley's Virus Laboratory as Professor and Research Biochemist. At UC, Fraenkel-Conrat held successive appointments as Professor of Virology, of Molecular Biology, and of Molecular and Cell Biology. He died of pulmonary failure at the age of 88 at the Kaiser Hospital in Oakland on April 10, 1999, and is survived by two sons and his wife and long-time collaborator, Bea Singer.

Fraenkel-Conrat won numerous awards including the Albert Lasker Award for Basic Research in 1958, which he shared with Alfred D. Hershey (Cold Spring Harbor, NY) and Gerhard Schramm (Tübingen, Germany) for their work with nucleic acid. He was also California Scientist of the Year in 1958 and was elected to the National Academy of Sciences in 1974. As a scientist and experimentalist Fraenkel-Conrat retained a certain Prussian phenotype in all of his many years in Berkeley. But behind that phenotype there was a *mensch* who is now sadly missing.

Peter Duesberg Harry Rubin Gunther Stent

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Donald Thomas Handy, Kinesiology: Los Angeles

1908-1996

Professor Emeritus

Donald Handy, born and raised in Los Angeles, was a devoted son of UCLA. He earned three UCLA degrees: bachelor of art (1934), master of art (1941), and doctorate in education (1952). Before entering UCLA, Don attended Berkeley where he and his brother, Carl (who was the football captain), were known as the “Handy boys.” Don was also the heavyweight boxing champion at Berkeley.

From 1934 to 1941, Don taught physical education and social studies classes at Fremont High School in Los Angeles; he also coached the football, gymnastics and wrestling teams. In 1941, he accepted an appointment as a Junior Supervisor of physical education in UCLA's School of Applied Arts and coached the freshman football team. During World War II, he served in the United States Navy, and he continued to serve in the Naval Reserve until 1967 when he retired with the rank of Captain.

In 1946, Don returned to UCLA as an Assistant Supervisor in the Physical Education Department, and he was promoted to Associate Professor after earning his doctorate. In the 1950s, the Physical Education Department offered one of the finest teacher preparation programs in the country, and Don was well known for his classes on teaching methods.

With the establishment of California's Master Plan for Higher Education in 1960, most teacher preparation programs for UC undergraduates were discontinued. As a result, the School of Applied Arts at UCLA was disestablished. The Physical Education Department transferred to the Life Science Division in the

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College of Letters and Science, and the tenured faculty members designed new educational programs devoted to the science of human movement. Focus was given to understanding the physiological and psychological effects of physical activity and exercise on individual participants, as well as the social-historical effects of sport on world cultures.

In 1962, Don became chair of this new department, and for the next 12 years, his energetic leadership was crucial to the department's development. He recruited young faculty with expertise in biomechanics, neuroscience, physiology, psychology, and sociology; he called them “his kids.” He set high goals and helped them establish state-of-the-art research laboratories. The young faculty shared Don's dream of developing a top-rated department devoted to the study of movement—a field science they called “kinesiology.”

The Kinesiology Department—established in 1972—was the first of its kind in the United States. By then the department's faculty members were leading the nation's research in exercise physiology, motor development, neural control of movement, sports biomechanics, and sports psychology. When Don retired in 1976, he was recognized as the founding father of the Kinesiology Department, and at the department's graduation ceremony, the faculty conferred upon him the first doctorate of kinesiology in recognition of his leadership.

During the 1980s, a period when fiscal constraints affected all campus units, the kinesiology faculty decided to reduce the scope of the department's research and education programs and focus primarily on the physiology subfields of kinesiology. In 1990, the Kinesiology Department became the Physiological Science Department.

Don was well known on campus and served as president of the UCLA Faculty Center for two years. His community service was legendary. He was president of the Los Angeles Physical Education Association, the Southern California Football Officials Association, and the Bruin Coaches. A long-time member of Westwood Village Rotary Club, he was the first president of its foundation and was named “Rotarian of the Year” in 1980. He also received the “Service of Mankind Award” from The Sertoma and La Sertoma Clubs of Westwood Village in 1980. He served as chairman of the Westside YMCA Board of Directors and was a member of the Board

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of Directors for the West Branch Red Cross. He also chaired the nationally recognized Westside YMCA Fitness Program.

In retirement, Don continued to pursue his hobbies of fishing and mountain hiking, and he stayed engaged in community service. He was also active in UCLA's Emeriti Association and often accompanied his close friend of many years, Sylvia Winstein, to special events such as the emeritus art show in the faculty center. Don never tired of asking about “his department” and the achievements of kinesiology faculty and students. Their accomplishments and the department's continued success are Don's legacies.

Judith L. Smith

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Fred Orin Harris, Dramatic Art: Berkeley

1901-1998

Professor

Fred Orin Harris, an inspiring teacher and mentor, gifted, resourceful, versatile director, and life-long friend to his students, died in his sleep August 28, 1998 at the age of 97.

Fred's association with the Berkeley campus began in 1940 when he accepted an offer from the Associated Students of the University of California to direct plays for its Little Theatre. He was undaunted by the sparse resources—the only stages were the lecture platform in Wheeler or Cal Hall or the neglected Greek Theatre; the sets were self-built and stored in the basement of Eshelman Hall (affectionately called “the Cave”); and there was a modestly equipped moveable light board. Rehearsals were held in any available classroom or usable space.

Fred was 39 at the time, “rangy and skinny,” with a walk that seemed more of a bounce, and joints that could stand a good tightening. He had a marvelous, wry sense of humor and when laughing his shoulders moved up and down convulsively with barely a sound emerging—his lips held together in a wide grin and his dark, piercing eyes twinkling.

He was well prepared for the job. Born in Sumpter, Oregon, January 24, 1901, Fred learned how to work hard and to create something out of practically nothing. His academic credentials included a B.A. in art and electrical physics from the University of Washington (1924) and an M.F.A. from New York University (1930).

On July 26, 1931 he married Mary Caroline Blaisdell, who as an experienced actress and dramatic coach, complemented Fred's diverse talents as teacher and director. They saw eye to eye in their approach to theater, essentially based on the Stanislavsky

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method learned from Mme. Maria Ouspenskaya of the Moscow Art Theatre. Together, Fred and Mary had an extensive background of working in community theater throughout the country. This gave them a broad knowledge of the theater in all its aspects and respect for its power as an educational tool for life.

Fred's introduction to academia as a career had begun as an Instructor (who could also build scenery) at the University of Oregon School of Architecture. There he emphasized learning by doing. So too at Cal; he involved the students in all aspects of play production, from organizing, rehearsing and mounting the play, to selling the tickets. As one of his students wrote years later, “He taught us not to be afraid of any challenge. We learned that theater was work but worth it.”

From the time Fred was hired by the ASUC, it became obvious that he had remarkable talents. He was not a frustrated actor or prima donna director. This was validated not just by the success of his productions but by the enthusiasm of the students and faculty working with him.

The University Department of Dramatic Art was established on July 1, 1941, with Fred attaining faculty status as Lecturer. He advanced to Associate Professor (1945) and in 1948 to Professor, and chaired the Department from 1945 to 1958.

An advocate of interdisciplinary cooperation, Fred involved other departments—English, Music, Speech and Foreign Languages—in the broad spectrum of his presentations. The Music Department provided an original score for his brilliantly mounted *The Trojan Women* of Euripides (1945), his first Greek Theatre production. At a later date the cast was reassembled for a special presentation to the founding delegation of the United Nations in San Francisco, which received national acclaim in *Theatre Arts* magazine.

What a rare opportunity Fred provided to students, faculty and community at large with his presentation of such plays as *Hedda Gabler*, *Pride and Prejudice*, *The Oresteia*, *Dido and Aeneas*, *Truckline Cafe*, *Family Portrait*, *Green Pastures*, *Lady in the Dark* and a most memorable *King Lear*. Auditions were always open to all students; those who could be heard from the sand pit of the huge Greek Theatre amphitheatre to the last row where Fred perched were cast.

Fred's colleagues were amazed at the extent to which, with such a small staff and limited resources, he could build up the department and enlarge the program. In 1946-47 there were seven

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major productions in Wheeler and the Greek Theatre, nine faculty supervised studio productions, five faculty directed readings, and nine Thalian afternoon performances with total audience attendance of about 25,000. (*King Lear*, thought by some to be his masterpiece, attracted more than 4,100 viewers).

Those were lucky indeed who learned their craft in the early days working side by side with Fred in the Cave. With great relaxed strokes, he painted a flat in a neutral color, then with a brush full of just the right amount of paint, he splattered on bright hues which caught the lights on stage conveying appropriate moods and atmospheres. .. "Harris Tweed" his students fondly called it.

Fred's passion for a studio theater (The Playhouse) was set forth in his 1953 article in UC's *Idea and Experiment*, "... though the play's the thing, the student actor, writer, producer is an even more important entity in the University dramatic productions. The studio is the place for trial and error experiences, the inevitable pre-requisite for final accomplishment."

In 1958, Fred relinquished his chairmanship of the department and chose not to continue directing. Instead he preferred to concentrate on teaching and writing on the psychology of acting and directing. In 1964, after returning from his sabbatical abroad, Fred was made Chairman of the UC Academic Advisory Committee for the design of a campus auditorium theatre complex, a project on which he had been working since 1943. The fulfillment of his dream came to fruition with the construction of the Zellerbach Auditorium and Playhouse.

He was appointed Assistant Dean of Letters and Science and served the University in this capacity until his retirement in 1967.

Fred then returned to painting, was active with the productions of San Francisco's Bohemian Club, worked in his vegetable garden, wrote, and enjoyed ongoing contact with many of his students and colleagues.

In a collection of essays, *Letters to a Young Director* (1968-95), written with his usual dry wit, Fred posed this main challenge: "How may a play director, even if quite skilled in putting on shows, really help thespians in fulfilling their parts to the best of their abilities?"

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Fred possessed a unique ability to inspire. His students responded with their own outstanding stage performances, a feeling for the magic of the theater and the collegiality it engendered, and especially with a lasting love and devotion to Fred, himself.

P. M. Markmann S. G. Seton D. Wood M. Wood

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Alma M. Hawkins, Dance: Los Angeles

1904-1998

Professor

Alma Hawkins, a leader in modern dance education and founder of the Dance Department at UCLA, passed away on Thursday, January 8, at her home in Santa Monica of natural causes. A pioneer in developing the field of dance in higher education, she passionately believed in the spirit of people and their creative potential. Born in 1904 in Rolla, Missouri, and raised from the age of 13 on a dairy farm by parents who “were open to life,” Professor Hawkins excelled in basketball in high school, going on to study physical education at the University of Missouri where she earned her B.S. degree. Her interest in modern dance was sparked while she was a student at Columbia Teachers College in New York City, where she was a contemporary of Martha Graham, Doris Humphrey, and other modern dance innovators. She studied dance at Bennington College, Vermont, and Steamboat Springs, Colorado, while completing M.A. and Ed.D. degrees at Columbia University. In her own words:

I studied dance extensively during the thirties and forties. I spent summers at Bennington College where many of the modern dance pioneers were teaching and experimenting—people like Doris Humphrey and Hanya Holm. It was a very exciting time for us. We didn't understand it all, but we were excited to be studying with the experimenters. I particularly enjoyed working with Doris Humphrey. [Interview, *American Journal of Dance Therapy*, 1984.]

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She taught at Emporia State Teachers' College in Kansas and George Williams College in Chicago before accepting the chairmanship of the dance program at UCLA in 1953, chairing continuously until her retirement in 1977.

The UCLA program became the flagship of a nationwide effort to establish dance as a discipline, an academic field of inquiry with unique methodology to deal with non-verbal expression and the creative process. From 1953-1958, the curriculum was expanded and revised to support a graduate program; in 1962 Professor Hawkins led the nation in establishing an autonomous Dance Department in the College of Fine Arts at UCLA, equal in status to departments of Art, Music, and Theater Arts. With a teaching/learning process that wove together theoretical and experiential learning, Professor Hawkins expanded the dance curriculum to include degrees in dance/movement therapy, theoretical studies in dance history, aesthetics, and education as well as choreography and performance. Recognizing the rich ethnic diversity of the UCLA students and the expertise of arts faculty in other departments, she helped develop the interdepartmental Program in Ethnic Arts that later became World Arts and Cultures.

She worked closely with presenters to bring leading dance companies of the United States and abroad to Royce Hall, educating audiences in the Los Angeles area to innovative and cutting-edge creativity in the field. Many of these artists taught in the department; many found new dancers for their companies among the students at UCLA. By the end of the 1970s, more than half the chairs of dance departments throughout the country, and some abroad, including Indonesia, Africa, England, and Europe, were graduates of UCLA's Dance Department. Graduates of the program number more than 500 and are active in performing, teaching, documenting, and researching dance; they also carry dance-based learning into other arts activities and into fields as diverse as law, management, and film-making. Graduates working in elementary education have developed and implemented model arts education programs regionally and nationally. The department reaped numerous awards for leadership from organizations such as the American College Dance Festival and California Dance Educators Association.

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The Council of Dance Administrators (CODA) was formed by Professor Hawkins in 1967, the outcome of a national conference on dance funded by the U.S. Office of Education, Arts, and Humanities Division. Under her leadership as chair, this nationwide body published *Standards for Dance Major Programs* (1979) that led to a dance certification program, a way for the field to evaluate its own programs, still in use today.

Professor Hawkins' exploration in the study of creativity, her early association with Mary Whitehouse and other dance therapy innovators on the West Coast, and her own work as a dance movement therapist contributed to unique constructs on the nature of what she called “basic movement” and its relationship to the creative process. Parallel to her duties in the Dance Department, Professor Hawkins worked as a dance/movement therapist and researcher at the Neuropsychiatric Institute at UCLA 1960-77. She utilized movement as a psychotherapeutic modality with patients from all age groups, often involving graduate students in training sessions, creating a series of educational research films for this emerging field, including *Imagery and the Thought Processes*, *Centering and Self Space*, and *Spatial and Energy Components of Movement Therapy*. In her work with the American Dance Therapy Association, she helped found the Council of Graduate Dance/Movement Therapy Educators and served on their Approval Committee for graduate programs across the country.

After retiring from UCLA, Professor Hawkins taught for more than 10 years at Santa Monica College, continuing to develop a new approach to creativity for the young choreographer. From these explorations came her last book, *Moving from Within: A New Method for Dance Making* (1991), which adds to her earlier works, *Creating through Dance* (1964/88), *Dance: A Projection for the Future* (1968), and *Modern Dance in Higher Education* (1953). She also authored numerous articles on dance creativity, choreography, administration, and movement therapy, giving lectures and workshops on her theories and methods until the mid-1990s. Her honors included UCLA's Distinguished Teaching Award, the California Dance Educators' Award (1980), the Harvey L. Eby Memorial

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Award, ADTA Marian Chace Award, CODA, and the University of Missouri's Outstanding Woman of the Year Award.

She is survived by her sister, Alice Hawkins. A memorial service was held at the UCLA Faculty Center on February 27, 1998.

Emma Lewis Thomas Allegra Fuller Snyder Judy Mitoma

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Ann E. Hill, Nursing: San Francisco

1905-1999

Professor Emerita

Ann Elizabeth Hill, one of the early nurse-lawyers and a beloved public health nursing faculty member, died in January 1999. She is survived by nephews, Dr. Ernest Page and Charles Page, and great niece Lindsay Galloway. Although she had a doctor of laws degree from the University of Cologne in Germany, she typically preferred to be addressed as Miss Hill by her students.

Nursing was her second career as she had been a member of the juvenile court in Germany. In 1933, Ann and her family were forced to flee Germany due to the advent of the Nazi regime. After studying at the University of Lausanne, she arrived in San Francisco in 1936 and promptly entered nursing school. She often referred to herself as the “oldest nursing student” UC ever had at that time because she had already had a legal career and was older than her classmates. In 1936, she entered the University of California Nursing Program (then based at both Berkeley and San Francisco) and in 1940 she graduated.

During the Second World War, Ann was a public health nurse with the San Francisco Visiting Nurse Association, from 1942 to 1943. Most of her clients were families of recently arrived workers in shipyards and other defense industries. She joined the UCSF School of Nursing faculty in 1943 and taught various courses

related to public health nursing until she retired in 1970.

During 1950-1951, Ann took an educational leave to earn her master's degree in public health from the University of Minnesota. While her pioneering contributions to the field of public health nursing curricula were many, she was especially recognized

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for the establishment of a strong graduate public health nursing program. Her most notable course innovation was the development of one of the first school nurse preparation programs in the state. This credentialing course series was approved by the then-Bureau of Teacher Education and Certification of the California State Licensing Department of Education.

Ann was truly beloved by her many students for her forward thinking and flexible approach to teaching school health, school nursing, and public health nursing. She had a noticeable German accent in her speech and an old-world style of handwriting that sometimes needed deciphering. However, everyone who was fortunate enough to come in contact with her understood and admired her unwavering dedication and commitment to quality teaching to those who would serve the children and families in the community.

Students in Ann's classes constantly showed their appreciation in various ways for her genuine respect for each student. Many wrote letters of gratitude and kept in touch with her long after graduation. She was presented with bouquets of flowers after almost every course completion. She graciously accepted these tributes and no student ever suspected that she was highly allergic to flowers and later gave them away to others.

Ann's legacy to her fellow faculty was almost legendary. She gently but firmly encouraged young faculty members to use creative approaches to clinical placements and discouraged rigidity in the curriculum, which students were quick to perceive and appreciate. In recognition of Ann's many years of outstanding service at UCSF, a nursing scholarship in her name was established upon her retirement. In light of her love for teaching nursing students, it is a most fitting tribute to a distinguished and beloved teacher.

Finally, to the children and their families throughout the state and beyond, through her former students who work as school nurses and public health nurses, Ann leaves a lasting influence, which continues to this day, of genuine caring and respect, which is the essence of nursing at its best.

Dorothy S. Oda

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William Carl Holmes, Music: Irvine

1928-1999

Professor Emeritus

William Carl Holmes, Professor, Emeritus in the Department of Music at the University of California Irvine, died of cancer in Laguna Beach on October 11, 1999. He battled his adversary with unflinching resolve and courage to the end, demanding of his several doctors clear explanations of its every fearsome aspect. As he had wished, he remained at home, attended by nurses and loving friends. Born in Orville, Ohio on April 26, 1928, he graduated from the College of Wooster in 1951 and was elected to Phi Beta Kappa. A Ditson Scholar at Columbia University, he received his M.A. in 1954 and was awarded the Ph.D. there in 1967 with a dissertation, "Orontea: A Study of Change and Development in the Libretto and Music of Mid Seventeenth-century Italian Opera." During his residence at Columbia, he supported himself by playing the flute, the organ at nearby churches, writing liner notes for Mercury Records, translating, editing music, and reviewing for *The Musical Courier*.

The dozen years between M.A. and Ph.D. were rich and productive, beginning with his first article in a field then little studied. Some notion of his editor's high esteem proceeds from the 24-year old graduate student's first article, "*Pamela Transformed*," appearing in the fall 1952 *Musical Quarterly* in the company of no less than Schoenberg, Deutsch, Hyatt King, Lowinsky, Mendel, Sachs, and Gombosi! Between "*Pamela*" and completing his Ph.D., he published important entries on opera for MGG, the *New Catholic Encyclopedia*, and the *Enciclopedia Ricordi*. Following research from 1956 to 1959 in Rome, he returned to Columbia for an assistantship.

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Cornell appointed him Instructor (1961), Assistant Professor (1964) and tenured Associate Professor (1968). There he not only conducted its chorus for several terms, but led performances of operas by Haydn, Mozart, and Cesti, and found time to be reviews editor for *Notes* (1965-68).

Irvine appointed him Associate Professor in the fall of 1968. Mindful of "*Pamela Transformed*," he conducted performances here of Piccinni's *Buona Figliuola*. Spurred on by dissertation interests, he also led Cesti's *Argia* and, at UCLA, advised on the West Coast premiere of *Oronthea*. Previous to and following his promotion to Professor (1972), he published a host of musical editions, articles, reviews, book chapters, and two books which established his position as a leading authority on Italian opera and its staging. Running parallel with his editions of Cesti's *Oronthea*, Scarlatti's *Statira*, and Verdi's *La Forza del Destino* are essays about these operas—among them, his monograph on *Statira* (1983), and the critical notes for and several essays on *La Forza* (1986, 1991). The latter stemmed from performances at Irvine in 1980 of his edition of the first (St. Petersburg) version of Verdi's opera held in conjunction with the Sixth International Verdi Congress. He also contributed lengthy book chapters about opera in England and the Americas and on the melodrama (1977, 1982).

Studies on Vivaldi, and on Venetian and Florentine theatres led to *Opera Observed. Views of a Florentine Impresario in the Early Eighteenth Century* (Chicago, 1993). This gracefully-written and informative book, climaxing a decade of work on the Albizzi papers in the Guicciardini archives in Florence, was widely reviewed and well received. Its usefulness is extended by his penultimate article (proofs for which he saw): an extraordinary series of indices of *personaggi* found in the Albizzi papers. His final contribution, concerning a Legrenzi opera given at Pratolino in 1685, will soon appear in a group of essays for an Irvine colleague, one who remains forever grateful for the wise counsel and high distinction of his friendship.

An appealing modesty could not mask his profound knowledge, not just of his own field, but of most other historical periods of music. He was as at ease teaching liturgical chant, the 13th-century motet, and Beethoven string quartets as he was with Bach's organ music—often performing it on Irvine's baroque instrument

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for which he had ordered the specifications. Several years before retiring in 1994, he thoroughly re-tooled himself in computer and internet technology for his graduate bibliography course. Thus, the department eagerly recalled him after retirement to teach graduate students. Both they and his undergraduates relished his brisk, sometimes even biting wit (one, however, that was never malicious). In class and indeed in conversation with colleagues, he often took extreme positions to make his interlocutor clarify and defend an argument. Students and colleagues agree that he was a natty dresser, admiring particularly his seemingly endless stock of spiffy bow ties. A superb cook, he would invite students year after year to elegant dinner *chez lui*, and without apparent effort feed 20 or more. Afterwards, and in return, they were then charmed into sight-singing canons.

From the moment he joined the School of Fine Arts at Irvine in the fall of 1968, Holmes was its moral and intellectual center. He served as Chair of the Music Department (1972-74), Associate Dean (1974-77), and Dean (1980-81). A powerful department builder, in 1974 he recruited and appointed two brilliant young scholars, one of whom remains, the other gone on to an equally distinguished career. His service to the Irvine Academic Senate and the Universitywide Senate was legendary and continued even into his retirement. He

was also the founding president of Irvine's Phi Beta Kappa chapter. Junior and senior faculty members of his own and other departments revered him for his mentoring and for his sound advice. Both his modesty and his organizational capacities were exemplified in a two-day conference which, virtually single-handedly, he meticulously arranged for the present writer in April 1999.

Although by then he was suffering mightily, two months later he was still able to attend a splendid concert of operatic arias and instrumental arrangements offered him by a grateful department, at which the Vice Chancellor and a former Dean extolled his outstanding contributions to the life of our campus. And not least, generations of grateful students, inspired by his extraordinary teaching abilities and his scholarship, had written moving testimonials to these qualities.

He served the American Musicological Society long and well—as its Reviews Editor (1968-72), twice elected to its Council

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(1976-79; 1991-94), and as member and chair of the Einstein Award Committee (1989-92). Our profession has lost a major scholar and distinguished teacher, and his family and friends, a steadfast, caring, and warm-hearted person. Typical of the man was his clearly expressed desire for neither funeral nor memorial. Thus, on November 13, in the pleasant setting of a Laguna art gallery, well over 100 invited friends, family members, colleagues, and students, attended an elegant cocktail party, pursuant to his wishes not to memorialize him, but instead joyously to celebrate these relationships.

H. Colin Slim

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H. Stuart Hughes, History: San Diego

1916-1999

Professor Emeritus

H. Stuart Hughes, Professor of History, Emeritus and a member of the UCSD faculty since 1975, died on 21 October 1999.

Stuart had strong claim to be the finest intellectual historian of Europe of his generation. He formally began his career at Brown University, having earlier won his Ph.D. at Harvard. Shortly thereafter, he served as Chief of the Research and Analysis Branch of the U.S. Office of Strategic Services in the Mediterranean Theatre during World War II, and he later held the same post in Germany. He also briefly held the title of Chief of the U.S. Department of State Division of Research for Europe. He won many accolades, including a Guggenheim Fellowship, two decorations from the Italian government, membership in the American Academy of Arts and Sciences, a year's residence at both the Institute for Advanced Study (Princeton) and the Center for Advanced Study in the Behavioral Sciences (Palo Alto), and the Bacon Exchange Professorship at the University of Paris (Nanterre).

Stuart's copious research and writing explored the intellectual history of modern Europe. His two earliest works, *An Essay for Our Times* (1950) and *Oswald Spengler: A Critical Estimate* (1952) broke ground for later investigations. In 1958, he published *Consciousness and Society*, a major piece of scholarship dealing with the reorientation of European social thought after 1890. This study of the “cluster of genius” that formed in Europe at the turn of the century—Croce, Durkheim, Freud, Sorel, Weber, and others—established him as the best-known and most widely read intellectual historian of Europe in the United States.

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Indeed, *Consciousness and Society* began a trilogy for which Stuart would become best known. The sequel, *The Obstructed Path* (1968), continued the analysis of the French intellectual tradition through this century and examined such pivotal figures as Lévi-Strauss, Sartre, and Teilhard de Chardin. A third volume, *The Sea Change*, appeared in 1975, and it dealt with the intellectual migration from Central Europe to England and the United States of Adorno, Marcuse, Wittgenstein, and others. It is safe to say that all scholars of European history in the United States acknowledge Stuart's preeminence in his field.

As a teacher, both of graduate students and undergraduates, Stuart enjoyed the highest reputation. His public performances were invariably models of urbanity, perception, and wit. In less than two decades at Harvard, he became the dissertation supervisor of about 50 students, of whom more than half ultimately published at least one monograph. Stuart's interest in teaching was further demonstrated by three other books he published. *Contemporary Europe: A History* (1961) went through five editions and, in its day, was more widely used in the United States than any other general treatment of twentieth-century European history. *The United States and Italy* (1953) had a similarly positive reception. And Stuart's *History As Art and As Science* (1964), a collection of his essays, portrayed his vast interest in the craft of historiography and his extraordinary awareness of the mutual interests and problems of history and the social sciences more generally.

Stuart's work in service to his profession was similarly distinguished. He was widely regarded as a congenial, civilized, and intellectually stimulating colleague. Moreover, as epitomized in his independent bid for a U.S. Senate seat from Massachusetts, Stuart was a scholar of social conscience and conviction. In sum, as a scholar, mentor, and colleague, he made enduring contributions to our profession as one of the great academic leaders of his generation.

Allan Mitchell Andrew Wright Michael A. Bernstein

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John Edward Jackson, Medicine; Neurosciences; Pharmacology: San Diego

1952-1998

Professor of Clinical Medicine

Professor of Neuroscience and Pharmacology

J. Edward Jackson, Professor of Clinical Medicine and Clinical Professor of Neurosciences and Pharmacology at the UCSD School of Medicine, died suddenly and unexpectedly on Sunday, March 22, 1998 in San Diego. Professor Jackson was integral to the growth of geriatrics at UCSD.

Professor Jackson was born on May 23, 1952 in Stockton, California. He graduated from Stanford University and Yale University School of Medicine. He joined the faculty of the University of California San Diego in 1984 after completing residency and fellowship training in clinical pharmacology and endocrinology at the University of Arizona.

Professor Jackson was widely recognized for his clinical acumen in Alzheimer's disease and the clinical pharmacology of Alzheimer's disease. He was an important collaborator in the UCSD Alzheimer's Disease Research Center and served as pharmacological consultant to the Alzheimer's Disease Cooperative Study. Upon joining the faculty, he assumed the role of Director of the Seniors Only Care Program (SOCARE) at UCSD. This multidisciplinary geriatric assessment program evaluates medical, environmental, social, and other aspects of a frail elderly patient's circumstance and develops a comprehensive plan to successfully deal with these aspects of the aging and illness. He was also Director of the Alzheimer's Disease Diagnostic and Treatment Centers. Under Professor Jackson's leadership, both these programs gained national recognition.

Professor Jackson was a superb and caring physician. His knowledge, wisdom and careful attention to the details of his patients' conditions complemented his compassionate nature. As a result, he was uniquely gifted in his ability to care for patients with Alzheimer's disease, one of the most difficult diseases for patients, caregivers and physicians to manage.

Professor Jackson was deeply involved with teaching and mentoring. He was director of the Research, Training and Information Transfer (education) Core of UCSD's Alzheimer's Disease Research Center and directed UCSD's innovative Mini-Residency in Geriatrics. The mini-residency, which became a model for graduate medical education, was a venue for training medical students, residents, practicing physicians, nurses, and others involved in geriatrics and Alzheimer's disease care. Professor Jackson was also involved in training numerous medical students for whom he served as an independent study project chair and in mentoring fellows in geriatrics at UCSD.

Professor Jackson's dry sense of humor, messy desk and neat mind will be sorely missed by his colleagues.

Robert Katzman Leon J. Thal Joe W. Ramsdell

F. Burton Jones, Mathematics: Riverside

1910-1999

Professor Emeritus

Floyd Burton Jones, who died on April 15, 1999 at the age of 88, had spent the later years of a distinguished mathematical career at UCR. He came here from the University of North Carolina in 1962 and became Professor, Emeritus in 1978. Burton remained active in teaching and research at UCR for a number of years after his official retirement. In 1988, he and his wife Madeleine endowed the UCR Mathematics Department's F. Burton Jones Chair in Topology, one of the first endowed chairs at UCR.

Burton made major contributions at UCR in research, teaching and service. He was one of the world's leading researchers of his generation in the mathematical field of topology, specifically point-set topology. He was also well known for his contributions to the teaching of mathematics, being a leading practitioner of the "Moore method" of teaching mathematics, which had an outstanding record of producing successful research mathematicians.

Burton was born in Cisco, Texas, on November 22, 1910. That Cisco is situated in West Texas, thereby making Burton a west Texan, was a distinction he savored. Burton received a bachelor's degree in chemistry from the University of Texas and then, according to his first doctoral student Louis McAuley, "When he entered graduate school at Texas, it was difficult for him to choose between mathematics and chemistry. At the time, there was a graduate assistantship in mathematics but none in chemistry. Perhaps this fact influenced his choice. He fell under the strong influence of R.L. Moore, and mathematics became the dominant creative outlet for his life."

Moore had practiced a Socratic style of teaching so assiduously and so successfully that it became known as the Moore method. Burton wrote:

Moore would begin his graduate course in topology by carefully selecting the members of the class. If a student had already studied topology elsewhere or had read too much, he would exclude him (in some cases, he would run a separate class for such students). The idea was to have a class as homogeneously ignorant

(topologically) as possible. He would caution the class not to read topology but simply to use their own ability. Plainly he wanted the competition to be as fair as possible, for competition was one of the driving forces. Moore would state some axioms, definitions and theorems in a class. In the next class he would call upon students in the reverse order of their success at proving theorems in class. When a student stated that he could prove a theorem he was asked to go to the blackboard and present his proof. The other students would make sure that the proof was correct and convincing. When a flaw in a proof appeared, everyone would patiently wait for the student at the board to patch it up. If he could not, he would sit down. Moore would ask the next student to try to prove the theorem. The program was about preparing students to do research in mathematics. That it was successful is attested to by the 1957 Albert Report which found that of the Ph.D.'s produced in the United States and Canada from 1915 through 1954, the top 15 percent in productivity (according to its criteria) was composed of 5 percent from UC (Berkeley), 8 percent from Chicago, 16 percent from Harvard, 20 percent from Princeton and 25 percent from Texas. The debate over the years was over whether to teach students to learn mathematics or to prove theorems, to get the students to the frontiers of knowledge or to get them to develop skills. This was not a problem for much of Moore's career because in his prime he and his students were at the frontier. It was a major problem for all who came after him.

As theoretically-minded as he was, Burton was practical and down to earth. He modified Moore's methods to keep them attuned to the changing times. Of his own teaching he wrote, "I have already mentioned that the instructor must possess patience, but I think that it is more than that. It must be patience that is

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born of the conviction that training a student to do research is important—even more important than conveying knowledge; that trying to develop a student's mathematical ability to the limit of that ability is important. The instructor should suppress his urge to get into the act. Even an ugly proof from one of the students should please the instructor. Only on rare occasions (possibly 'never' is the better policy) should he show an elegant proof." Point-set topology is rife with complicated constructions and hard-to-state examples. Burton's writing was spare and elegant; of his colleagues, he was always the surest and steadiest guide through thickets of complexity. His students learned that ugly proofs were a place to start, but spare, elegant proofs led to deeper insight. His student Louis McAuley wrote:

There are times when I call to mind an image of Jones sitting in a classroom. He is sitting, perhaps in agony, as a student labors at the blackboard. He holds a pipe in one hand and scratches his head with the other. His brow is deeply furrowed. Those hazel eyes are fixed on the board. He is intensely interested in what the student is doing. Dr. Jones listens with the eager curiosity of a child hearing his first bedtime story. A smile crosses his face and his eyes light up with that wonderful joy of discovery when the student finally achieves success. It seems that almost each proof and each theorem is a new revelation to him. He is intensely interested in what others have to say—in what others are doing. This is indeed a rare talent. At other times, I can picture Dr. Jones standing before a class. He is deeply puzzled by some remarkable phenomenon (suggested, perhaps, by some student's proof). With an amazing feigned ignorance (achieved only through years of experience), he motivates the discovery of a new concept or a new theorem.

Burton received his doctorate in 1935 and joined the faculty at the University of Texas. It was a time when academic positions might be divided in half—two people would work full time for half the salary. Burton would speak of good mathematicians going back to work on the farm after they completed their doctorates. Mary Ellen Rudin, a prominent topologist who got her degree from the University of Texas in the late 1940s, writes about Burton's early work, "Except for a few years on leave during World War II which Jones spent in Cambridge, Massachusetts working on underwater

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sound, he spent the next fifteen years as a Professor at the University of Texas, sometimes as chairman of the department. He married [Madeleine] and his four children were born during these years. His interests in

physics, chemistry, music, short wave radio and innovative teaching blossomed, and he made many friends. But also the varied mathematics of Jones has its roots in those days at Texas. In my mind Jones's mathematics divides into three (rather overlapping) areas: 1. Abstract set theoretic constructions. [For example] in 1937 Jones made the normal Moore space conjecture—and this famous, fiercely difficult, very set theoretic conjecture kept many able mathematicians busy for almost fifty years, and its repercussions are still basic. 2. Simple beautiful facts. Jones had a special talent for coming up with the killing example to clarify some point. It has been a life long talent of Jones to find aesthetically satisfying insights. 3. Continua theory and homogeneity. [For example] in 1941 Jones defined a local connectedness property called aposyndesis and used it effectively to classify continua. It has proved to be one of the most basic ideas in continua theory and has generated hundreds of research articles.”

Burton went to North Carolina in 1950 as chairman to help build up that department, which he did very well. Before assuming his position at UCR, he had spent a year at the Institute for Advanced Study in Princeton. There he extended his contact with the topology community, enabling him to visit many mathematical centers in Europe, Australia, New Zealand, India and many other places. It enabled him to bring several well-known topologists, such as Borsuk, Kuratowski, Montgomery, and Mary Ellen Rudin to visit UCR for extended periods. Several other mathematicians visited for shorter periods because of his presence here. His scholarly contributions and distinguished leadership were the reasons for a four-day conference at UCR in 1980, participated in by many researchers from the United States and several from abroad. This was possibly the largest meeting of such a group on the UCR campus. Those who contributed to its proceedings included several of the leaders in their subject, such as Bing, Borsuk, Dugundji, Dyer, Effros, Rudin, Martin and many others.

At North Carolina, Burton had directed five doctoral dissertations. He was in his prime as a thesis director when he came to UCR just when the graduate program in mathematics was getting

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under way. He was to direct 10 doctoral dissertations at UCR: Edward Thomas 1965, Lynn Gref 1966, Clifford Arnquist 1967, Eldon Vought 1967, James Rogers 1968, Edward Shirley 1969, Leland Rogers 1970, George Rudolph Gordh 1971, Don Fox 1973, and Barry Graham 1977. He also served as department Chair and as a member of the Committee on Academic Personnel. Over the years Burton had helped many topologists do their research and get their papers written. More than a few topologists had taken the "There is no such thing as a bad proof" philosophy literally. If they, or anyone else, were fortunate enough to get Burton as a referee for one of their papers, then their work would likely end up looking well thought out, polished and elegant. Burton would work out what it was that they really had in mind and how it was that they truly intended to say it. It was also the way he dealt with his colleagues. He was always able to see good intentions behind their words and deeds and he was then able to assure them that they really had had those intentions.

Burton's mathematical interests are wider than point-set topology. They included group theory, algebraic topology as well as complex analysis. His balanced view of mathematics was a great asset in developing the department here, as well as at the University of North Carolina, Chapel Hill. His advice was greatly respected and generally adopted here and elsewhere. He will be missed.

A. R. Stralka R. E. Block M. M. Rao

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John Paul Jones, Studio Art: Irvine and Los Angeles

1924-1999

Professor Emeritus

John Paul Jones, painter, printmaker, sculptor and teacher died at his home in Ashland, Oregon on September 25th, 1999. John Paul first came to prominence in the art world as one of the leaders of the "Printmaking Renaissance," developed out of the workshops at the University of Iowa under Mauricio Lasansky. John Paul's early work in printmaking helped to re-establish the graphic arts as part of a contemporary artist's vocabulary. Recognized as a master in this technique, and having exhibited extensively since his degrees were awarded, UCLA recruited him to set up the printmaking curriculum at its School of Art. John Paul taught at UCLA from 1953 to 1963 when he resigned to pursue his art-making full-time. These were heady times for him, as he exhibited and garnered a reputation as an artist with an original style and deep personal focus.

John Paul's artwork is unmistakable. He was always keen to the nuances and the processes of art-making. His use of line and subtle value was a lifelong exploration that he crafted through nearly five decades of creativity. His subject matter changed over those years, with early figurative works evolving into the abstracts of the past two decades. But at the heart of all his work was a deep humanist sense in the worth of human experience through creativity. The art world is not an easy arena to make a living in, and so when John Paul's wave of commercial success waned, he returned to teaching. In 1969 the then-fledgling Studio Art program at UCI hired John Paul to start its printmaking program.

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From then until his retirement in 1990, John Paul continued his personal artwork while at the same time putting his heart into the instruction of young artists.

I had heard of John Paul and seen his work a full 10 years before we met. Many of the best artists/teachers that I had studied under had been students of John Paul's. It was logical for me to go to the source, to the master. My first meeting with John Paul was as a prospective graduate student. I was nervous and unclear, but he put me at ease and confirmed for me what I had always heard about him. I left that meeting feeling as though I had been with an old friend. The rapport and sense of a shared value in the meaning of art bound me to him. I am not alone in this feeling. Many artists over the years, especially art students, have told me how valuable and essential John Paul was to their creative and personal lives. John Paul was not only a kindred soul to these generations of art students; he was also an inspiration. The goal was always to keep working at your art, trust in yourself to do your best and be truthful to your vision. The art world and the art market are fickle and transitory and do not represent what art truly means. Art was deep, long and resonant in the human spirit. Serve art and art would serve you. I look back on his life, a life with plenty of accolades and peaks, a life with much pain, sorrow and downturns as well. But when I look at his life in terms of substance and meaning, I see a life well lived, an art well served, and a vast army of artists whose lives were enriched and aided by this remarkable man.

John Paul Jones's artworks appear in more than 50 public art collections and museums in the United States and abroad. He has been represented continuously by galleries from 1956 to 1996. He has had 40 one-man exhibitions in major museums and art centers in the United States and Europe and exhibited in over 100 important group exhibitions worldwide.

John Paul is survived by his companion, Susanne Nestory of Ashland, Oregon; his son, Shawn Jones of Niantic, Connecticut; daughter, Leah Jones of Tampa, Florida; and of course, his former students and colleagues, all left to do "good work."

Tom Dowling

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David Lockhart Judd, Physics: Berkeley

1923-1998

Senior Lecturer

David Lockhart Judd, a most effective teacher and mentor in UCB's Department of Physics, died of a heart attack on November 23, 1998. He was born on January 8, 1923 in Chehalis, Washington, and graduated with a B.A. in physics and mathematics with highest honors from Whitman College in Walla Walla in 1943. His service as an instructor during his senior year presaged his lifelong love of and commitment to teaching. Dave spent a year as a graduate student at the California Institute of Technology before joining the U. S. Navy in 1944. He served in the Navy at Harvard, M. I. T., and then Los Alamos until 1946, when he resumed his graduate studies at Cal Tech (1946-49). Characteristically, he served as instructor in an upper-division physics course in his final year of graduate work. He was awarded an M.S. in 1947 and a Ph.D. in physics in 1950. It is of interest that his graduate education as a physicist came at Los Alamos as well as at Cal Tech, for in the fall 1945, before many of the Los Alamos staff returned to civilian life, he attended eight separate courses of lectures spanning all of physics, given by such luminaries as Hans Bethe, Enrico Fermi, George Kistiakowsky, Rudolph Peierls, and Edward Teller. Dave's careful lecture notes of these courses are now part of the Los Alamos archives.

After spending a year with the RAND Corporation, Dave joined Ernest Lawrence's Radiation Laboratory at UCB in 1950 as an accelerator physicist. In 1953 he began a 45-year career as Lecturer (1953-62) and Senior Lecturer (1962-) in the Berkeley Department of Physics. He was granted Security of Employment

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in 1987 in recognition of his outstanding contributions to both graduate and undergraduate classroom teaching, as well as service to the campus in numerous other ways. In 1974, his undergraduate alma mater honored him with an honorary D. Sc. While at Los Alamos he met his wife of 53 years, Martha Leah Brown Judd. He is survived by her, his two sons, Bruce and Ralph, and two grandsons.

While on a one-third-time appointment on campus for the first half of his career, Dave regularly taught a course each quarter or semester and participated fully in departmental and campus duties. He was proud of being willing and able to teach at every level in almost all physics subjects, with a record of having taught more than 25 different semester-courses, from the physics of music to graduate classical mechanics and electromagnetism. Students recall his strong voice, his dynamic enthusiasm, his extensive knowledge and contagious joy of physics, his meticulous course organization, and his friendly availability both in and out of the classroom. He had true affection for his students. He was a sympathetic and effective departmental advisor to undergraduates on the one hand, and on the other active in the department, the college, and the University in matters of curriculum and academic standards. Dave was also active in reaching out to local schools. Ever curious, he applied his analytic skills as a physicist to numerous phenomena outside the classroom or the laboratory. Notable are extensive unpublished notes on the physics of lawn bowls and on the rotational dynamics of tennis rackets.

Dave's primary research field was theoretical accelerator physics. He is the author or co-author of over 100 reports, papers, and conference contributions. Much of his work lay close to practical accelerator design and problems of operation, but he also studied such exotic topics as the formation of mu-mesic molecules. He contributed to a number of other fields, including neutronics, molecular and nuclear physics, analytical mechanics, the spectrometry of charged particle beams, and plasma physics. In 1971-72, he spent a year at the Scripps Institute of Oceanography where he contributed to the mathematical theory of ocean wave interactions and the mechanics of whitecapping. In 1976, he co-chaired a two-week workshop on heavy-ion inertial-confinement fusion. Many consider this workshop to be the birth of the field. Since

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1976, his research was in the area of heavy ion beams as igniters for inertial-fusion power and on high energy, high-current accelerating systems based on induction linear accelerators.

Dave's role at the Radiation Laboratory (later successively named the Lawrence Radiation Laboratory, Lawrence Berkeley Laboratory, and now Lawrence Berkeley National Laboratory) included administration as well as research. Soon after his arrival, he became long-time Group Leader, Theoretical Physics (1951-66). In 1952, he played an important role in assembling staff for the then-new Livermore Laboratory. He gave general direction to the Berkeley Laboratory's computing services for 19 years. Later, he served as Acting Head and then Deputy Head (1963-65), and Head of the Physics Division (1965-70). Most recently, Dave served as editor-publisher of *Inertial Fusion Energy News*, distributed to many institutions here and abroad. A gregarious, friendly man of imposing stature, his office door seemed always open to students and colleagues. David is remembered fondly by his many students, his physics colleagues and many friends on campus. A special subset of friends remember him for his active participation in the Monks Chorus of the Faculty Club.

Roger O. Bangerter J. David Jackson Andrew M. Sessler Howard A. Shugart

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Joseph J. Kaufman, Urology: Los Angeles

1920-1999

Professor Emeritus

Had he been a soldier, he would have been General.

Had he been a politician, he would have been Senator.

Had he been a nobleman, he would have been King.

Joe Kaufman was the most distinguished urologist of his day. He was a complex, multifaceted individual, who was a brilliant physician and surgeon, a great teacher, and a personal inspiration to all who knew him. In any room—operating room, lecture hall, athletic field, or social gathering—his presence was the dominant one. He influenced the lives of thousands of patients, trainees, co-workers, and students during a UCLA career that spanned nearly 40 years. During those years, both UCLA and the specialty of urology changed from struggling start-ups into important forces. No individual did more to lead these transitions than Joe.

Joe was effective because of his innate leadership abilities, and also because he was a striking physical presence. Tall, dark, and handsome, he had a booming voice and a commanding demeanor. He was an extremely gifted communicator, clever and funny, both with the spoken and written word. In his many areas of endeavor, he exuded a self-confidence, which assured the best possible result. He was often called a “Renaissance Man” because he was talented in many different fields.

As a urological surgeon, there was none better. In the operating room, he combined technical skill, artistic creativity, imagination, and vision. He was an early pioneer in the area of incontinence treatment. He built at UCLA one of the world's great centers for

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study and treatment of renovascular hypertension. Every operation was a work of art. His operations were performed not only to cure a cancer or remove a prostate; they were done as high theater with Joe as the leading man. He earned this role by his technical expertise, which was the envy of all his peers. A roomful of observers, often from all over the world, was his audience. Locally, he was surgeon to the rich and famous. Nationally and internationally, he was in constant demand to perform as visiting surgeon at the world's most prestigious institutions.

As a caring clinician, there was none better. He was an inspiration to patients. His presence at the bedside of a sick patient resulted in immediate improvement. He made every effort to prolong life and ease pain, but when

there was no hope, he used merciful treatments judiciously.

As a teacher, there was none better. He taught on many levels, sometimes by example, sometimes didactically. He was to all of his trainees the complete physician, and two generations of his students strived to be like him in every way possible. His lectures were always punctuated by jokes, interesting anecdotes from his travels, and witty graphics. His lessons became unforgettable experiences, resulting in inspired study afterward, the students trying (usually in vain) to become as learned as the professor.

As a leader of men, there was none better. People were attracted to him; they listened to him; and they tried to be like him. Outside of his professional life, he was an accomplished tennis player, a devout open-ocean swimmer, a masterful pianist, and a painter of note. He knew art; he knew literature; he knew foreign languages; and, especially, he knew music. He could walk into a bar and take over a piano, drawing a crowd that would soon be applauding and singing along with him. In any gathering, when he spoke, the room grew silent.

Joe was born in New Haven, Connecticut, and was especially close to his father, who was a carpenter. He was a student at UCLA and at UC Berkeley, where he was elected to Phi Beta Kappa and Alpha Omega Alpha. He completed surgical and urological training at Yale, at the Beth Israel Hospital in Boston, at Mt. Sinai in New York and at UCLA. He served with the U.S. Army in the Pacific Theater during World War II. He practiced urology in Los

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Angeles for eight years before being recruited, in 1960, back to the full-time staff at UCLA by his mentor and lifelong friend, Professor Willard Goodwin. Under Joe's chairmanship (1970-1984), the UCLA Urology Department, which had been established by Dr. Goodwin, prospered and became the finest such department in the world.

During his long and distinguished career, Joe received virtually every honor that organized urology had to bestow. In addition, he trained hundreds of young urologists, most of whom moved on to distinguished careers of their own. Many are now training another generation at some of the finest academic institutions. Joe will be long remembered by his numerous students, friends and colleagues, who honored him in 1994 with a retirement gift, a piano, bearing the inscription "Physician, Teacher, Inspiration, Friend." His contributions have been memorialized in the annual Joe Kaufman Lectureship at UCLA, established by his own bequest in 1997.

Joe's latter years were marked by a decline in his health following several strokes. He died on March 11, 1999 at the age of 78, while swimming in the Pacific Ocean off Hawaii, his final home. His eyes never lost their youthful sparkle, and he remained a handsome and commanding presence to the end. He never stopped thinking about UCLA. And all who were lucky enough to know Joe Kaufman, especially those of us who were trained by him, were permanently etched by that good fortune.

Leonard S. Marks

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George A. Knox, English: Riverside

1918-1999

Professor Emeritus

George Knox was born May 19, 1918 in Everett, Washington, and raised in Portland, Oregon, where he worked for his father, a florist, before attending Pacific University, where he majored in biology. At Reed

College, he took his B.A. in literature (1943), at which time he enlisted in U.S.N.R., serving with the amphibious Forces of the U.S. Pacific Fleet until the close of 1945. After completing an M.A. in English at the University of Oregon (1949), he entered the graduate program at the University of Washington, where he completed his Ph.D. in 1953. By that time, he had married. Doctorate in hand, he moved, with his wife, Elizabeth, and their three children, to the new campus of the University of California, at the foot of the Box Springs Mountains, in Riverside. Professor Knox was one of the founding faculty members of UCR in 1954, which explains why a street just north of the Chancellor's residence is named after him.

From the outset, Professor Knox fit well into the rapidly changing campus. Strong in both research and teaching, he moved through the ranks from Instructor to Associate Professor in 1961, and then to full Professor in 1966. He served a successful term as Chair of the Department of English, hiring many of the people who went on to establish a solid Ph.D. program, with strength in all nine of the traditional historical fields. He found time, also, to serve as Fulbright Lecturer at the University of Vienna (1957-58) and Erlangen-Nürnberg (1964-65). Again, in 1974-75, he spent the academic year as guest professor at the University of Trier.

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After his retirement in 1984, he pursued his interest in exotic gardening, as a member of the American Bonsai Society, and as an active poet, writing and publishing in the demanding form of haiku, renga, and tanka. A volume of Professor Knox's poetry in this vein, *Tendrils of the Eye*, splendidly illustrated by Edward R. Perez, was published by Haiku Moments Press in 1993.

It is hard in a few paragraphs to summarize the achievement of Professor Knox through his many decades of service to the University, this partly because the range of his intellectual interests was so wide: fiction, poetry, drama, photography, American literature, the Harlem Renaissance, seventeenth-century English literature, and critical theory. He wrote books and articles on Kenneth Burke, John Dos Passos, Walt Whitman, Sadakichi Hartmann, Dante, Donne, Herbert, Melville, Hawthorne, Eliot, Twain, Faulkner, Pound, and James. He read papers all over the world on these and other topics, general and particular. And throughout a successful career as a scholar, he consistently served the University community at the highest level in teaching and service.

Professor Knox established a solid reputation first with *Critical Moments: Kenneth Burke's Critiques and Categories* (1957). Not long afterward came his very impressive *Dos Passos and "The Revolting Playwrights"* (1964), which Professor Knox co-authored with Herbert Stahl. During the 1950s and 1960s, Professor Knox published dozens of articles in such respected journals as *New England Quarterly*, *Western Humanities Review*, *Renascence*, *American Quarterly*, and *ELH*.

In one area—the study of Sadakichi Hartmann—Professor Knox literally invented the field. Before interdisciplinary studies became the mantra of upwardly-mobile deans, Professor Knox, often in collaboration with Harry Lawton, inquired into the poetry, criticism, prose, cinematic career, and photography of Sadakichi Hartmann. His achievement in this field amounts to no less than five highly-regarded books published during the 1970s by top-flight publishers, to very favorable public reception. Perhaps the most notable of these is *The Valiant Knights of Daguerre*, a book which did much to advance the serious study of photography, and of Sadakichi Hartmann in particular. Published in 1978 by the University of California Press, this book received wide notice in, among other periodicals, the *Village Voice*, *New York Times Book Review*, *The New Republic*, and *American Photographer*.

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The *Canadian American Journal* claimed it to be “one of those books that the serious student of the subject just has to have.” Readers for the press pronounced the work “unique, timely,” “comprehensive,” “very important,” “invaluable,” “marvelous.” All in all, Professor Knox authored or co-authored nine books of high quality, and more than 50 essays.

As a teacher, Professor Knox was indefatigable in his efforts to help students. "Professor Knox," one wrote, "is a fine teacher, and a very sensitive one." In the days when we solicited remarks only from English majors who had graduated, students uniformly described him as a friend, who treated them as future literary critics. "He is," one wrote, "a great professor, with a wealth of knowledge. He is creative, and sensitive to students' opinions, and make[s] the students work to explore new forms and styles in literature." Above all, he was "[k]ind and considerate. ... He cared about the total student. I wish," said one student, "I could have taken more than two classes from him." Another wrote, "I remember this man as very personable and interested very much in the individual student." Surely this is how all of us want our students to remember us.

S. N. Stewart F. M. Carney H. Lawton M. Miller H. H. Schmidt

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Steven G. Lapointe, Linguistics: Davis

1952-1999

Professor

On February 26, 1999, Professor Steven G. Lapointe died of liver cancer in a San Francisco hospital; he was interred in Davis on March 3. The cancer had been detected only two months before, and Steve was directed to a special liver unit in early January in the hopes of arresting it. His wife and friend of 28 years, Cynthia Goldberg, was by his side during the entire six weeks of his hospitalization. At the time of his death, his hospital room was filled with some 200 cards from well-wishers around the country and also from abroad, attesting to the impact his life and work had on his friends and professional colleagues.

Steve came to Davis in 1991 from Wayne State University and immediately stepped into the directorship of the UCD Linguistics Program, which he administered with vision and foresight right up until his hospitalization in early 1999. He was an ideal scholar-administrator, highly respected by his colleagues in the program for his acumen in dealing with the University administration and by linguists in the profession for his uncompromising commitment to well-conceived formulations of linguistic theory and for abjuring every kind of fad.

He was born on January 23, 1952, in Massachusetts, the first of four children. His early ambition was to become a physicist, but in his junior year at M.I.T. he took a linguistics course that changed the direction of his academic interests entirely. Although M.I.T. had no undergraduate major in linguistics, he crafted with a faculty mentor a B.S. degree in science and humanities, which was a code term for linguistics. He subsequently went on to earn his

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Ph.D. at the University of Massachusetts at Amherst in 1980. There followed a two-year stint at Johns Hopkins in the Psychology Department as a Research Scientist and Lecturer, and then an appointment as Assistant Professor in the English Department at Wayne State, where he remained, except for one year at Indiana University, until he was called to Davis in 1991.

Steve said that he had come to Davis in order to make a difference. It was a promise fulfilled, even in the relatively short time he was here. He quickly learned the "system" of the University of California, and became a tireless advocate of linguistics on the Davis campus to the administration. He combined two qualities of effective leadership: He was a stickler for details and at the same time had a breadth of vision for the development of the discipline on this campus. His attention to the "small" things of running a successful program made his colleagues secure in the knowledge that he let nothing important get past him that could contribute to the welfare of the program. He led the Linguistics Program in developing a long-term vision

for its growth, one which was truly collaborative, incorporating the strengths of each member. Under his leadership, the program developed to the point where he presented to the faculty, in the spring of 1998, a proposal for a Ph.D. program that was to be unique in the United States in its emphasis on second language acquisition and on the interconnections between linguistics and cognitive science. It is a great loss to the University that he was not able to see his plans carried through to fruition.

Steve was a devoted husband and father. In 1988 he and Cindy adopted a Korean infant, Rachel, who became the apple of his eye. He doted on her and was keenly interested in all the activities she participated in, whether ballet or soccer or schoolwork. He always spoke warmly and fondly of her, and she clearly occupied a central role in his life.

The intense loyalty that Steve evidenced in his own family carried over to the way

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he approached his relations with friends and colleagues. He took others' concerns and their work with utmost seriousness. If asked to offer a professional opinion on another linguist's book or paper, for example, he undertook the task with the goal of making the arguments more cogent and the text more readable. The job was never undertaken lightly. This was the way he approached all his tasks: if it was worth doing, it was worth doing well. He inspired loyalty from faculty and staff because he demonstrated in countless ways that he was genuinely interested in them. There was no ulterior motive in this, although the result was a unified faculty and a staff that felt appreciated. Although his interests were clearly in theoretical linguistics, he did not neglect the TESOL (Teaching English to Speakers of Other Languages) component of the Linguistics Program, and went out of his way to show his support of the lecturers who carry the brunt of the teaching mission there.

When a colleague is struck down before his time, it always leads to reflection on what might have been. What is certain is that Steve would have continued to influence the field of linguistics by his command of competing theoretical models of language and by his careful craftsmanlike analysis of linguistic data. One comment we heard from a number of colleagues in the field was that Steve did not promote his own work in the fashion it deserved. Indeed, Steve was loathe to self-promote and refused to indulge in the flashy, speculative work which draws a lot of attention initially, but which has a very short shelf life. Those who read and absorbed his work recognized a first-rate mind; he made solid contributions to theoretical linguistics, especially in the area of morphology, the study of word formation. His special love was Korean, but he worked on a number of other languages as well, such as Norwegian, French, Navaho, and Welsh. In all, he demonstrated solutions to well-known conundrums that are models of clarity, originality, and simplicity. Both the linguistics profession and the University of California have lost a peerless scholar who still had much to contribute to our knowledge of the architecture of human languages.

Will Benware Mary Schleppegrell Lenora Timm

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William A. Lessa, Anthropology: Los Angeles

1908-1997

Professor Emeritus

William A. "Bill" Lessa, 89, Professor, Emeritus of anthropology at the University of California at Los Angeles, and a major contributor both to Micronesian studies and the anthropology of religion, died in Los Angeles on October 14, 1997, after a long illness. A native of Newark, New Jersey, Bill was born on March 3, 1908. He received his A.B. from Harvard in 1928. After serving as a Researcher at the Constitution Clinic at Columbia-Presbyterian Medical Center (1929-30) and as a Research Associate at the University of Hawaii

(1930-33), where he developed a life-long fascination with the cultures of the Pacific, he enrolled in the University of Chicago's graduate program in anthropology. He received an M.A. in 1941.

Like so many members of his generation, Bill's graduate education was interrupted by World War II, during which he served with distinction as a Captain and later a Major in American military government in Italy. After the war, he returned to Chicago and, upon submitting a dissertation based on his wartime experiences, completed his Ph.D. in 1947. That fall, he joined the faculty at UCLA as an Instructor, but shortly thereafter took a leave of absence to do intensive field work on Ulithi Atoll, in the Western Carolines, a place he would return to on several occasions in later years for further research. He eventually rose to the rank of Professor, retiring in 1969 after a distinguished teaching career, during which he served as a mentor and good friend to dozens of UCLA anthropology graduate students, myself included.

Trained initially as a physical anthropologist, Bill's first major

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publication, *An Appraisal of Constitutional Typologies* (1943), probably did more than any single publication to discredit Sheldon's then-popular notion that body types—"mesomorphs," "endomorphs," etc.—determine personality structure. However, his exposure at Chicago to the ideas of Radcliffe-Brown and others caused him to shift his focus to cultural anthropology, with an emphasis on magico-religious belief systems. In this latter vein, in 1958, together with Evon Z. Vogt, he edited the first of what would eventually become four editions of *Reader in Comparative Religion* (4th ed., 1979), still widely considered the standard work in the field.

Bill also became intensely interested in folklore and, in 1961, published *Tales from Ulithi Atoll*, a magisterial work that is often held to be a model of the genre. A few years earlier, in 1956, he published a paper entitled "Oedipus-type Tales in Oceania," which definitively demonstrated that the Oedipus story is not universal, as the Freudians had long held, but has a limited geographic distribution. His comprehensive ethnography, *Ulithi: A Micronesian Design for Living*, a mainstay of the old Holt, Rinehart and Winston "Case Studies" series, has been read and appreciated by generations of anthropology students, as well as professionals in the field.

Bill, who never married, is survived by a brother, Alfred Lessa, of Berkeley Heights, New Jersey; and a niece, Rose Natale, of Lakewood, New Jersey.

Scott Littleton

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Erle Loran, Art Practice: Berkeley

1905-1999

Professor Emeritus

Erle Loran, artist, scholar, and connoisseur passed away peacefully in Berkeley on May 13, 1999, in his 93rd year. His was an illustrious life, a life dedicated to the arts—painting, literature, and music. Born in Minneapolis on Oct. 2, 1905, he attended the university there and completed studies at the Minneapolis Art School. He became fascinated with a Cézanne landscape he discovered at the Walker Art Center. At the age of 21 he won the prestigious Chaloner Foundation Scholarship, which provided funds for study of the great works in the museums of Europe during the years 1926 to 1930. It was in this period that he undertook intensive research on the paintings of Cézanne in Provence. In this pursuit he arranged to take residence in the Cézanne studio on the outskirts of Aix and proceeded to locate and photograph many of the landscape subjects the master had painted. His subsequent writings based on this extensive research led to his international reputation as an authority on the form and technique in the paintings of this great pioneer of modern painting.

Upon returning to Minneapolis he began developing a personal style of painting, reflecting the understanding he had achieved through his analysis of Cézanne's treatment of line, color, and space in painting. These works won wide acclaim and were to enter major private and public collections such as the Smithsonian in Washington, D.C., the Los Angeles County Museum, and the San Francisco Museum of Modern Art. He was represented in major group exhibitions at the Museum of Modern Art, New York; the Whitney Museum; the Art Institute of Chicago; the São Paulo

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International Exhibitions in Brazil; and in solo shows across the country. His work won numerous awards in oil, watercolor, and gouache paintings and in printmaking.

Worth Ryder, who had revolutionized teaching of creative art at Berkeley, invited Loran to join the faculty in 1936. Loran became identified as a leading exponent of the "Berkeley School," a term coined by a San Francisco critic. The work of the group reflected Cézanne's concepts but placed greater emphasis on linear and textural qualities, flat planes of color, and shallow "picture box" treatment of space. Loran, together with his colleagues, Ryder, Margaret Peterson, and John Haley, were to lead the way out of a parochial attitude toward art into the modern era and to recognize the importance of abstraction in the works of Cézanne, Gauguin, Picasso, Kandinsky, Klee, and other European artists. The Berkeley group, besides painting in oils and watercolor, made extensive use of gouache and egg tempera. Landscapes and cityscapes were major themes, including painting coastal areas, and the mountains and deserts of the West. In an interview with Hershel Chipp, the art historian, Loran said, "The subject matter itself may have no significance except that it inspired him to put together significant relationships of color and forms." Loran continued publishing critical essays and became the San Francisco correspondent for *Art News* magazine. In 1943, his book, *Cézanne's Composition*, based on the research he had done in Europe, was published by the University Press. It presented an erudite text on the subject of form and spatial factors to be considered in the analysis of paintings. It was extensively illustrated with the photographs he had taken in Provence and schematic diagrams he had made clarifying his theories. It was an immediate success with artists, teachers, and critics. One colleague observed that this book enhanced the stature of professional artists as teachers within the realm of academe. In fact, it was not until that volume was published that artists on the faculty were promoted to the rank of full professor.

By the end of the 1940s, Loran's work became increasingly abstract. He was to execute a number of non-objective works, but most of all his output was referential. Early in his career he had done some etchings and engravings and in the 1960s did a series of abstract lithographs at the Tamarind Lithography Institute in Los Angeles.

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In 1952, Loran was the first artist to be appointed as head of the Art Department since Eugene Neuhaus served as the first Chairman in 1923. During his tenure as Chair, the department grew tremendously in national stature. According to Karl Kasten, "Loran's great contribution to the University was his cosmopolitan outlook on art and his close link to the New York School." Loran instituted a program of appointment of visiting artists to serve on the faculty, such as Kitaj, John Grillo, David Hockney, George McNeil, Jimi Suzuki, and Wolf Kahn. He was instrumental in adding distinguished professionals to the faculty such as Felix Ruvolo, Joan Brown, David Park, and Peter Voulkos. In the roster of his students who have attained distinction are Sam Francis, Ynez Johnston, Jay DeFeo, Richard Diebenkorn, Elmer Bischoff, and Robert Colescott. It was his friendship with Willem de Kooning that led the artist to come to the Berkeley campus and execute two large lithographs, "Litho #1" and "Litho #2."

In 1930, Hans Hofmann, at the department's invitation, left Germany to teach on the campus. In gratitude, in 1960, Hofmann donated \$250,000 toward the construction of the University Art Museum and made a gift of 45 of his canvases to the museum. Loran had studied with Hofmann and a warm friendship ensued; consequently, the University administration asked Loran to play a major role in securing this gift.

Loran was a discriminating connoisseur. During his first sojourn in Paris in 1926, he began acquiring examples of ethnic art that he found esthetic. Over the years, his acute sense of form led to the development of one of the finest private collections of its kind in America. It is comprised primarily of Asian, pre-Columbian, Native American, and African tribal art with rare examples of the art of the Northwest coast. He had stipulated that the entire collection be housed at the M.H. de Young Memorial Museum in San Francisco.

Clark Kerr, President of the University, conferred the University Citation on Loran upon his retirement in 1973 in recognition of the great contributions he had made to the institution and to the community. He continued to work in his studio until failing eyesight precluded further efforts about a year before his passing. At the time of his demise, a retrospective exhibition of his work was being presented at the Craftsman's Guild and California

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Heritage Gallery in San Francisco. He is survived by his wife, Ruth Shorer Loran, and a nephew, Neal Brasted.

Robert Hartman Karl Kasten Peter Voulkos Brian Wall

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John Lysmer, Civil Engineering: Berkeley

1931-1999

Professor of Geotechnical Engineering, Emeritus

John Lysmer, a pioneer in geotechnical dynamics and earthquake engineering, died of a heart attack at his home on January 25, 1999. As a vigorous member of the geotechnical engineering faculty within the Department of Civil Engineering, he played a significant role in the education of hundreds of geotechnical graduate students and, through his extensive research and consultation, provided tools and procedures for designing safe foundations for many kinds of structures.

Lysmer was born in Denmark on August 18, 1931, and grew up there. He attended the Technical University of Denmark in Copenhagen, earning the equivalent of a Master of Science degree (Cand. Polyt.) in 1954. His longstanding ambition to work overseas led to employment in Nigeria with the English firm Ove Arup. He was placed in charge of a developing engineering office involved with design and construction of roads, buildings, and bridges throughout West Africa. He built up the first soil-mechanics laboratory in West Africa and in his work had the satisfaction of carrying a large number of demanding projects to completion without the delays and trammels more typical in developed nations.

In 1961, having just changed his name from Petersen, Lysmer moved with his first wife, Karen, to Gainesville, Florida, to work as Research Engineer with Professor F. E. Richart at the University of Florida, primarily in connection with design for the new NASA facility at Cape Canaveral. The next year he followed Richart to the University of Michigan where, in 1965, he earned the Ph.D.

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with research on vibrations of rigid foundations on soils. His developing expertise in theoretical soil mechanics and dynamics resulted subsequently in his recruitment as Assistant Professor of Civil Engineering at Berkeley.

Lysmer's academic career was spent entirely in the Geotechnical Group of the Department of Civil Engineering at Berkeley up to his retirement as Professor in 1991. As a teacher, Lysmer's strong theoretical bent prepared a large number of graduate students (and some less enthusiastic undergraduate students) for the new, computational age that awaited them. With a cadre of foreign doctoral candidates, he pioneered critically needed computer methods to analyze the seismic response of soil structures and soil-structure interaction, resulting in the now renowned and much-used programs SHAKE, QUAD-4, FLUSH, and SASSI. He published key contributions in many important articles. Among the formal tokens of appreciation

deservedly received from the profession were the Thomas Middlebrooks Award in 1967 and, in 1976, the Walter Huber Civil Engineering Research Prize of the American Society of Civil Engineers. His University service included membership in and chair of the Elections Committee of the Academic Senate for 10 years during the period 1971-83.

Lysmer's analytical and numerical skills concerning soil response in earthquakes and seismic soil/structure interaction were in great demand in the service of industry. As an outgrowth of his consulting and applied research, he lectured extensively in public and private forums both in the USA and overseas. In much of this work—concerning earthquake engineering and the safety of building foundations, dams, offshore structures, and nuclear power plants—he worked closely with Harry Bolton Seed. In this critical area of engineering research and development, the pair were the stars of the world stage.

Lysmer also worked with C.L. Monismith on the response of pavements to dynamic loads, an emerging area in the 1980s. With his doctoral students, pioneering solutions were developed for the dynamic response of both asphalt concrete and jointed, plain concrete pavements under moving-wheel loads. Monismith observed that when Lysmer gave his approval to a dissertation in the dynamic-response area, the solution could be used with confidence to solve real-world problems.

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An expansive personality, he enjoyed square-dancing and loved company. He made people happy with his cheerful stories regarding his abundant travels. As a lifelong stamp collector, he prepared and delivered a series of fascinating public lectures about engineering history—the Suez Canal, the Panama Canal, the Egyptian Pyramids, and the voyages of Capt. Cook and others—illustrated entirely by slides of postage stamps he had collected. Lysmer radiated warmth to all who were fortunate enough to know him. His ability and personality uniquely enriched the civil engineering program at Berkeley.

Lysmer is survived by his mother, Asta Peterson of Copenhagen; his wife, Mary Smith Flint Lysmer; three daughters from his first marriage, Susanne Rapella, Annette Lysmer, and Marianne Fogle; three step-sons from his second marriage to the late Dolores Lysmer, Douglas Tarter, Kenneth Higginbotham, and Richard Higginbotham; and five stepchildren from his third marriage, Stephen Smith, Timothy Smith, Sue Ann Shurtliff, Karen Flint Hoyt, and Roger Flint.

Richard Goodman Carl Monismith Raymond Seed Nicholas Sitar

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George Long Marsh, Food Science and Technology: Davis

1901-1994

Professor Emeritus

Food Technologist in the Experiment Station, Emeritus

George Long Marsh was born in San Francisco on June 15, 1901 to Robert Byers and Gertrude Clark Marsh. He attended Sutro Grammar School and graduated from Polytechnic High School in 1919.

He started his university education at the University of California Berkeley in 1920, where he received his bachelor of science degree in 1931, majoring in horticulture. During his undergraduate years, he also worked periodically as a chemist for several employers, including the R.C. Bulgar Company, a producer of orange concentrate and candied citrus peel products used by bakeries, the California Walnut Growers Association and as a laboratory assistant at UC Berkeley where he was supported by a grant from the Paperboard Industry Association.

His academic development as a graduate student at Berkeley continued in September 1931, supported by a research assistantship in the Division of Fruit Products that was chaired by Professor W.V. Cruess. In 1934 he was awarded the master of science degree in agricultural technology. In that year Professor Cruess offered him the appointment of Associate in the Agricultural Experiment Station, which he accepted. In 1943 he was advanced to Lecturer in Food Technology and Assistant Chemist in the Experiment Station. Three years later he was promoted to Assistant Professor and in 1949 to Associate Professor. In 1951 most of the

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faculty of the department, then under the chairmanship of Emil Mrak, moved from Berkeley to a new building on the Davis campus. In 1953 George was promoted to Professor of Food Technology and Food Technologist in the Experiment Station. He retired to emeritus status on July 1, 1968, having reached the then-mandatory retirement age of 67, but continued his research on a part-time basis. His association with the University of California of nearly 75 years came to an end with his death in 1994.

George was a meticulous analytical chemist who worked effectively and constructively with colleagues and students in his and related departments on numerous problems in the complex field of food technology and the wine industry. The first paper listed in his extensive bibliography of 100 technical and numerous semi-technical publications was an article dated 1929 with W.V. Cruess on the detection and quantitative determination of carbon disulfide residue in almonds treated with this fumigant for control of insect infestation. During the following active 50-plus years, many other analytical methods and food processing procedures were investigated. From 1929-1942 he collaborated closely with his departmental colleague Maynard Joslyn on the basic principles of freezing preservation of fruits and vegetables, inactivation of enzymes in vegetables during blanching prior to freezing, flash pasteurization and aseptic packaging, frozen fruit concentrates and beverage bases. In 1950, in cooperation with Professor Cameron, he discovered the important effect of root stock on development of bitterness in naval orange juice concentrate. George also collaborated effectively with other departmental colleagues in research projects to produce superior dehydrated cut fruits by a combination of blanching and suffering prior to drying the fruit in a dehydrator rather than in the sun. Their results were published in a 68-page *Bulletin of the Agricultural Experiment Station*, which also described engineering aspects of this new preservation method.

In 1933, the year of Prohibition repeal, George directed some of his faculty to confront problems facing the wine industry. The lack of experienced people in that industry meant that great demands were being made upon the University for help in restarting enology research and practice. George and other staff traveled a great deal and organized numerous conferences and meetings on cooling,

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use of sulfur dioxide, yeast cultures, filtration and so on. George worked primarily on the effect of cooling on the different phases of wine fermentation, which in turn led to work on tartrate stability and the use of refrigerated holding tanks for tartrate deposition. He developed a recovery process of potassium bitartrate from lees and distillery material that contributed in an important way to the national effort to overcome critical shortages of this compound during World War II. This study also helped the wine industry to maintain its status as an essential industry. Also of importance were his observations on the role of protein in the development of cloudiness in wines by copper complexes and its control by Bentonite treatment. The “Marsh Tables” for recovery of proof gallons of alcohol from wines, which he developed in 1951 with the Technical Advisory Committee of the California Wine Institute, are still useful today. Further evidence of his high standing in the California wine industry comes from his appointment as a wine judge at the California State Fair from 1937-1966.

George developed and taught a course “Principles of Food Preservation” for many years. He was deeply interested in the welfare of his students. Besides being an undergraduate advisor for the major, he was active for a long time in Academic Senate committees dealing with student affairs, such as the Regents Scholarship

Committee, the Board of Admissions and Relations with Schools, and Student-Faculty Relations.

George was a member of the American Chemical Society, The American Association for the Advancement of Science, Sigma Xi, a charter member of the Institute of Food Technologists, a charter member of the California Wine Institute Technical Advisory Committee, and the American Society of Enologists (Vice-President 1964-65, President 1967). In recognition of his outstanding achievements in enology and with meritorious service to the wine industry, he was presented with the Society's most prestigious Merit Award in 1963.

George Marsh married Gertrude Evelyn Bee of Santa Rosa, California, and is survived by two daughters, Avonia M. Dondero of Orinda, California and Marilyn M. Wilson of Denver, Colorado.

M.W. Miller V.L. Singleton H.J. Phaff

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David Frederic Martin, Computer Science: Los Angeles

1937-1996

Professor

David Frederic Martin, an engineering alumnus and Professor of Computer Science at UCLA for 29 years who received the 1985 Distinguished Teaching Award and was a dedicated church pianist, died December 22, 1996 in Los Angeles of cancer. He was 59. It was a loss not only to his family but to his many friends and students as well. He was a teacher without equal, dedicated to his students and to the truth. David treated everyone with dignity, gentleness, and grace.

Martin was born in Waterbury, Connecticut, on November 16, 1937 and spent his childhood in New Rochelle, New York. In 1945, he moved to California and, at the age of 12, began taking piano lessons. He was an organist at St. Clement's Episcopal Church in Huntington Park for a year before graduating from Huntington Park High School in 1955 and enrolling as a freshman engineering student at UCLA. He met his wife, Nancy Hunter, at a co-ed softball game at UCLA in 1958 and they were married in 1960. He received his B.S., M.S. and Ph.D. degrees from UCLA in 1960, 1962, and 1966 respectively.

He was an Assistant Professor of electrical engineering at the Massachusetts Institute of Technology for two years until 1967 when he and his wife were drawn back to Southern California where he joined the UCLA faculty. At UCLA, Martin's research interests focused on improving the semantics of computer programming languages, including the language translators, semantics of computation, and high-level language computer architecture. "He was a great researcher, with the ability to synthesize

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information that sometimes could be very difficult, and impart that to students in a way that they could grasp," said wife Nancy Martin. He was primarily devoted to teaching, was well liked by students, and was recognized for his extra effort when he received the 1985 UCLA Distinguished Teaching Award. He is fondly remembered by his students for his strength, his thoroughness, his dedication, and most of all as a man who "would pour his heart out for his students." Martin prepared his lectures with care and perfection for a classroom full of eager young minds that would benefit from such distinguished teaching. Former student David Booth remembers the "strength of his integrity; his unwavering respect and caring for even the most powerless student when push came to shove; his diligence; and his commitment to doing what was right."

Martin was not only an excellent teacher but also a friend of many whom he comforted, listened to, and advised in times of need. He never passed judgment and, right or wrong, he was always there to listen. To all,

he was a wonderful friend. It was not only his students who felt that he was the epitome of a perfect teacher but friends around him who witnessed his lectures. And Martin was a modest man as he would always blush when he was told what an excellent teacher he was.

Martin's other interests included religion and music. His musical talent continued to be expressed through the Culver City Four Square Church beginning in 1980, in his role as a pianist; in 1995 he joined the Church on the Way, in the San Fernando Valley. There he became part of the "Renaissance" choir who performed at his memorial service on Saturday, December 26, 1996 at the Prayer Chapel of the Church on the Way. The minister said that Martin was a great man, a Renaissance man, gifted in both the arts and the sciences. Martin's son spoke of his warm remembrances of his father and how his family remembers him as a wonderful father, and despite his age, a "really young man."

Martin is survived by his wife, Nancy; his son, Christopher; his daughter, Laurel Starkweather; and two grandchildren, Megan and Melissa Starkweather. He will be missed beyond the ability of words to say. We shall not see his equal again.

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This *In Memoriam* statement was drawn from articles and letters by: Peter Homier, Karen Duryea, Warren Hoppe, David Booth, Brenda Ramsey, David Patterson, and Bill Andrews.

Peter Homier

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Frederic Meyers, Management: Los Angeles

1917-1999

Professor Emeritus

Frederick Meyers, a gifted scholar, noted teacher, fine musician, and person of tremendous capacity for the humanitarian act, died on March 11, 1999 in Williamstown, Massachusetts, of pneumonia. He was 82. Meyers obtained a Ph.D. in economics from the University of North Carolina in 1941. He taught at the University of Texas and University of Illinois before joining the UCLA faculty. He held visiting professor appointments at MIT, the University of Paris and other universities. To his graduate students in the Anderson Graduate School of Management at UCLA, where he taught industrial relations and labor economics from 1958 until his retirement in 1980, he will be remembered as a teacher and mentor who was generous to a fault of his time and of his support, both intellectual and emotional.

As a scholar he wrote many influential books and research monographs with such titles as *The French Labor Courts: Judgement by Peers ; Party, Government and the Labor Movement in Mexico ; European Coal Mining Unions: Structure and Function ; and Ownership of Jobs*. Meyers wrote the definitive analysis of the impact of the right-to-work provisions of the 1947 Taft-Hartley Law. The article "*Effects of Right-to-Work Laws: A Study of the Texas Act,*" was published in the *Industrial and Labor Relations Review* in 1955. He was awarded many honors for his scholarly accomplishments, including election as a visiting member of the London School of Economics; in 1960 he was the recipient of a Guggenheim Fellowship.

Meyers was active in the Academic Senate at UCLA and held administrative appointments as Associate Dean and Chairman of the Anderson Graduate School of Management and Director of the UCLA Institute of Industrial Relations. He was a well-known arbitrator of

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labor-management disputes in Southern California and a member of the prestigious National Academy of

Arbitrators. Meyers manifested a deep commitment to social justice and joined in struggles for social and political equality throughout his life; he was an early activist in what became the civil rights movement of the 1960s.

Graduate students sought Meyers out as a mentor and advisor. A principled scholar throughout his life, his commitment to providing his students with the best profession the field of study had to offer was clear and uncomplicated. Mei Bickner, one of his Ph.D. graduates and now a professor in the California State University System wrote of him, “He introduced us to practical experiences and he attempted to cultivate in us an appreciation for the global aspects of labor relations long before others recognized the importance and necessity of this approach. He was a wonderful mentor.”

Faculty colleagues at UCLA remember Meyers as a confidant, mentor, role model and friend. Their admiration and respect for him, his academic values, and his views of what a university should be all about is part of the legacy that remains in the hearts of the many people who remember. One colleague wrote, “He was for us exemplary in his scientific and human attributes.”

After his retirement from UCLA in 1980, Meyers and his wife, Judy Hoke Meyers, lived in France, Georgia, and Bennington, Vermont, where he taught mathematics at the Bennington Tutorial Center. Meyers was predeceased by his first wife, Elizabeth Jones Meyers (a social worker) of Harrodsburg, Kentucky, in 1989 and by his second wife, Judy Hoke Meyers (A UCLA administrator) of Los Angeles, in 1995. Two children preceded him in death: daughter Anne Meyers Cohler in 1989 and son Stephen Z. Meyers in 1997. Anne had a Ph.D. from Harvard and published in the field of French political theory as a faculty member of the University of Chicago. Stephen Z. Meyers had an LL.B. from UCLA and was the co-founder of the Jacoby and Meyers law firm.

Meyers' surviving family includes daughter Sarah Meyers Allan, who has a Ph.D. from UC Berkeley and is the Burlington Northern Foundation Professor of Asian Studies at Dartmouth College where she is a specialist on Chinese culture.

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Meyers is also survived by three grandchildren, three step-grandchildren and one great grandchild. Correspondence may be directed to: Professor Sarah Meyers Allan, 9 Low Road, Hanover, New Hampshire, 03755

Sarah Meyers Allan Archie Kleingartner Daniel Mitchell

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Russell Bryan Miller, Chemistry: Davis

1940-1998

Professor

Chair of the Academic Senate, Davis Division

On October 29, 1998, at the end of a day that typified three decades of exemplary service to the University of California, Professor R. Bryan Miller passed away in Los Angeles. According to the November 6, 1998 issue of *Dateline*, Bryan had, on that day, contributed frequently and eloquently to a universitywide meeting of faculty leaders on a number of issues. He is remembered with thoughts of kindness and respect by his family, friends, colleagues, and students.

Born on May 31, 1940, Bryan received his B.S. degree from Washington and Lee University in 1962, and continued his education at Rice University, earning his Ph.D. in synthetic organic chemistry in 1967. A year of postdoctoral work followed in New York, where Bryan worked in the laboratory of Professor Gilbert Stork in the Chemistry Department of Columbia University. He was appointed to the faculty of the Chemistry Department at the University of California Davis in 1968.

Bryan's passion was organic chemistry, where he could develop his unusually diverse interests in the areas of synthetic methodology, with emphases on regio- and stereoselectivity in organosilicon chemistry; syntheses of naturally occurring compounds of biological and pharmacological importance, especially alkaloids and terpenes; syntheses of haptens for use in immunochemical studies; and syntheses of combinatorial libraries of small organic compounds. He established a research program in which the elegance of his ideas revealed organic chemistry to be

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as much an art as a science. His contributions to the field include a method for the preparation of a class of anticancer drugs which after a decade is still the most important in the field. For a number of years he was co-editor of the annual series of monographs, *The Total Synthesis of Natural Products*.

As a research advisor to graduate students Bryan displayed wisdom and balance, leavened by wit and humor. Many of the 30 M.S. and Ph.D. students to come out of his group have achieved great excellence and recognition in their own right. As a role model and mentor for younger faculty, Bryan was supportive and honest, critical but never judgmental. He recognized and embraced fully the teaching, research, and service missions of the University, and always strove to uphold its ideals. As Chair of the Chemistry Department from 1985 to 1990 he successfully guided the department through a critical period in which numerous faculty appointments were made and new research directions established. His knowledge of the campus, his perspective and ability to take the longer view, and his integrity and fairness all contributed to the growth of the program over those years.

Bryan's service to the organic chemistry community was profound. In 1990 he accepted a position as Visiting Scientist in the Chemistry Division of the National Science Foundation, and from 1992 to 1995 he was the Divisional Program Officer of Chemistry at NSF. Upon completing these assignments, Bryan was lauded by the Director of the Division for his outstanding contributions to the program, specifically his “impressively broad and deep familiarity with, and excellent connections to, the community of scholars in organic chemistry,” as well as the “appropriate mix of wisdom and compassion” with which he made critical funding decisions.

Throughout his career Bryan gave most generously of his time and energy to make the University a better institution. He was chair or member of campus committees far too numerous to mention, yet he never gave any of these assignments anything less than his fullest attention and effort. Bryan enriched us all by his presence on campus and in the department, and his energy and spirit in handling the multitude of tasks that a faculty member faces set a model for us all.

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Bryan is survived by his wife Francesca; stepdaughter Cesca Wellman of Santa Rosa; stepson Arthur Wellman of San Diego; mother Dorothy Miller, and brothers Bargie and David Miller, all of Houston.

Neil Schore Albert Bottini George Zweifel

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Gary P. Moberg, Animal Science: Davis

1941-1999

Professor

Gary P. Moberg was born on the family farm in Alexis, Illinois, in 1941. He obtained a bachelor's degree in biology in 1963 from Monmouth College (Illinois) followed by a master's degree in behavioral physiology in 1965 and a doctoral degree in neurophysiology in 1969 from the University of Illinois. After completing post-doctoral research in neuroendocrinology at UC San Francisco, he joined the Department of Animal Science at UC Davis in 1970. Gary died unexpectedly of heart failure on August 13, 1999 at the age of 58.

As an animal physiologist, Gary studied the ways in which environmental stressors influence the reproduction, health, and behavior of animals. His early research focused on the stress response in rats, livestock (primarily dairy cows and sheep) and monkeys. Gary and his colleagues examined the influence of early life experiences and various animal management techniques on the response to subsequent stress. In the early 1980s, he broadened his work on animal stress to address animal welfare issues. More recently, Gary focused on research dealing with the endocrine control of reproduction in white sturgeon, as well as the biological response of finfish to various stressors and the impact of environmental stress on shellfish. Through his research, Gary earned an international reputation as one of the world's leading authorities on animal stress and welfare.

Gary was in great demand as a consultant on the subject of animal physiology, animal stress, and animal welfare and traveled extensively to Europe and Asia, offering seminars and invited

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presentations on these topics. He authored 95 major publications, including eight book chapters. He also served as editor of the book, *Animal Stress*, published in 1985, and as co-editor of *Animal Stress: Basic Biology and Implications for Animal Welfare*, published in 2000. Both of these books were the outgrowth of international conferences organized by Gary and held at UC Davis.

Gary offered courses in comparative physiology and endocrinology for the Section of Neurobiology, Physiology, and Behavior of the Division of Biological Sciences and was a member of the Animal Behavior and Physiology Graduate Groups. He was best known for teaching Comparative Physiology: Endocrinology (NPB 128) and Physiology of the Endocrine Glands (NPB 130). He also taught Advanced Endocrinology (PGG 230) for the Physiology Graduate Group. Students consistently commented on his thorough knowledge of the subject matter and his ability to organize and present complex information in a manner that was interesting and informative. Gary loved to teach and his enthusiasm, humor and clinical anecdotes were appreciated by his students. He was an active and inspiring mentor for many graduate students during his 29-year tenure at UC Davis.

Gary was Director of the Aquaculture and Fisheries Program (AFP) on campus from 1991 to 1993, providing leadership for a large body of faculty and graduate students conducting research with aquatic animals. In 1993 he was appointed Associate Dean of the Division of Animal Biology in the College of Agricultural and Environmental Sciences (CAES), a position he held until shortly before his death. In the spring of 1999, he again assumed the directorship of AFP which he renamed the Center for Aquatic Biology and Aquaculture. Gary was a strong advocate of the “center” model for advancing mission-oriented interdisciplinary research. As Associate Dean, he established new research centers on campus in dairy science, animal welfare, avian biology, range and forested ecosystems, and genetic engineering of large animals. He also developed the Center for Special Programs to serve as an incubator for new research programs. One of his greatest contributions to undergraduate education as Associate Dean was the development of the Animal Biology major, which emphasizes biological principles used in solving societal problems associated with animals in agriculture, urban areas, or natural environments. The major enrolled 100

students in its first two years of existence.

Gary was a member of the Board of Directors of the California Dairy Food Research Center and was active nationally as Chairman of the Board of Directors of the USDA Western Regional Aquaculture Center. In addition, he was an administrative advisor for the USDA National Animal Genome Research Program and a member of the USDA Western Regional Research Committee on Stress Factors of Farm Animals and their Effects on Performance. He also served on a national response team for animal welfare issues. He was a member of the American Physiological Society, the American Society of Animal Science, the Endocrine Society, Sigma Xi, the Society for the Study of Reproduction, World Aquaculture Society, California Aquaculture Association and the American Fisheries Society.

In addition to his professional activities, Gary enjoyed traveling and collecting art objects from his travels. He found great satisfaction in jogging and sharing coffee with friends. He was an avid San Francisco 49ers fan and for many years ran the play clock for UC Davis Aggie football games.

Gary is survived by his wife of 32 years, Sydney Moberg of Davis; his son, Philip Moberg of San Diego; and his daughter, Kirsten Moberg of Santa Cruz.

Thomas Adams Serge Doroshov Edward Price

Gurden Alois Mooser: Santa Cruz

1913-1999

Assistant Chancellor of University Relations, Emeritus

Gurden Mooser, founding head of the UCSC University Relations Office, died at his home in Santa Cruz on Friday, February 5, 1999. He was 85.

The death of Gurden Mooser ended many years of professional service provided by him both within and outside the University. He was born in San Francisco and graduated from UC Berkeley in 1935 with an undergraduate degree in physics. He served in the Pacific Theater during World War II and was discharged with the rank of Commander, U. S. Navy. Prior to joining the staff at the new Santa Cruz campus of the University of California, he was Vice President at J. Walter Thompson in New York and San Francisco.

In 1965, the year that the Santa Cruz campus opened, founding Chancellor Dean McHenry appointed Gurden Mooser to the position of Assistant Chancellor for University Relations. The distinctive undergraduate collegiate organization of the campus required significant partnership with the private sector. With dedication, a keen sense of humor, attention to detail, organization, absolute honesty, and concern for both the individual and institution, he was a remarkably able spokesperson and fundraiser for the University. He believed in the vision for the campus articulated by founding Chancellor Dean McHenry and the mission and goals of the University of California. By the time he retired in 1978, he had helped the campus attract a series of major gifts from individuals and foundations that helped establish the

campus's colleges and campus-wide academic programs, such as the Long Marine Laboratory. In 1974, he established the UC Santa Cruz Foundation and served as its first Executive Secretary. In retirement, he was appointed a trustee of the foundation.

Gurden Mooser was deeply committed to public service. He was a “doer.” He encouraged his family and those around him to become involved, saying “people and agencies need your volunteer help.” He practiced what he preached—both within and outside the University. He was founding member of the Community Foundation of Santa Cruz County (honorary trustee at the time of his death); charter board member of Friends of Long Marine Laboratory (co-chairing the Development Committee for the Marine Discovery Center nearly to the time of his death); trustee for many years of the Santa Cruz Dominican Hospital Foundation; chair, Santa Cruz Grand Jury (1972-73); vice chair of the Santa Cruz County disaster relief following the El Niño floods of 1982-83; and founding board member of The Arboretum of Flagstaff (serving on the board until his death). He also served as board member of Friends of the UC Santa Cruz Library, Santa Cruz Red Cross, Cabrillo Music Festival and Cedar Street Gallery, and was a member of the Santa Cruz Industrial Development Commission. He and his wife Mary Kate also were benefactors of the UC Santa Cruz Library and the campus arts programs.

Gurden Mooser left an indelible mark on those with whom he interacted. He loved intellectual and practical challenges. He was an analytical thinker, articulate speaker, and stimulating colleague. He assumed leadership roles but let others assume credit for successes. Simply, he was a wonderful person, a caring friend and, truly, a gentle man. He enriched our lives and helped to establish the Santa Cruz campus as a major educational and research institution and cultural resource. Someone once wrote: “The great use of life is to spend it on something that outlasts it.” Gurden Mooser did just that.

William T. Doyle

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Meredith W. Morgan, Physiology; Optometry: Berkeley

1912-1999

Professor of Physiological Optics and Optometry, Emeritus

Dean of the School of Optometry

Meredith W. Morgan died peacefully in his sleep on May 1, 1999 after a prolonged battle with cancer. He was a dominant and creative leader in the profession of optometry who helped shape its future in highly constructive ways. He performed elegant research, taught virtually every course offered in the School of Optometry at Berkeley, and served as the Dean of the School for 13 years. We remember him with affection, and have often honored this gentle giant of a man.

Morgan was born on March 22, 1912 in Kingman, Arizona, and grew up in Richmond, California. His father was an early optometrist and maintained a practice in Richmond. Morgan entered Berkeley as a freshman in 1930. He was active in a variety of roles on the campus for 69 years, from his initial admission as student until the time of his death.

One of us, a classmate, remembers meeting Morgan as a freshman in 1930. Optometry at the University of California was then a part of the Physics Program in the College of Letters and Science. The freshman class was large (about 3,700 students), and those considering optometry as a major took courses identical to those of students pursuing pre-medicine, engineering, law, and other studies. Grading was “on a curve,” meaning that all individuals were competing with each other in this large class. After two pre-optometry years, students entered the optometry program to complete their training for the bachelor's degree. This

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program was then quite modest in size. All students of this era remember Professor Frederick Mason, a demanding, but respected instructor. Mason appreciated that the 12 members of the Class of 1934 were exceptional, and he personally worked closely with, and encouraged, this group. Of the 12 optometry students in this class, four graduated *summa cum laude* (including Morgan), seven were titled honor students, and

Morgan was elected to Phi Beta Kappa. In part, because of the fine performance of the Class of 1934, Professor Ralph Minor (Director of the Optometry Program) later was able to convince the Academic Senate of the University that optometry deserved recognition as a learned profession and should have a school of its own. In 1940, this became a reality.

After receiving his degree, Morgan entered into the practice of optometry in Richmond in association with his father, Dr. Meredith Morgan Sr. By 1939, Morgan Jr. was President of the Alameda-Contra Costa Counties Optometric Association. In the same year, he received a Master of Arts degree in physiology from the University of California. In 1942, Morgan received a Ph.D. degree in physiology, also from Berkeley.

In 1941, Morgan accepted an invitation to participate in the special program in aniseikonia (a condition resulting from unequally perceived image sizes in the two eyes) at the Dartmouth Eye Institute in Hanover, New Hampshire.

Morgan's research, teaching, and professional activities were all of a piece. For his Ph.D. dissertation in the Physiology Department in the old Life Sciences Building on the Berkeley campus, he selected a topic of considerable physiological as well as optometric interest, the neural control of accommodation of the eye. This was in keeping with the research program of the Physiology Department, which included smooth muscle physiology and innervation, and was also a prominent question facing the optometric clinician. The eye's ciliary muscle is unique among smooth muscles in that it is purely parasympathetic without an antagonist. The adjacent iris has two antagonistically-acting muscles, one fed by the sympathetic system, the other by the parasympathetic system. Is there a possible sympathetic influence on the ciliary muscle as well, and if so, how would it operate and be channeled?

In a series of concise, lucid, and insightful studies published in the *American Journal of Physiology* in the early 1940s, in co-authorship

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with J. Olmstead, who later became chairman of the Physiology Department at Berkeley, Morgan showed there is indeed a sympathetic influence on the lens of the eye. The eye becomes more hyperopic—it shows negative accommodation—when a rabbit is startled (the fight-flight syndrome of the sympathetic nervous system) and when the sympathetic nerves are stimulated. The two workers went on to demonstrate in the rabbit and other mammals that the eye's lens actually changes shape under these conditions and they succeeded in tracing the exact anatomical pathway involved.

When Morgan went back from the Physiology Department to the School of Optometry, his research became more overtly optometric and clinical. The growth to maturity of biological research on the eye and vision in Berkeley did not take place until Morgan's service as Dean in the 1960s. He produced a steady stream of papers, often in collaboration with clinical faculty members, addressing significant questions that arose in eye-examination procedures and the analysis of clinical data, questions that he was uniquely qualified to address as both a trained physiologist and an optometrist. His studies on the relationship between accommodation and convergence demonstrate a rare balance between scientific insight and clinical acumen. His dual skills came to the fore most effectively when he confronted interesting and complicated clinical cases. The masterful way in which he diagnosed, analyzed and treated a patient with Adie's pupil, where the parasympathetic innervation of one eye was lost, remains a classic and is one of the more widely referenced papers that appeared in the then- *American Journal of Optometry and Archives of the American Academy of Optometry*. Another major contribution was his book on ophthalmic optics, written in collaboration with Henry Peters. This text served as a benchmark in ophthalmic science for decades.

In 1942, Morgan was appointed as an Instructor in the faculty of the University of California at the Berkeley School of Optometry; he achieved the rank of Professor in 1951.

Morgan made significant contributions to his community through service as a Trustee of the Richmond High School District (1950-1955) and as a member of the Richmond Board of Education (1954-1961), including serving as President of the Board (1957-1960).

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As a member of the School of Optometry faculty for 33 years and dean from 1960-1973, Morgan led the School to international prominence. He was active in the establishment in 1946 of the Ph.D. Program in Physiological Optics, now termed the Vision Science Program. This was one of the first such programs in the United States, and played an important role in upgrading the academic quality of the profession as well as serving to create a reservoir of trained teachers and researchers for optometry. The Berkeley program has provided many major vision researchers, optometric educators, and the deans of several schools of optometry.

During his service as Dean, Morgan expanded the optometry curriculum to a four-year professional-studies program leading to the Doctor of Optometry degree. He recruited world-renowned vision scientists to the School and to the Berkeley campus. He was the major player in securing much needed additions to the optometry research and educational facilities on the Berkeley campus. The construction of the “New” Minor Hall was made possible by including optometry funding in a University Health Science Facilities Bond Issue and by passage of this measure by the voters of California.

Morgan played a dominant role in the advancement of optometric education in the United States and, thus, indirectly, in the World from the end of World War II to the present. He served with great effectiveness on almost all of the major policy groups of optometric education nationwide. He was a member of the Council on Optometric Education, the accreditation agency for schools and colleges of optometry from 1960 to 1973. He was a contributor to the Havighurst Study of Optometric Education sponsored by the National Commission on Accreditation, and a major consultant to the New Academic Facilities Committee of the American Optometric Association in the establishment of additional schools of optometry.

Morgan acted to advance vision research as a member of the first National Advisory Eye Council of the National Institutes of Health. In the American Academy of Optometry he was elected President (1953-1954) and was appointed Chair of the Editorial Council of the *American Journal of Optometry* from 1954 to 1957. Morgan received many honors. As examples, in 1967 he received the Charles F. Prentice Medal, the highest award of the American

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Academy of Optometry; and in 1975, he was awarded the Berkeley Citation for exceptional service to the University. He also received four honorary doctorate degrees.

In retirement, along with former Dean Al Rosenbloom of the Illinois College of Optometry, a close friend, Morgan edited a compendium addressing the general and special visual needs of the aging patient. A comparable treatment was prepared that addressed the neonatal and pediatric patient communities. He was also there when his successors as dean needed him. He helped when the School faced challenges. He chaired the committee assigned to appoint the new endowed chairs; he interceded with the University administration when it was indicated; he was Honorary Chair of the 75th Anniversary celebrations of the School of Optometry (1998/1999); he participated in writing the history of the School and provided oral summaries of the early days; and so much more.

Morgan was a kind and gentle man. In so many ways he represented the finest qualities of our profession and science. He encouraged us all, and many of us sought to emulate him. We are very pleased to have had created a bust of him that seems to capture the twinkle of his eye as well as his smile and general enthusiasm for life. We named a lecture and continuing education program after him, and renamed the clinic in his honor. He was very proud of this recognition, in particular, the naming, in 1998, of the state-of-the-art clinical facility in the “new” Minor Hall Building as the Meredith W. Morgan University Eye Center. These actions testify to the

high esteem for Morgan existing in the hearts of the University of California optometric community and the profession as a whole.

The character and personality of Morgan are best conveyed by quoting from the remarks by Dean Anthony Adams at a memorial event held in Morgan's honor in the Great Hall of The Faculty Club on the Berkeley campus on June 8, 1999:

Hundreds of optometrists and vision researchers viewed him as a mentor, a colleague, a role model, a personal friend, even a father or grandfather figure. He was all of these to many of us. Over and over again colleagues remark on their “special” relationship with Meredith and point to his friendship, his integrity, his strong senses of fairness and ethical behavior, his tolerance, his ability to

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mentor and provide sage advice, and his ability to recognize excellence in a wide range of interests outside of his own. He valued the simple, the honest, the humorous, and the unadorned version of things and was suspicious of excessive pomp and fanfare. We all knew his booming, contagious laugh.

Morgan had been greatly saddened by the death of his wife of many years, Ida. He is survived by his daughter, Linda, and her children, as well as by his friend Janet.

Darrell Carter Jay M. Enoch Edward Goodlaw Gerald Westheimer

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Fredric J. Mosher, Information Management and Systems: Berkeley

1914-1999

Professor Emeritus

Fredric Mosher, who taught at UC Berkeley for 32 years, died in his sleep on May 30, 1999. He was born on 19 February 1914 and grew up in North Dakota, where he received a bachelor's degree in 1934 and a master's degree in English in 1935, both from the University of North Dakota. After serving in the Army from 1943 to 1946, he received a Bachelor of Library Science degree from the University of Chicago in 1948, and a Ph.D. in English in 1950 from the University of Illinois, where he had taught English from 1936 to 1943. He became a librarian in the Newberry Library in Chicago and remained there until joining the Berkeley faculty in 1950. He is survived by his wife, Evelyn, and two sons, John Randolph and Allan.

In 1950, Mosher came to Berkeley as an Instructor in the School of Librarianship, which in 1976 was renamed the School of Library and Information Studies, and is now the School of Information Management and Systems. His teaching focused on bibliography and reference work and he was broadly interested in the history of books, printing, publishing, and early forms of bibliographical description. At the Newberry Library, he had worked with an impressive collection on the history of printing and had compiled, with Archer Taylor, *The Bibliographical History of Anonyma and Pseudonyma*, published in 1951. At Berkeley, he set himself to the task of getting to know the Rare Book Collection, then housed in the Main Library with browsable stacks; he also worked on recommending titles to purchase as a reference and study collection for doctoral research. The strength of that collection is one of his legacies.

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In the 1960s, Mosher helped to create a “Bibliography Laboratory” of reference books that served for several years as the basis of class assignments and tests. Many alumni remember the final “treasure hunt” that required students to find the answers to questions within those volumes. In the early 1970s he participated in the establishment of the School's Typographical Laboratory, which served to enhance the teaching of the course on the history of the book.

Always interested in the principles and practice of book selection, he became active in the 1950s in efforts to preserve intellectual freedom and, especially, to fight censorship in the form of banning books from library collections. He edited *Freedom of Book Selection*, published by the American Library Association in 1954. Other interests included the work of the Chicago publishing firm of Way and Williams in the years before and after 1900 and the printing interests of the architect Frank Lloyd Wright. He went as a Fulbright Lecturer to the Royal School of Librarianship in Copenhagen in 1963-64 and collaborated with Erland Munch-Petersen on *A Guide to Danish Bibliography*, published in Copenhagen in 1965.

In 1977-78, on sabbatical in London, he joined the team preparing the *Eighteenth Century Short Title Catalogue*. This work gave him the highly valued privilege of access to the British Library's stacks, where he discovered a previously unrecorded catalog of the famous, early Estienne publishing firm.

Mosher retired in 1981 after 32 years of teaching at Berkeley. In his retirement he was active as a contributor of numerous articles to the revised edition of the leading encyclopedia on the history of the book, the *Lexikon des gesamten Buchwesens*, in which his articles on subjects in both American and foreign book history constitute an overview of his research interests in the field.

Mosher was an active member of the Trinity United Methodist Church in Berkeley and was always concerned that students be treated ethically. He was a friendly, dedicated teacher with a dry sense of humor.

Michael Buckland Mary Kay Duggan Robert Harlan

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George E. Mount, Psychology: Los Angeles

1917-1999

Professor Emeritus

George E. Mount was born at Cedar Falls, Iowa, on October 10, 1917, the son of George H. Mount and Margaret A. Lyon Mount. The family moved to Los Angeles when he was a child. His mother died when he was 13 and he was raised by his father who later remarried. His father obtained a Ph.D. in psychology at the University of Iowa and taught at both Duke University and the University of Southern California. George completed his undergraduate degree in 1940 at UCLA with a major in psychology, after having switched from physics. He entered the UCLA Ph.D. program in psychology to study with Knight Dunlap and Roy Dorcus. He was drafted in early 1942, and on June 26, 1942, he married Florence von der Kuhlen. His graduate training was interrupted while he served in the United States Army. He served in Indochina and China, attaining the rank of First Lieutenant. While serving overseas he was responsible for shepherding a military hospital over the Burma road into China. He also earned the nickname "Springer Mount" after successfully defending a court-marshalled soldier. When the war ended, George returned to complete his Ph.D. in psychology at UCLA in 1947.

Upon receipt of his doctorate, George joined the faculty of the Department of Psychology at UCLA where he spent his entire academic career. From the outset, his duties included running the newly-founded experimental laboratory course where he taught laboratory procedures to many generations of undergraduate students. He also assisted graduate students and other faculty with the instrumentation for their research. His major professional

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interests centered around scientific equipment and laboratory facilities. He also had a strong research interest in measurement theory and perception. He published two widely cited papers with Jim Thomas on visual perception.

Soon after George joined the faculty, the department launched into an extended period of growth, both in faculty and student body, and George became heavily involved in the department's building program. He worked with the university architects and engineers in designing the laboratories and other facilities while Franz Hall grew from the original small "Old Franz Hall" building to the giant complex it is today. When a departmental building committee was appointed, George served as a dedicated and hard-working member. George accepted these responsibilities happily because they fit in with what he loved to do. He spent his time helping students and faculty with their equipment because he considered it his duty and because he loved to teach. Meanwhile, UCLA was growing from a small provincial Southern Branch of the University of California to one of the top 10 academic research institutions in the world. As the years went by, academic advancement increasingly depended on research publications rather than university service. This development did little to facilitate George's own professional career advancement since his major contributions were in service and teaching rather than research.

Had George been able to anticipate these developments, it would probably not have altered his course of action. He marched to his own drummer and stuck stubbornly to his guns in the face of pressure to compromise. For example, some of George's superiors thought that too much public money was being spent on facilities for the Psychology Department and tried to pressure George to cut back on funds he was trying to obtain for the department. George refused and continued to demand from the architects and engineers what the state-mandated guidelines allowed. If he had given into this pressure, the department would have received far less in the way of facilities than it did.

George did some research and writing, but he only published when he felt he had something he really wanted to say. He refused to participate in the "publish or perish" rat race but he loved to teach, particularly one-on-one with graduate students. He chaired or co-chaired 13 doctoral committees. Many of his students

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went on to distinguished careers at major universities. All of us in psychology at UCLA owe a large debt of gratitude to George for what he did for the department. Unfortunately, that debt cannot now be repaid.

George died June 17, 1999 after a long bout with prostate cancer. He is survived by his wife, Florence; two children, George H. Mount and Linda Louise Mount Williams; six grandchildren; and one great grandchild.

Andrew L. Comrey F. Nowell Jones John H. Lyman Irving M. Maltzman

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Alva Lee Mullican, Art: Los Angeles

1919-1998

Professor Emeritus

Lee Mullican served as a member of the faculty of the UCLA Art Department from 1962 until his retirement in 1990.

Lee was a pioneer West Coast modernist whose work is known internationally. In the 1940s, along with Gordon Ouslow Ford and Wolfgang Pallegu, he founded the Dynatou movement with its roots in surrealism and automatism. Mullican's fusion of these concerns with his love of the Southwest Native American art forms consistently fueled his art throughout his life. His range of interest, however, was not limited to these concerns. In the catalogue for the Neo-Tantra-Contemporary Indian Painting Exhibition of 1985-86, which he co-curated, Lee states that he made three trips to India, two to investigate past art and a third to discover contemporary art based upon past tradition. This represents yet another facet of his concern for the mystical

which found its way transformed into his own creative work.

Paul Schimmel, chief curator of the Los Angeles Museum of Contemporary Art, which includes Lee's work in its permanent collection, said the artist “played a pivotal role in the period of transition between European modernism and American abstract expressionism” and helped “significantly and subtly change the course of 20th century art.”

Lee's work is represented in numerous public collections including the Museum of Modern Art, New York; the Museum of Modern Art, Paris; the Phillips Gallery, Washington D.C; the Detroit Museum of Art; the *Museo Nacional de Bellas Artes*, Santiago, Chile; the Roswell Art Museum, New Mexico; and other notable collections.

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In 1959 Lee was the recipient of a Guggenheim Fellowship and in 1968 he was invited to teach at the *Universidad de Chile* in Santiago.

Lee always enjoyed considerable popularity as a teacher and his contribution in this area was of consistently high quality and individuality.

Former graduate students acknowledge Lee's unique gifts in these comments: “Lee is a very special, intelligent and imaginative man. As an artist his work speaks for itself. As a professor he made a real difference in my life.” “I feel that Lee developed a rapport with graduate students, a kind of 'overall faith' that wasn't contingent on the success of each piece of art but was cumulative in essence, motivating the student to dare more, knowing that failures were seen as a part of artistic process.” “My own last year of work at UCLA was inspired and based on a story Lee told me about an experience he had in India. It changed my work and my life.”

Lee shared with his remarkably creative family, which includes his wife Lucita Hurtado, and their three sons Daniel, Matthew and John, an encompassing commitment to the arts. Lee is sorely missed by his colleagues and all those whose lives he touched.

Sam Amato William Brice Elliot Elgart

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Kenneth S. Norris, Environmental Studies: Santa Cruz

1924-1998

Professor of Natural History, Emeritus

Kenneth S. Norris—pioneering marine mammal researcher, legendary and much-loved teacher, and generous, selfless University and public servant—died at the UC San Francisco Medical Center on Sunday, August 16, 1998. He was 74.

Ken Norris was born in an unincorporated area within Los Angeles on August 11, 1924. His early life was spent in Los Angeles before his family moved to the San Fernando Valley at a time when substantial undeveloped space there allowed ample childhood exploration of the natural world and fostered in him a lasting appreciation of it. Following graduation from Van Nuys High School in 1942, he enrolled at UCLA, majoring in geology. There he joined the Navy ROTC and subsequently served as ensign on troop transports until the end of World War II.

Returning to UCLA after the war to complete his bachelor's degree, Ken Norris took a field trip that changed his undergraduate major and career objectives. The course was on the natural history of California, and its

instructor was Professor Raymond Cowles, who would become Ken Norris's mentor. In 1948, Ken Norris graduated with a B. A. in zoology. Working on the evolution of adaptations in desert lizards, he earned an M. A. in zoology from UCLA in 1951. In 1959, he was awarded a Ph.D. from the Scripps Institution of Oceanography, where he studied the effects of water temperature on the ontogeny of the opaleye perch, an intertidal fish. He soon joined UCLA's faculty, taught desert biology and herpetology, and continued research on desert reptiles. In 1972, he joined the faculty of UC Santa Cruz as Professor of Natural History, and there he remained until his retirement in 1990.

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The research accomplishments of Ken Norris reflect his diverse scientific interests. The animal in its environment was a central theme of this research. He was a rigorous scientist who exuded the creative joy of doing science. While at UCLA, he discovered circadian rhythms in snakes and the function of color change in reptiles and amphibians. As a graduate student at Scripps, he was asked to help design facilities and be the first curator, from 1953 to 1960, of marine mammals at the developing Marineland of the Pacific. While there he designed the “ichthyothermaltaxatron” (fish-temperature-movement-machine), equipment used in his doctoral research. This research earned him, in 1963, the Mercer Award from the Ecological Society of America for the best paper published by a young scientist. At Marineland of the Pacific, he and his colleagues conducted groundbreaking research on echolocation in dolphins. From 1968 to 1971, he split his time between the faculty at UCLA and his position as research director of the Scientific Institute of Oceanarium Research of the Oceanic Institute, Hawaii. He and his colleagues in Hawaii carried out studies crucial to the understanding of the social structure and behavior of dolphins.

Ken Norris was a “mover and shaker” in marine mammal research. He was a great communicator and brought field and laboratory researchers together. He has been credited with virtually creating the field of cetacean research. He was a prime mover in the formation of the Society of Marine Mammalogy and its journal, *Marine Mammal Science*, and he served as the society's first president. He helped draft and shape the Marine Mammal Protection Act of 1972, and he carried out research to identify ways of reducing the numbers of dolphins killed in tuna-fishing nets. He defined important conservation issues and helped create research programs to develop insight into possible solutions.

For his research contributions and publications, Ken Norris was named “Man of the Year” by the American Cetacean Society in 1976. The following year, he was awarded the California Academy of Sciences' Fellows Medal “In Recognition of his Outstanding Contributions in the Natural History of Marine Mammals.” In 1992, he received the prestigious John Burroughs Medal for his book *Dolphin Days: The Life and Times of the Spinner Dolphin*, a personal account of his research spanning 30 years.

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Ken Norris was always an idea man, and one of his greatest ideas, a concept both innovative and far-reaching, was the UC Natural Reserve System (NRS). As early as the late 1940s, while Ken Norris was still a graduate student at UCLA, he began to notice how quickly field study sites were literally losing ground to encroaching development—how, for example, a remote and undeveloped area in the spring could be transformed by the fall into a motel and parking lot. Over time, his frustration with such disturbances to his work (and his realization that other field scientists were experiencing the same frustration), paired with keen environmentalist concern over the escalating destruction of habitats and the species they support, engendered the notion that perhaps the University of California could acquire certain lands, or at least their long-term use rights, that would represent a broad sampling of all the state's habitat types and make them available for teaching and research. After all, as Ken Norris would later say, “You can't study nature without a nature to study.”

In 1963, Ken Norris presented to then-UC President Clark Kerr his proposal for a UC reserve system: a systemwide plan that would serve the entire state, not just the interests of an individual faculty member or

a single campus. In January of 1965, The Regents of the University of California approved his proposal and created the Natural Land and Water Reserves System, as the Natural Reserve System was then known. In 1966, Ken Norris took time off from his teaching responsibilities, borrowed a jeep and a dictating machine, and spent several months travelling around the state, searching for potential sites that met his criteria for what was needed in a reserve and that might be acquired to complete the system's spectrum of habitats. The report he wrote following his statewide tour is an action plan for system-building, and, of the 81 sites Ken Norris analyzed for this report, 13 were eventually drawn into the system. Today, 35 years after its inception, the NRS comprises 33 reserves, encompassing over 120,000 acres and a majority of the state's habitat types—the largest system of natural reserves in the world.

Ken Norris believed it was pointless to simply acquire lands and hold them; that in order for NRS sites to function as true outdoor classrooms and laboratories, they must be developed with basic facilities and equipment, then actively maintained. He also

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knew that a viable NRS must be well funded, and he never stopped pressing to attain this goal. Ken Norris was blessed with enormous personal charm, persuasive eloquence, fixity of purpose, and stubborn persistence, and he was a magnet that helped to attract all of the very largest gifts the NRS received during the first three decades of its existence. In June of 1998, the David and Lucile Packard Foundation awarded the NRS a \$4 million endowment, named the Kenneth S. Norris Endowment Fund for the California Environment, as a tribute to his leadership.

Ken Norris served as chair of the original NRS Universitywide Advisory Committee until 1968. For many years during his professorship at UC Santa Cruz, he gave, by his own reckoning, at least half his time to being chair of the Santa Cruz campus NRS Advisory Committee and faculty manager of the Landels-Hill Big Creek Reserve in Big Sur. He appeared before the UC Regents many times, called on countless potential donors, served on numerous committees and panels, and wrote scores of letters and position papers—all in support of the NRS. And although, after he started the NRS, Ken Norris went on to generate other new ideas and other action plans—including Hawaii's Natural Land Reserve System—he continued to be actively involved with the UC NRS throughout his entire life, rightly considering it to be one of his finest achievements.

The Santa Cruz campus benefited in numerous ways from the appointment of Ken Norris to its faculty in 1972. He helped obtain land for the future development of the Long Marine Laboratory and served as first director of UCSC's Coastal Marine Laboratory. He and his colleagues helped bring international distinction in marine mammal research to the campus. He worked with campus administration to provide an academic home for the Santa Cruz Predatory Bird Research Group, a privately funded group that had an initial focus on the biology and survival of the peregrine falcon in California.

Ken Norris served as chair of the Environmental Studies Department at Santa Cruz and initiated UCSC's Environmental Field Program. This program provides funds and equipment for undergraduate student research projects, including small teams of undergraduate students at remote sites, such as the Kingston Range. He also created the marvelous Natural History Field Quarter, a

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course on California's natural history, and diverse habitats, that offers undergraduate students hands-on field training and unparalleled experience in observation, reflection, critical thinking, and synthesis. During the decade that he taught the field quarter, he transported hundreds of students around the state, giving each of them a personal introduction to the natural world, launching many careers in environmental fields, and earning himself the informal title of “Professor of Wonderment.”

Ken Norris has been described as “an extraordinarily kind, warm and generous human being” and “a man that said yes to making things happen.” He was unsurpassed as a teacher and legendary for his ability to inspire

and bring out the best in his students. He had an inherent curiosity. Under his friendly, disarming exterior was a truly rigorous, creative, and innovative scientist. He is survived by his wife, Phylly (whom he met at Scripps, where she was a doctoral student in marine biology/phycology), and their four children: Richard, Susan, Nancy, and Barbara.

William T. Doyle Susan Geerumsey

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Michael O'Brien, Agricultural Engineering: Davis

1918-1999

Professor of Biological and Agricultural Engineering, Emeritus

Professor Michael O'Brien's grandfather immigrated to America from Ireland in 1848 and homesteaded a farm in south central Iowa. Mike's father grew up to farm on his own nearby. Michael was born on his father's 50th birthday. Farming was truly hard when he was growing up in the 1920s and 1930s. For many years, Mike was the son who cared for the four draft horses that performed the power work of farming.

Michael began his college education at Albia Junior College in Iowa on a combined scholastic and athletic scholarship, taking general agriculture courses. Upon graduation in 1938, he returned to the farm and helped his father. In early 1942, he volunteered for the U.S. Navy pilot program, which included preflight ground school at Del Monte, California—an experience that piqued his interest in someday returning to California.

In 1944, Mike was reassigned to be a pilot instructor, teaching air-fighting techniques and the use of the modern equipment then being provided on airplanes. This experience was the beginning of his long and illustrious career as a teacher.

During pilot training in 1942, Mike met June Gretten from Hiteman, Iowa. They were married upon his return to the States in 1944 and raised three children, Elizabeth, Michael Jr., and Timothy.

Mike was discharged from the Navy in December 1945. He enrolled at Iowa State University under the G.I. Bill and was awarded a B.S. in 1947 and M.S. in 1948, both in agricultural engineering. An assistantship in agricultural engineering allowed him to pursue his doctorate, also at Iowa State. In 1950, he completed

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a Ph.D. in vocational education and agricultural engineering and came to UC Davis as a member of the Department of Agricultural Engineering under the leadership of department Chair Roy Bainer.

Mike's initial assignment was to teach agricultural engineering shop courses in the two-year curriculum and to teach the fundamentals of shop practice to agricultural education students—future high school teachers of vocational education.

Soon after Mike arrived at UC Davis, the two-year curriculum was phased out and he then taught agricultural education courses. In 1953 he wrote the book *Shopwork Teaching Tricks* which was revised and, with co-author Elwood Jurgenson, re-published in 1956. In 1957, Mike and Professor Jurgenson co-authored another book, titled *Demonstrations in Farm Mechanics*. After completing several years of research in fruit harvesting and handling, Mike served as senior editor (with B.F. Cargill and R.B. Fridley) of the book *Principals and Practices for Harvesting and Handling Fruits and Nuts*. This comprehensive reference is useful in both agricultural engineering and pomology teaching and research.

Given Mike's experience in growing up and working on the family farm, it is not surprising that his initial research focused on labor-saving farm equipment devices, including an automatic farm gate, a farm-weldable

A-frame hoist, an innovative livestock watering device for pigs and lambs, a mandrel grinder, a portable drill press, a ditcher, a concrete mixer to fit on a small farm tractor, and a beehive lifter of which he was particularly proud. By 1957, he had developed nearly 50 such labor-saving devices.

In the late 1950s, Mike's research took a new direction, as he began working on the bulk handling of fruits and vegetables. This brought him international recognition for his development of systems, containers, container fillers, and samplers for handling many crops in bulk rather than 50-pound lugboxes. His initial efforts came in connection with the almond industry, which needed a device for taking a representative, four-pound sample of nuts from the large bins in which almonds were transported to the processing plant. A series of industry requests followed, the second being from the cling peach industry. Starting with research on sampling from a load of lugboxes, Mike soon observed that great savings of manual effort and improved fruit quality could be realized

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with the development and adoption of an entirely new handling system. His research led to the transformation of the post-harvest handling of clingstone peaches in California. Soon thereafter, he led the research effort that resulted in dramatic changes of the post-harvest handling of processing tomatoes in conjunction with, and necessitated by, the development and implementation of mechanical harvesting. The development of mechanical harvesting, including the adoption of bulk handling, sampling, and grading revolutionized the California processing tomato industry. Mike's research soon resulted in numerous fruits and vegetables being handled in bulk.

He also developed mechanical harvesting techniques and machines for bushberries, cantaloupe, and pineapple, the latter pursued during a sabbatical leave in Hawaii in 1964. Overall, his research and development efforts led to 13 United States Letters Patents.

Mike took great pride in the fact that all of his research was done in cooperation with academic staff, non-academic staff, and with many graduate students. Those who worked with Mike came to know him as a soft-spoken, easy to work with researcher with high expectations. He was always receptive to the ideas and suggestions of his colleagues. One of his most memorable qualities was his effort to get the work of his colleagues recognized by others; he was an active participant in awards activities both on campus and in the American Society of Agricultural Engineers (ASAE) to which he was elected a fellow in 1977. In 1988, Mike was awarded the ASAE Massey-Ferguson Educational Award for "his dedication to effective teaching, his genuine interest in students and his contributions to the knowledge base for agricultural development."

Mike's contributions were not limited to his superior research and teaching. He was also very active in the St. James Parish, the Board of Education of the Davis Joint Unified School District, and in the establishment of the UC Davis University Faculty Association.

Robert B. Fridley David Slaughter Roger E. Garrett David J. Hills Henry E. Studer

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Albert G. Pickerell, Journalism: Berkeley

1912-1999

Professor Emeritus

Albert G. Pickerell, for 28 years a member of the Department (after 1969, the Graduate School) of Journalism at Berkeley, died on February 13, 1999. Born on May 7, 1912 at Cherryvale, Kansas, he received B.S. and M.S. degrees in English from Kansas State Teachers College and an M.A. in journalism and a Ph.D. in political

science from Stanford, where he served as an Assistant Professor of Journalism from 1947 to 1950. His 1952 dissertation dealt with America's "psychological offensive" during the Cold War.

During World War II, he served as a publications officer in the U.S. Army Signal Corps and a journalism instructor, rising to the rank of Captain. He retired from the Army reserves in 1965 with a commission of Lieutenant Colonel. He also worked as a reporter for the Joplin (Missouri) *Globe and News Herald*, a copyreader for the *Washington Post*, a reporter and news editor for the Associated Press and United Press, and, in 1950-51, served as a special assistant for the U.S. State Department's Office of Public Affairs, for which he consulted thereafter.

While at Berkeley (whose faculty he joined in 1951), he was best known for two courses that he taught: Legal Aspects of the News Media—for many years a required course for journalism students—and Reporting on Crime and the Courts. He was equally at home among judges and attorneys, publishers, editors and reporters, as well as both undergraduate and graduate students. In 1966-68, he led a major campaign among his former students and friends in the California Newspaper Publishers Association to retain journalism education at Berkeley, when the department was threatened with

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dissolution. The result was the new independent graduate school, whose first dean was Edwin R. Bayley.

In 1974, Al edited the invaluable California legal handbook (and textbook) called *The Courts and the News Media*, and wrote for it the sections dealing with “shield laws”—the laws that allow reporters to protect their sources—and “free press vs. fair trial,” the complex challenges presented to both editors and judges in balancing First and Sixth Amendment rights. Al saw it personally through four editions; it reached its sixth edition (rewritten by Alan Ashby and others) in 1993. Al wrote articles on several key issues in press law, and participated in Bench/Bar/Media committees and conferences. (*The Courts and the News Media* grew out of such a conference held at Berkeley in 1973.) He was awarded a citation by the California Judges Association for his “numerous contributions to the California judiciary.” He also served as a consultant or expert witness in a number of important libel and defamation cases. After he testified in 1981 on behalf of actress Carol Burnett's lawsuit against the *National Enquirer*, Ms. Burnett donated one-half of the settlement she received to the School, in expression of her thanks.

Al's other specialty as a teacher and researcher was the foreign press and international correspondence. He had served as a Fulbright Lecturer both in Thailand in 1954 (where he helped to establish a journalism school, and returned to do research) and in India in 1979, and never abandoned his interest in Asian affairs and reporting. His early research on psychological warfare, and his work with the Army and the State Department (which sent him to lecture throughout Southeast Asia in 1965) also nourished his interest in international reporting and propaganda, and led him to foster a number of his students' careers as foreign correspondents or professionals with the USIA. Frequent return trips to England, where he had been stationed during part of his wartime service, established in him an interest in that country's press and a new network of friends.

Al had a unique concern for the problems and needs of smaller California newspapers. Between 1954 and 1979, he organized annual campus workshops for reporters, editors, and publishers of weekly papers, making many lifelong friends in the process. In gratitude for this, for his contributions to *California Publisher*, for

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his frequent advice, and for his dedication to the welfare of the state's local press, the California Press Association in 1994 gave him the Philip N. McCombs Achievement Award for “his contribution to the newspaper industry, both in the college classroom and through his efforts to raise the consciousness of the public..to the importance of Freedom of Information.” He was a former member of the executive board of the California Freedom of Information Committee, and in 1984 was given the James Madison award by the Northern California Chapter of the Society of Professional Journalists for his contributions to the freedom of

information.

From 1960 to 1966, Al also served as State Director of Information under President Clark Kerr, coordinating the efforts of all nine campuses' public information efforts in the years after the establishment of the state's Master Plan for Higher Education. One happy offshoot of this job was the publication, during the University's 1968 centennial year, of *The University of California: a Pictorial History*, an illustrated chronicle of the University and each of its nine campuses, which Al assembled in collaboration with University archivist May Dornin.

Al was constant in his attendance at Cal home football and basketball games, and a faithful member of the Berkeley Faculty Club. There (until illness prevented him from attending) he was an active participant in a 52-year-old luncheon group called the Little Thinkers that met every Friday. In place of a memorial service, 12 of his colleagues in the group (including former Chancellor Al Bowker and University Professor Marvin Cohen) held an informal “going-away” remembrance lunch, at which they toasted Al's life and memory. In addition, he had been a member of the National Press Club, the San Francisco Press and Union League Club, the London Press Club, the American Political Science Association, and Sigma Delta Chi, the national journalism fraternity.

After retiring in 1979, Al was recalled to duty for several years to share his wisdom with students at Berkeley and at San Francisco State University. He lectured at Shanghai International Studies University in 1986. Unfortunately, after transferring most of his papers to his Berkeley hilltop home at 56 Gypsy Lane, with its fine garden and spectacular views of San Francisco Bay (the site of many happy gatherings of colleagues and friends), his next

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house in Hiller Highlands—and the papers—were lost in the Oakland firestorm of 1991. Decreasing mobility in later years marked a premature end to the busy social life of a man once known as well for his killer martinis as his feisty opinions and generous good nature.

He is survived by his wife, Betty Jean (“B.J.”) Pickerell of Oakland, who cared for him devotedly in his final years; and by his children, Blair Pickerell of Hong Kong, and Lynn Bodell of Atherton.

Phillip Johnson David Littlejohn

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Gerald C. Pomraning, Engineering and Applied Science: Los Angeles

1936-1999

Professor

Professor Gerald C. Pomraning, a member of UCLA's Mechanical and Aerospace Engineering Department, lost his battle with metastatic melanoma on February 6, 1999 at the age of 62. UCLA has lost one of its best—a brilliant scholar, a gifted teacher, a concerned campus citizen, and a wonderful human being. He was a warm and generous man, admired for his decency, fairness, and irreverent humor, with a tremendous capacity to enjoy simple pleasures shared with friends and family. He will be greatly missed by countless friends worldwide.

Jerry was born in Oshkosh, Wisconsin, on February 23, 1936. He received his bachelor of science degree in chemical engineering from the University of Wisconsin in 1957, and spent the following academic year as a Fulbright Fellow in chemical engineering at the *Technische Hogeschool te Delft* in the Netherlands. He returned to the United States to attend graduate school at the Massachusetts Institute of Technology, receiving his Ph.D. in nuclear engineering in 1962.

After graduation he spent seven years working at General Electric and General Atomics. In 1969, he and two colleagues founded the San Diego-based Science Applications International Corporation (SAIC). A diversified, high-technology research and engineering firm, SAIC and its subsidiaries have over 35,000 employees with offices in over 150 cities worldwide.

After joining UCLA's School of Engineering and Applied Science in 1976, Jerry's research addressed transport and kinetic theory, radiative transfer, radiation hydrodynamics, nuclear reactor

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physics, and applied mathematics. He published two books and 250 papers in these areas. Recently, his research had focused on the development of transport theory for discrete stochastic mixtures and algorithms describing the transport of highly collimated particle beams. Applications of these two research areas include inertially confined fusion, nuclear fission reactors, global climate change, and radiation oncology treatment planning.

Jerry was an active consultant to industry and government, and held visiting appointments at the Brookhaven National Laboratory, the Los Alamos National Laboratory, the Lawrence Livermore National Laboratory, the Nuclear Research Center in Karlsruhe, Germany, and the Universities of Bologna and Rome (*La Sapienza*) in Italy. He was a member of several professional societies and was a registered professional nuclear engineer in the State of California. He was associated with three journals in an editorial capacity: *Nuclear Science and Engineering*, *Quantitative Spectroscopy and Radiative Transfer*, and *Transport Theory and Statistical Physics*.

The excellence of Jerry's research contributions has been recognized by numerous honors and awards. He received the Mark Mills Award of the American Nuclear Society (ANS) for his Ph.D. dissertation work. He was elected fellow of the ANS (1975), the American Physical Society (1980), and the American Association for the Advancement of Science (1986). The University of Wisconsin awarded him a Distinguished Service Citation in 1994 for his contributions to nuclear reactor physics, transport theory, and radiative transfer. In 1997, he was awarded the ANS's Arthur Holly Compton Award for his contributions to nuclear engineering education and research. Two days before his death he was informed that he was a recipient of the ANS's Eugene P. Wigner Reactor Physicist Award for his unique and pioneering contributions to the advancement of the field of reactor physics.

Jerry's students knew him as a wonderful and personable teacher. His lectures were presented with extreme clarity and insight, and his courses were rigorous and challenging. He took service to the UCLA community very seriously and served on many departmental and Academic Senate committees. Perhaps his greatest contribution to the campus was serving as chair of the Graduate Council in 1993-94, during the difficult time of the Professional Schools Restructuring Initiative. He steered that committee with grace and

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fairness and his characteristic good humor. Jerry's last act as chair typifies his ability to have fun with his work: he gave the council a large wooden gavel, dubbed the "Graduate Council Peacekeeper."

Jerry loved his work and enjoyed good food, smoking cigars, off-color humor, and pleasant company. He was a wonderful host and made visitors to his home or his office feel welcome and appreciated. He is survived by his wife, Lucie; his two daughters, Linda and Sandi by his previous marriage to Gayle; his granddaughters, Lauren and Julia by daughter Linda and her husband Jeff; his two brothers, Tom and Jim; and numerous friends on campus and around the world. We will all miss him.

Adrienne Lavine Ajit Mal

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Oreste Pucciani, French: Los Angeles

1916-1999

Professor Emeritus

Born in Cleveland on April 7, 1916, Oreste Francesco Pucciani taught in the UCLA Department of French for 31 years, from 1948 to 1979, and chaired the department from 1961 to 1966. He was instrumental in introducing the existentialism of Jean-Paul Sartre to the United States and built an innovative and highly influential language program. He retired from UCLA in 1979 and died in Los Angeles on April 28, 1999.

The son of a candy manufacturer, Pucciani attended the Cleveland public schools and received his B.A. from Case Western University (then known as Western Reserve) in 1939. He took his doctorate in Romance languages from Harvard in 1943. He studied in France and Italy on a Sheldon Traveling Fellowship in 1946-47, meeting Sartre and his companion Simone de Beauvoir. Returning to the United States in 1947, Pucciani lectured at Harvard, then joined the faculty of UCLA in 1948. Moving through the professorial ranks, he became a full Professor in 1960.

Pucciani's scholarly record reflected the diversity of his interests. His doctoral dissertation was devoted to the reception of Walt Whitman in France. *The French Theater since 1930* (Ginn, 1954), which includes a critical introduction, is still a useful anthology of French theater in the years between the world wars. A well regarded translation of Racine's masterpiece *Phédre* appeared in 1961. But Pucciani was best known as an interpreter of the philosophy of Jean-Paul Sartre. Among his numerous expositions of Sartre's existentialism, the most notable is the long entry on Sartre, written in the French over which he had so stunning a command, in

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Gallimard's *Histoire de la Philosophie* in the *Encyclopédie de la Pléiade*, France's most prestigious publication series.

Pucciani pioneered in teaching courses on Sartre at UCLA before the philosopher's works were translated into English. In his 31 years in the department he directed some 33 doctoral dissertations, many of which dealt with Sartrean existentialism and related literary subjects. Pucciani was a frequent participant in conferences on Sartre both in the United States and in France. He lectured on Sartre at the Sorbonne and in recent years was honored for his lifelong contributions to Sartre scholarship by the North American Sartre Society.

Pucciani's interests were not restricted to unraveling the finer points of existential ontology. He was a passionately devoted theorist and developer of methods of language acquisition. At Western Reserve in the 1930s, he studied with Emile B. de Sauzé and became an ardent champion of Sauzé's "direct method" of language teaching, then little known outside the Cleveland public schools, in which all instruction, including explanations of grammar and vocabulary, is given in the target language.

In the late 1950s, Pucciani pioneered in adapting the direct method to the UCLA French Department's language program. As head of lower-division and subsequently department Chairman, he organized and perfected rigorous and effective methods for the training and supervision of teaching assistants. In 1967, he embodied the results of the department's experience with the direct method in a highly successful and influential textbook, *Langue et Langage*, coauthored with Jacqueline Hamel, which revealed the advantages of immediate and total immersion in a foreign tongue. *Langue et Langage*, which has gone through some five editions, has greatly influenced language teaching in Southern California and throughout the United States. In 1973, Pucciani collaborated with José Rubia Barcia of the UCLA Department of Spanish and Portuguese to produce a companion textbook in Spanish, *Lengua y Cultura*.

Pucciani believed that students should be taught to generate French sentences themselves rather than having them implanted in their heads by the teacher through rote drills and translations from English. Because he saw

language as inseparable from culture, he insisted that students be exposed to major works of literature

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as early as possible. In the lower-division program he devised, students are able to read literary works in French by the end of the first year of study.

Pucciani's dedication to French philosophy, language, and culture was given due recognition by the French government in 1965 with the award of the Knight's Cross of the Legion of Honor. Pucciani was held in high esteem by generations of students whose dissertations he directed and whose subsequent academic careers he closely followed. His colleagues will remember him as a seigneurial figure of a type virtually extinct in the university of today. His absolute conviction of the unique value of French language and literature as a scholarly discipline has left an indelible mark on our department and on the study of French in the United States.

Stephen Werner Eric Gans

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Gerson Rabinowitz, Classics: Berkeley

1919-1998

Associate Professor of Greek, Emeritus

With the passing of Gerson Rabinowitz, on about February 20, 1998, at age 79, the Department of Classics at Berkeley lost one of its most memorable characters and devoted teachers. He had retired at the then-statutory age of 70, but right up to his death he continued to hold unofficial tutorials every week in what was (until prohibited) a smoke-filled office, reading Greek with a select number of students, especially Plato's *Republic*, which he venerated as the source of timelessly valuable insight into the human condition.

Born on February 2, 1919, in Kansas City, Missouri, Rabinowitz was an undergraduate at Berkeley before World War II. He studied briefly at Johns Hopkins University before enlisting; at Johns Hopkins and at Berkeley—where he returned after service for graduate work—he was inspired by Harold Cherniss, who was the country's most eminent expert in ancient philosophy. It was Cherniss, himself a devoted Platonist, who instilled in Rabinowitz a passionate attachment to Plato. From 1948-1954, Rabinowitz taught at the University of Washington. He received a Ph.D. from Berkeley in 1955 and was appointed Assistant Professor of Greek on the campus that same year. He advanced to tenure in 1958.

At the time of his appointment at Berkeley, Rabinowitz's promise as a research scholar was widely acknowledged. His first article, a study of Heraclitus in collaboration with Berkeley's Wallace Matson, appeared in 1956; at the same time, he collaborated on a translation of Plato's *Phaedrus* with W.C. Helmbold. Rabinowitz's dissertation, *Aristotle's Protrepticus and the Sources of its Reconstruction*

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appeared a year later as a University of California Press monograph. This was followed in 1958 with an article on "Platonic piety" in the new periodical for ancient philosophy, *Phronesis*. On the strength of his growing reputation, he was invited to give a paper on Aristotle in Louvain at the inaugural session of the Symposium Aristotelicum, and this was published as "Ethica Nicomachea II.1-6" in a conference volume that has become a classic, *Aristote et les Problèmes de Méthode* (Louvain, 1961). During these early years, Rabinowitz was awarded Guggenheim and ACLS fellowships, a visiting fellowship at Corpus Christi College, Oxford, and a visiting membership at the Princeton Institute for Advanced Study.

He had plans of extending his work on Aristotle's *Protrepticus*, and of embarking on a study of Galen's Platonism. Yet, for reasons that remain imponderable, he suddenly abandoned all interest in these projects.

After 1961 he refrained completely from publication, resisting all attempts by successive department chairs to get him to continue an orthodox research career. It is possible to speculate that he was disappointed by some of the reviews his monograph had received, although Cherniss, in a letter of 1957, describes Rabinowitz's dissertation as "an exemplary piece of mature scholarship, original work of a .. nature very rarely to be seen in a doctoral dissertation." It is also possible that he was mortified by harsh criticism that he heard from some Oxford scholars when he delivered a paper to the Oxford Philological Society. Whatever the cause may have been, Rabinowitz decided in the early 1960s to concentrate his professional work on undergraduate and graduate teaching at Berkeley, following Socrates' observations in Plato's *Phaedrus* that personal contact between teacher and student is greatly superior to the writing of books.

He directed numerous dissertations of students who, in several cases, have made names for themselves in departments of classics or philosophy. He especially liked to teach beginning Greek and courses on Greek tragedy and philosophy. Some students found him too severe, but in many he inspired a reverence that was quite remarkable. What they valued in him was his tireless determination to help them understand all the nuances of Greek and, as one puts it, "to work through dialogue rather than simple assertion," and to give "critiques that leave the student dissatisfied

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until he has given the best account of which he is capable." Anyone familiar with Plato's Socrates will recognize this allusion.

In his younger days at Berkeley, Rabinowitz served as a Humanities Area Advisor for the College of Letters and Science, and also as an associate dean. In one of these capacities he found himself advising a freshman who was inclined to withdraw, by the name of Mario Savio. Rabinowitz persuaded him to continue his studies. He also, at the request of the Graduate Division, paid extensive visits to East Coast campuses to investigate and report on their graduate programs. As he grew older, he became more reclusive but he served conscientiously on various departmental committees.

He was in every sense of the word a personality, old-fashioned in his manners, abrasive in his conversation, but gifted with a fine sense of irony and self-deprecation. He wrote in a letter to one of his department chairs, who had asked him to become vice-chair of the department, "I accept, it should be said, with no little trepidation, both for the department and for myself, with a fairly accurate appreciation of my many incapacities for the post." Opening the door of a colleague by mistake, he apologized with the words: "Trying to open the wrong door—that's the story of my life." As a young man, he had been strikingly handsome and a fine tennis player. Even when elderly and frail, he was stylish in his dress and spritely in demeanor. In his spare time he assiduously attended the Albany racetrack, and one would like to have known how his love of betting on horses meshed in with his Platonism.

Rabinowitz found it difficult to adjust to scholarly methods of which he disapproved. By the end of his life, he had become a fixture of the Classics Department in his generous meetings with his devoted students, but curiously remote from the faculty and the general life of the place. One may regret that a person so intelligent should have chosen to withdraw so resolutely from the scholarly community of his peers, but Rabinowitz had his own priorities and he remained true to them. Few university teachers leave as strong a mark on their students as he did. That is his main legacy. We honor him for it and we miss his presence among us. He is survived by two sons.

Anthony Long Benson Mates Wallace Matson

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Livio Giovanni Raggi, Veterinary Medicine: Davis

1922-1999

Professor Emeritus

Livio Giovanni Raggi died on May 23, 1999 at his home in Carmel, California. He was born in Buie d'Istria-Free Trieste Territory (Italy) on April 9, 1922, and became a U.S. citizen in 1957. He is survived by his wife of 41 years, Vi.

Professor Raggi received his veterinary degree *cum laude* from the University of Perugia, Italy in 1944. Following graduation he served as an Assistant Professor at the University of Perugia and as Assistant Director at the *Istituto Zooprofilattico Sper.* in Teramo before leaving for the United States in 1949 to study for an advanced degree at the Davis campus. During his academic studies at Davis, Professor Raggi carried an appointment as an Assistant Specialist in the Veterinary School. After receiving the Ph.D. degree in comparative pathology in September of 1955, he was promoted to Assistant Professor after which he rose quickly through the ranks to Professor in 1967. He served as Chairperson in the Department of Avian Medicine from 1960 to 1964.

Of the several honors bestowed on Professor Raggi, he especially cherished the recognition he received from the senior veterinary class of 1965 who chose him as the "Outstanding Teacher" of the school. His ability to raise the interest level of students in his poultry medicine course reflected highly on his teaching methods. He was a "no-nonsense" but fair teacher who drew the respect from his students. His reputation as an effective teacher followed him throughout his teaching career.

Professor Raggi served as coordinator of the school's continuing education program from 1967 to 1971, and thus was actively

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involved in bringing a closer liaison between the school and practitioners in the state. In 1970, a resolution was adopted unanimously by the faculty of the school that expressed its gratitude for Professor Raggi's exceptional service to this program. He also received a bronze plaque from the California Veterinary Medical Association that recognized the leadership role he played in developing the program.

In the Department of Avian Medicine (later consolidated with the Department of Public Health to become the Department of Epidemiology and Preventive Medicine) Professor Raggi's research interests primarily concerned viral diseases of poultry, including avian encephalomyelitis, infectious bronchitis, Newcastle disease, and laryngotracheitis. His studies on the biology and immunology of these diseases brought him in close contact with the poultrymen of the state. They appreciated his active involvement in solving field problems and he thoroughly enjoyed being out in the field. An area of basic research on which he spent a considerable amount of time was a minute infectious agent that was coexistent with the infectious bronchitis virus. He was rightly proud to have this time-consuming and difficult research published in 1977 in the *American Journal of Veterinary Research*.

In July 1975 Professor Raggi transferred to the Department of Medicine to develop a teaching and research program in aquatic animal medicine. He initiated research and developed courses on diseases of fish and shell fish. He provided the early leadership in developing this program, which today is considered one of the finest of its type.

Professor Raggi retired from the University on July 1, 1978 after 26 years of service. He was a member of the American Association of Avian Pathologists, American Veterinary Medical Association, California Veterinary Medical Association, New York Academy of Science, F&A Masonry and Phi Zeta. He also was a consultant for two European research institutes located in Athens and in Italy.

Anibal Sánchez Reulet, Spanish and Portuguese: Los Angeles

1910-1997

Professor of Spanish, Emeritus

The death of Anibal Sánchez Reulet, Emeritus Professor of Spanish, was deeply felt by his colleagues and numerous friends and disciples throughout the United States and Argentina. Born in Azul (Argentina), he studied philosophy at the University of La Plata (Ph.D. 1939) and later in Spain, where he worked under the direction of the illustrious Spanish philosopher José Ortega y Gasset. After his return to Buenos Aires he published *Raíz y destino de la Filosofía*, a book received with general praise by the specialists. This book, as well as his extensive study on Contemporary Latin-American Philosophy and other solid contributions to his field, earned him universal recognition as one of the most distinguished Latin-American philosophers. From that time onward, he was a permanent member of the American Philosophical Association. His name appeared in general dictionaries such as the *Larousse*, and in more specialized ones such as J.Ferrater Mora's *Dictionary of Philosophy*. In Argentina, he was Professor of Philosophy and Dean of the Faculty of Philosophy and Letters at the University of Tucumán from 1939 to 1946, the year in which the military coup that imposed the government of Juan Perón expelled all faculty members who didn't accept the dictator's rules. Persecuted for his ideas, Sánchez Reulet lost his position in the university and was imprisoned. Indeed, he was one of many Argentine intellectuals who, in search of an illusive freedom, were opposed to Peronism and all other forms of dictatorship. When it became possible, he went into voluntary exile. After many failed attempts to return to his native country, he remained in the United States, but never lost sight of the political and social problems in Argentina. He maintained during his entire life contacts with his Argentine friends,

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traveling almost yearly to Buenos Aires, and continuing to be amazingly well informed on every aspect of the Argentine reality. After being awarded a Guggenheim Fellowship in 1947-48, he was appointed Chief of the Division of Philosophy, Letters and Sciences in the Pan-American Union (1950-1958), where he soon established very close relations with heads of state, writers and artists from all around the world, many of whom considered him a personal friend. In Washington, Sánchez Reulet contributed to the publication of books, the preparation of art exhibits, other cultural programs and international exchange. In recognition of his contributions to Latin-American cultural relations, the National University of Mexico designated him Professor “Extraordinario” from 1955 to 1957. Meanwhile, his interest in the history of Latin-American ideas, plus the publication of many articles on Latin American literature, made him an ideal candidate for a professorship at UCLA, where Latin American studies were in a period of rapid expansion. The contributions of Sánchez Reulet to the Department of Spanish and Portuguese from 1958 to 1977, the date of his retirement, were invaluable. Many students who wrote their Ph.D. dissertations under his direction are today well-known figures in the American academy. They serve as witness to the time, advice, and interest dedicated by Sánchez Reulet to his students. He was a man of extraordinary culture, based on solid, encyclopedic knowledge; he traveled to Europe and Hispanic countries many times; he was a devoted reader and an enthusiastic film critic. But fundamentally he was an excellent friend who loved human communication. We will miss his sparkling conversation, his brilliant intelligence and his warm humanity.

Rubén Benítez Enrique Rodríguez Cepeda Paul Smith

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Stefan Albrecht Riesenfeld, Law: Berkeley

1908-1999

Professor Emeritus

With the death of Stefan Albrecht Riesenfeld on February 17, 1999, the University of California lost one of its most illustrious scholars, a renowned teacher of law students at Boalt Hall, and a revered mentor of generations of academics, policy officials, and diplomats. Phyllis Thorgrimson Riesenfeld, his wife of 53 years, and their two sons and their families and grandchildren survive him.

Riesenfeld was born on June 8, 1908, in Breslau, Germany, and recalled that one of his first memories was of sitting on his father's shoulders to see Kaiser Wilhem riding in polished armor through Breslau for the dedication of a memorial hall that celebrated the centennial of Napoleon's defeat. After World War I, in which his father was killed in service, Riesenfeld completed his secondary education and went on to study at Breslau University (now University of Wroclaw, Poland). Following his state examination, he wrote a doctoral dissertation on the law of mutual insurance companies. He received a Dr. iur. *summa cum laude* in 1930 and then undertook further studies in law at Milan, where he earned the Dott. giur. (1934). While there, he met Professor Max Radin of the Boalt Hall School of Law faculty, who (speaking German with him) took an interest in bringing him to Berkeley as a research associate to Dean Edwin Dickinson, then seeking assistance from a lawyer who could do research in German, Italian and French. Dickinson leapt at the chance to engage Riesenfeld, but was then astonished to learn on the young man's arrival that he did not know English! In short order, however, Riesenfeld was productively working on the Dean's project and also persuaded the faculty to admit him as a law student. When Riesenfeld informed

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one of his professors, Barbara Armstrong, that he aspired to an academic career on completing his degree at Boalt, she exclaimed, "That's ridiculous, Mr. Riesenfeld. You don't know any English and you don't know any law!" Her lapse in judgment was forgiven graciously, and they became close friends.

There followed further graduate study at Harvard, leading to the J.S.D. degree in 1940, and a major book, *Protection of Coastal Fisheries in International Law* (1942). This work established him as a leading scholar internationally in the field of ocean law, and today is regarded as a classic. By the time of its publication, Riesenfeld had moved on to a stint as a faculty member in law—also enrolling again as a student, this time successfully completing a degree in engineering—at the University of Minnesota. He enlisted in the U.S. Navy and during the Pacific campaign served on an LST in the combat zone. From this experience came some of his choicest anecdotes, among the prize treasures in an armory that supplied his rapier wit and fabled story-telling skills.

In 1952 Riesenfeld accepted the call to return to Boalt Hall, where he soon emerged as a jewel in the University of California's crown. He taught continuously at Boalt until mandatory retirement in 1976, but he continued to flourish afterward as a professor on recall and also as a member of the Hastings "emeritus faculty" in law. He also took up appointment at the time of retirement as Counselor for Public International Law in the U.S. Department of State, and he continued until the end of his life to provide services for the nation as an adviser to the government. Among his many duties was service as litigator in arguing major cases for the United States before the International Court of Justice in The Hague.

Riesenfeld's association with Berkeley was long and fruitful. It is said that when Clark Kerr pronounced the era of the "multiversity," Riesenfeld commented that the universe was challenging enough for him. One would not know it, however, from his extraordinary breadth of scholarship and teaching, both at Berkeley and at the many universities in Europe and elsewhere that benefited from his lectureships and visiting appointments. Probably there has been no legal scholar in this century who has done such splendid work as he did at the

intellectual frontiers of so broad a range of important subject matter in the law. To Riesenfeld, the

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“universe” was vast indeed!

While maintaining a distinguished presence in public international law, he also established himself as one of the world's leading authorities on private international law; he wrote important articles on legal history. He was the author of numerous texts and monographs on bankruptcy, property, secured transactions, and patent law; on social legislation, comparative administrative law; and the treaty-making power. His writings in all these fields are among the standard works on specialized themes and, in some instances, the general subject field. In addition to this virtuoso lifetime effort, Riesenfeld found time to provide highly important consultation to the United States on the postwar judicial organization for Germany during and after the Occupation, and on such issues of law and policy as the governance of the Trust Territories in the Pacific. He was dedicated to the cause of internationalism and, as one whose father was lost in one world war and his homeland devastated in the second, he devoted, with exceptional passion, much of his adult life to the cause expressed in the United Nations Charter: “to save succeeding generations from the scourge of war.”

At his 90th birthday celebrations at the annual meeting of the American Society of International Law and, later, at Boalt Hall, he was presented with a special commendation for service from Secretary of State Madeleine Albright, one of the many gestures of recognition that were extended to him. Especially important to him, too, were his several honorary degrees in jurisprudence from leading European universities; but, he made clear to his friends, to have his adopted country honor him at such a level was of special significance.

Alumni of Boalt Hall who worked under Riesenfeld's direction—both American and foreign, both J.D. graduates and those who earned advanced research degrees—are found throughout the world in private practice, government agencies, and diplomatic posts. Any gathering of them, or of his faculty colleagues young and old on the Berkeley faculty, brings forth cherished stories about his indispensable contributions to their lives and careers, given in so generous a spirit. He leaves wonderful memories and a corpus of scholarly work that is truly of unique scope and brilliance.

Richard M. Buxbaum David D. Caron Harry N. Scheiber

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Sanford Bernard Roberts, Civil & Environmental Engineering: Los Angeles

1934-1997

Professor Emeritus

Sanford Roberts, an alumnus and faculty member of the School of Engineering and Applied Science at UCLA for 30 years, died January 18, 1997, of pneumonia after a valiant 12-year battle with Parkinson's disease. Sandy's illness had forced his premature retirement in 1991, but throughout his remaining years he exhibited the same strength and good humor that had characterized his entire life.

Sandy was born in New York City on February 20, 1934, and received his bachelor's degree from City College of New York in 1956. Upon graduation he relocated to Los Angeles, lured by employment in the high-tech environment of the thriving aerospace industry. He pursued his graduate education while working, earned his master's degree from the University of Southern California in 1959, and his doctorate from UCLA in 1965, the latter under the chairmanship of world-renowned engineer T. H. Lin. He was immediately hired as an Assistant Professor by the faculty who recognized his outstanding potential as a teacher and researcher.

Sandy's education and work experience had all been concentrated in the area of structural mechanics, and his earliest research dealt with the analysis of complex plate and shell structures. But it was in biomechanics that he distinguished himself. He was one of the first researchers to recognize the importance of the field, and he applied himself to a modern engineering analysis of the human body with his customary enthusiasm and vigor. Originality and analytic rigor characterized his research. Among his projects, he formulated a three-dimensional finite element model of the human

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head/neck complex as part of a comprehensive study of head trauma. He developed a structural dynamic model of the human thoracic skeleton, and studied respiratory mechanics, including the kinematic and deformation characteristics of the rib cage, diaphragm and abdominal wall during the respiratory cycle. He inspired students to work in the area, and was instrumental in developing a biomechanics program in his department and a Ph.D. field of bioengineering in the School of Engineering and Applied Science.

Sandy was also an exceptionally capable administrator. He served as director of a Department of Transportation program for study of motor vehicle trauma, which was a joint activity of the School of Engineering and School of Medicine. In this role, he organized a multi-disciplinary research effort involving a large group of faculty from both schools. He also co-chaired a planning group for the Institute of Engineering Medicine, an effort that led to the establishment of the Crump Institute. In short, Sandy was instrumental in promoting and developing many activities on the interface of engineering and medicine.

Throughout his academic career, Sandy displayed uncommon devotion to all his activities, and teaching was another area in which he truly excelled. He was one of the most highly regarded teachers in the department. His students praise his enthusiasm and friendliness, and his ability to make difficult concepts understandable. His presentations were always organized, effective, and stimulating. It is well known that students frequently took his classes even though the subject matter was far removed from their main areas of interest.

On a personal level, Sandy had a zest for life, generosity, and sense of humor that made him a pleasure to be with. He was a loving father to his three daughters, and was always available to them or to any of his friends in need of companionship, advice, support, or assistance. His interests extended well beyond the academic world. He enjoyed outdoor activities, such as biking, camping, and fishing; he enjoyed traveling, good food, and an occasional rousing game of poker. He was an accomplished athlete, and a consummate basketball fan (and critic). So it was particularly distressing to see his illness gradually deprive him of the

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ability to pursue the activities he enjoyed so much. If willpower alone could have overcome this final hardship, Sandy would surely have prevailed. All who knew him will remember him for the intelligent and kind soul that he was.

Alan Ardell Lewis Felton George Stern

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J. Wesley Robson, Philosophy: Los Angeles

1904-1997

Professor Emeritus

Director of Admissions and Relations with Schools

J. Wesley Robson died at the age of 93 of pulmonary complications on May 12, 1997 in San Diego, California.

Robson was born in Iowa but as a child moved to Spokane, Washington. Endowed with a gift for friendship and putting people at ease, he became student-body president of Spokane's North Central High School. In 1928 he graduated from the University of Washington, where he was a member of Sigma Chi and Phi Beta Kappa. In 1933 he received a Ph.D. from Harvard University. Before coming to UCLA in 1939 he taught at Columbia University, Lawrence College, and the University of Washington.

As a member of the UCLA philosophy department his main scholarly interest was the philosophy of David Hume, but his regular teaching load included service courses such as philosophy in literature. During the years of World War II, he served occasional terms as acting chairman of the department.

He had abiding interest in the problems of undergraduate students, and from the end of World War II he became increasingly involved in the administration of their affairs. In 1950 he became Associate Dean of the College of Letters and Science for Student Affairs. Of his performance of duty in that office, Dean Paul A. Dodd said, "His record here is nothing short of brilliant. On policy matters he is provocatively critical, understanding, and both intellectually and educationally wise. He is a wonderful student counselor. He is uncompromising in standards, yet quick to sense the student's point of view in gaining an equitable solution."

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In 1957 he was advanced to the full professorship. And in 1961 he became Director of Admissions and Relations with Schools at UCLA, a post in which he served until he retired from the University in 1971. His performance as director was marked by the same qualities that were mentioned by Dean Dodd. For example, he was still a superb one-on-one counselor. Generally, his administration was characterized by a persistent effort to make the California State Master Plan work, which required him to interpret the rules so as to maintain their integrity and also accommodate the myriad individualities presented by incoming students. As one of his aids puts it, "He often made excellent but unpopular decisions, and at the same time made people like it." He made advancements wisely within his office and was well liked by the large body of nonacademic personnel who worked there.

A memorial to J. Wesley Robson must also contain a remark about his lifelong wife, Catherine, who died in 1991. She was a most admirable person—eminently sensible and kindly and helpful—who was loved by a host of faculty, deans, and chancellors.

Robson is survived by his sons, John and Greg, six grandchildren, and six great grandchildren. He was a valuable member of the faculty at UCLA during a period of phenomenal growth.

Donald Kalish Robert M. Yost

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Robert John Schlegel, Pediatrics: Los Angeles

1927-1994

Professor Emeritus

Robert John Schlegel was born on December 31, 1927 in Ft. Wayne, Indiana, to Dr. and Mrs. Edward H. Schlegel (Marguerite Parsons). He attended Forest Park Elementary School and North Side High School in Ft. Wayne.

Professor Schlegel received his Ph.D. from the College of the University of Chicago in 1949 and his M.D. from the Medical School in 1955. He completed pediatric residency training and a fellowship in genetics and endocrinology at State University of New York in Syracuse, served 12 years in the U.S. Army Medical Corps at Walston AH, in Ft. Dix, New Jersey; Tripler General Hospital in Honolulu, Hawaii; and Walter

Reed General Hospital in Washington, DC. In July 1969, he joined the faculty at Stanford University Medical School. In 1971 he became Vice-Chair of the Department of Pediatrics at the King/Drew Medical Center in Los Angeles. From 1974 to 1975, he was a Robert Wood Johnson Health Policy Fellow at the National Academy of Sciences and in 1976 he became Chair of the Pediatrics Department at the King/Drew Medical Center in Los Angeles and Vice-Chair of the Department of Pediatrics at UCLA. After 22 years of service, he retired in 1993, and became Professor, Emeritus at the Charles R. Drew University of Medicine and Science and at UCLA.

Professor Schlegel was a fellow of the American Academy of Pediatrics and the Royal Society of Health. He was also a member of the Society for Pediatric Research, the American Pediatric Society, the Endocrine Society, the Western Society for Pediatric

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Research, the Association of American Pediatric Departments Chairmen, and the American Federation for Clinical Research.

Professor Schlegel was a most unique individual who was well suited for and excelled in many roles as research scholar, teacher, administrator and physician. He contributed considerably to the field of genetics and endocrinology, especially in the area of gonadal dysgenesis. His special love for children coupled with an interest in and understanding of social pediatrics characterized his leadership in the development of many outstanding pediatric programs serving disadvantaged children in South Central Los Angeles. He received many teaching awards from students and residents. Possessing an ability to provide wise counsel, he was often the mediator in difficult situations. During retirement, Professor Schlegel continued to serve the children he loved as an unpaid volunteer at the Community Preservation Center of the Ninety-Second Street Elementary School in Watts, which has been re-named in his honor.

Professor Schlegel developed an interest in Japanese ink painting and bonsai while stationed in Hawaii. When not busy with clinical and academic matters, he busied himself with his beautiful bonsai plants that were proudly displayed in his front yard. Self taught, Professor Schlegel's hand-made, Japanese-ink printed Christmas cards were prized works of art characteristic of his extremely gentle and peaceable nature.

Professor Schlegel was the beloved husband of Lois (Gussie) Schlegel. He was much the loved father of Robert J. Schlegel Jr., M.D., of York, Pennsylvania; Allison M. Schlegel Topik of Vienna, Virginia; and Tracy A. Cullander of Farmington, New Mexico; grandfather of Kira and Alexander Topik and Brynn and Camryn Cullander; and brother of Edward H. Schlegel Jr. of Ann Arbor, Michigan.

Betti Jo Warren Jo Anne Brasel

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Glenn Theodore Seaborg, Chemistry: Berkeley

1912-1999

Professor Emeritus

University Professor

Chancellor Emeritus

Glenn T. Seaborg, world-renowned nuclear chemist, educator, scientific advisor to 10 United States presidents, humanitarian, and Nobel Laureate in Chemistry (1951), passed away at his home in Lafayette, California, on Feb. 25, 1999, following a stroke suffered while attending the American Chemical Society meeting in Boston in August, 1998. Seaborg, who was Chancellor at UC Berkeley from 1958 to 1961, is probably best known for his co-discovery of plutonium (1941) and nine other transuranium elements, the formulation of the actinide

concept (1945), his chairmanship of the U.S. Atomic Energy Commission (1961-71), and his tireless efforts to improve U.S. science education at all levels.

Seaborg was born on April 19, 1912 in Ishpeming, Michigan, of Swedish ancestry. He attended school there until he was 10 years old when his family moved to a small town near Los Angeles. He completed high school in the Los Angeles suburb of Watts in 1929, and then attended UCLA, where he received an A.B. in chemistry in 1934. He was admitted to graduate study in the Chemistry Department at UC Berkeley and received a Ph.D. in spring, 1937, in the depth of the Depression, but was soon asked by Professor G. N. Lewis to serve as his personal research assistant.

The first chemical separation and positive identification of plutonium as plutonium-238 was accomplished in February 1941 by Seaborg; fellow instructor, Joseph W. Kennedy; Seaborg's first graduate student, Arthur C. Wahl; and E. M. McMillan. Soon after, the

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new isotope plutonium-239 was found to be highly fissionable. Because of potential military applications, these results were voluntarily withheld from publication until 1946, after World War II.

In 1942, Seaborg married Helen Griggs (then E. O. Lawrence's secretary), at Pioche, Nevada. They were en route to Chicago, where Seaborg had been called to head a chemistry group at the University of Chicago's Metallurgical Laboratory to devise plant processes for chemical purification of plutonium for the World War II Manhattan Project to develop an atomic bomb. Helen and Glenn's marriage was to last for more than 56 years and Seaborg often fondly referred to Helen as “his best discovery of all.” They had six children: Peter, who died in 1997, and Lynne Seaborg Cobb, David, Steve, Eric, and Dianne Seaborg who survive Glenn.

In 1944, after the process chemistry for plutonium was essentially worked out, Seaborg and his co-workers began attempts to produce and identify the next transuranium elements, 95 and 96, americium and curium, respectively. They were unsuccessful until Seaborg came up with the “actinide” concept of heavy element electronic structure in which the elements heavier than actinium are placed as a transition series under the lanthanide transition series in the Periodic Table of Elements. This was viewed as a “wild” hypothesis at the time, but later investigations have verified the concept, which is incorporated in the modern day Periodic Table.

In 1945 Seaborg returned from Chicago to become a full Professor at Berkeley. He and his co-workers, including many graduate students and postdoctoral fellows, went on to discover seven more transuranium elements beyond curium. These included elements 97 through 102, and element 106. The first of these, Berkelium (97) and Californium (98), were produced at the Berkeley 60-Inch Cyclotron in 1949-50. Shortly thereafter, in 1951, Seaborg and McMillan were awarded the Nobel Prize in chemistry for their research on the transuranium elements.

In 1952, Seaborg and coworkers at Berkeley, together with scientists from Argonne and Los Alamos, quite unexpectedly discovered Einsteinium (99) and Fermium (100) in the debris from the first thermonuclear device, “Mike,” tested in November, 1952 by the Los Alamos Scientific Laboratory at Eniwetok in the South Pacific. Seaborg and coworkers at Berkeley then produced Mendelevium (101) in 1955 and Nobelium (102) in 1958. Element

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106 was identified in 1974 by a Berkeley-Livermore team led by Ghiorso but which included Seaborg. After the discovery was confirmed by another group in 1993, the discovery team proposed the name “Seaborgium” for the element at Albert Ghiorso's suggestion. Although the name was at first rejected by the Union of Pure and Applied Chemistry on the grounds that Seaborg was still alive, it was finally approved in August, 1997. Seaborg regarded this as an even greater honor than the Nobel Prize.

Seaborg served as Chancellor at UC Berkeley from 1958 until 1961, when President-Elect John F. Kennedy asked him to Chair the U. S. Atomic Energy Commission. Seaborg led the negotiations resulting in the limited nuclear test ban treaty prohibiting the testing of nuclear devices in the atmosphere or under the sea, approved by the U. S. Senate in 1963. He strongly supported the use of nuclear energy as a source of electricity, and led delegations to some 63 countries, including the USSR, to promote the peaceful uses of atomic energy. Seaborg returned to Berkeley in 1971 as Professor of Chemistry and resumed his teaching duties which he carried out until 1979. He supervised the Ph.D. research of more than 65 students. He became the first Director of the Lawrence Hall of Science which he founded. He served as Associate Director-at-Large of the Lawrence Berkeley National Laboratory until his death. He authored more than 500 scientific articles and numerous books, including editing his journals which he faithfully kept throughout his career. These formed the basis for a number of books, including an autobiography published last year entitled, *A Chemist in the White House: From the Manhattan Project to the End of the Cold War*. He was active in the American Chemical Society throughout his career, serving as its President in 1976. One of his last accolades was being voted one of the "Top 75 Distinguished Contributors to the Chemical Enterprise" over the last 75 years by the readers of *Chemical & Engineering News*. It was this Award that he accepted at a huge ceremony and reception at the August 1998 Boston ACS meeting, the evening before his stroke.

Glenn loved to hike and he and Helen laid out an interconnected network of 12-mile trails in the East Bay Hills above Berkeley extending to the California-Nevada border which form a link in a cross-country trek of the American Hiking society. Glenn

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was also a strong supporter of the athletic program at UC Berkeley. Football was his favorite spectator sport and during his tenure as Chancellor the football team went to the Rose Bowl.

In spite of his legendary accomplishments, Glenn Seaborg always had time for students, family members, and even non-scientists who wanted to visit with him. He prepared as carefully for lectures to freshman chemistry classes as for appearances before audiences of renowned scientists. He will live on through his prolific writings and in the cherished memories of the hosts of students, scientists, colleagues, politicians, and lay people whom he has influenced.

Joseph Cerny Albert Ghiorso Darleane C. Hoffman

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Richard Skalak, Bioengineering: San Diego

1923-1997

Professor in Residence

Richard Skalak was born in New York City on February 5, 1923. He died peacefully at home in San Diego on August 17, 1997, after being ill with cancer for two years.

Richard received his B.S. and C.E. in civil engineering and engineering mechanics from Columbia University in 1943 and 1946, respectively. He served in the U.S. Naval Reserve as an instructor in radar and sonar in Washington, D.C. from 1944-1946. After receiving his Ph.D. from Columbia in 1954, Richard was appointed there as an Assistant Professor of Civil Engineering; he was promoted to Associate Professor at Columbia in 1960 and full Professor in 1964. He became James Kip Finch Professor of Engineering Mechanics in 1976. He also served as Director of the Bioengineering Institute of Columbia University from 1978-1988 and Chairman of the Department of Civil Engineering and Engineering Mechanics from 1985 to 1988.

In 1988, Richard was recruited from Columbia University, where he had studied and worked for nearly 50 years, to come to the University of California San Diego as Professor-in-Residence of Bioengineering. From 1992 to 1996, he was the Founding Director of the Institute for Mechanics and Materials at UCSD. The Institute was the only one established by the National Science Foundation after competitive applications by many institutions.

Richard had a most distinguished academic career. His early research interests were in engineering applications of fluid mechanics. He began to combine engineering mechanics and biomedical sciences in the early 1960s in his pioneering work on

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wave propagation in the pulmonary circulation. During his sabbatical leave in Dr. P.-I. Brånemark's laboratory at the University of Gothenburg in 1967-1968, Richard performed his classical study on the flow and deformation of human blood cells in the living microcirculation. Upon returning to Columbia, he initiated a series of imaginative and elegant research studies on blood rheology, including the material properties of red blood cells and cell membrane, viscoelasticity of white blood cells in the passive and active states, micromechanical and molecular bases of cell aggregation and adhesion, blood cell interactions in capillaries and microvascular network, and flow properties of blood in the circulation. These interdisciplinary studies, which he continued at UCSD, established the bioengineering principles of fundamental biomedical problems and had important implications in a number of clinical conditions, including inflammation, blood diseases, and cardiovascular disorders. While Richard was best known for his research in blood rheology, he also made prominent contributions in several other fields, including the biomechanics of craniofacial growth, skin replacement, osseointegration and titanium implants. He played a major role in fostering tissue engineering as a new frontier of biomedical engineering.

Richard had an outstanding ability to combine quantitative engineering analysis with state-of-the-art biomedical experimentation. He was able to formulate problems by distilling their essence into clear mathematical form, and to seek out the problem that was fundamental. His analytical approach guided many innovative experimental studies and led to improved understanding in each of his chosen research areas. He succeeded in opening new avenues of studying and understanding biological function through innovative engineering approaches. He had an unceasing, unselfish drive to create and innovate, and to teach by example these qualities to students and associates.

Richard trained many graduate students and postdoctoral fellows, who are now holding key positions in academia and industry. For his undergraduate teaching accomplishments, he won the Great Teacher Award of Columbia University in 1973.

In recognition of his outstanding achievements, Richard Skalak received many prestigious awards and honors. These included the Centennial Service Award from the American Society of Mechanical

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Engineers (ASME) in 1980, the ALZA Medal from the Biomedical Engineering Society in 1983, the Lissner Award from the Bioengineering Division of ASME in 1985, the Theodore von Karman Medal from the Engineering Mechanics Division of the American Society of Civil Engineers (ASCE) in 1987, the Poiseuille Medal from the International Society of Biorheology in 1989, an Honorary M.D. Degree from the University of Gothenburg in 1990, the Medal of Merit from the Czechoslovakian Academy of Sciences in 1990, and the Melville Medal from ASME in 1990. He was selected the recipient of the ASME 1997 Applied Mechanics Award one week before his passing.

Richard was elected to many honorific societies and academies. He was named Fellow, American Society of Mechanical Engineers in 1981; Fellow, American Academy of Mechanics in 1982; Fellow, American Society of Civil Engineers in 1985; Fellow, New York Academy of Medicine in 1985; Fellow, Society of Engineering

Science in 1990; Founding Fellow, American Institute of Medical and Biological Engineering in 1990; and Fellow, American Association for Advancement of Science in 1996. Particularly noteworthy is his election to membership in the National Academy of Engineering in 1988.

Richard's leadership and visionary role was sought after by many governmental, academic and private organizations. He served in many influential capacities for professional societies and scientific journals. He was a member of the Editorial Advisory Board of *Biorheology* from 1976-1988, Associate Editor of the *Journal of Applied Mechanics*, ASCE from 1978-1979, Chairman of the Applied Mechanics Division of ASME in 1979, President of the Society of Engineering Science in 1982, Associate Editor of *Circulation Research* from 1982-1985, Editor of the *Journal of Biomechanical Engineering*, ASME, from 1983-1987, President of the Society of Biomedical Engineering in 1983, Vice President of the Society of Engineering Science from 1984-1985, President of the Biomedical Engineering Society, from 1986-1987, Co-Chairman of the First World Congress of Biomechanics in 1990, and Co-Chair of the Biomedical Engineering Society Annual Fall Meeting in 1997. He was a member of the Board of Directors of the Institute of Applied Biotechnology, Gothenburg, Sweden, from 1976-1997, the Biomedical Engineering Society from 1980-1984, the American Bureau for

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the Advancement of Medical Research in China from 1979-1988, and the Society of Engineering Science from 1984-1997.

Richard was kind, considerate, generous, efficient, and self-disciplined. He was remarkable in his administrative ability and interpersonal affinity. As Director of the Bioengineering Institute at Columbia University, he laid the foundation for Columbia's current development in this field. In recognition of his contributions, a “Richard Skalak Colloquium in Biomedical Engineering” was established at Columbia in 1996. As the Founding Director of the Institute for Mechanics and Materials at UCSD, he succeeded in promoting interactions between the disciplines of mechanics and materials at the national level, the goal set forth by NSF in establishing the Institute.

Richard's hobbies were gardening and fishing. He was also an accomplished dancer, carpenter, cook, and harmonica player. He is survived by his wife, Anna Lesta Allison, whom he married in 1953 in New York City. They had four children: Steven, Thomas, Martha, and Barbara, and three grandchildren: Sarah, Leslie and Matthew.

In Richard's passing, UCSD lost one of its most distinguished faculty, the field of bioengineering lost a great leader and pioneer, all those who had the fortune to know him lost their marvelous friend, his family lost a loving and beloved husband, father and grandfather, and the world lost a superb human being. While we mourn this great loss, we are most grateful for the privilege and fortune of knowing such a marvelous man. His spirit, his thoughts, and his deeds have been spread to all parts of the world and will always be here to guide students in the field for generations to come.

Yuan-Cheng Fung Geert W. Schmid-Schönbein Shu Chien

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Ray F. Smith, Entomological Sciences: Berkeley

1919-1999

Professor of Entomology, Emeritus

Ray F. Smith, Professor of Entomology, Emeritus at the University of California Berkeley, died August 23, 1999 in his Lafayette home at age 80.

Ray, born on January 20, 1919 as a native son of California and alumnus of Berkeley's graduate school, became an internationally recognized champion of entomology. Absorbing the teachings of each of his distinguished Berkeley faculty mentors, E. O. Essig, A. E. Michaelbacher, and E. G. Linsley, he developed into a significant builder of Berkeley's entomological program. From the beginning of his academic career, it was apparent that an ecological approach to the economic ravages of insects was to be the hallmark of his teaching, research and advocacy. He encompassed Berkeley's strong tradition in agricultural entomology and fully appreciated the University's history of accomplishment in biological control. Ray accepted the dictum that pesticides are to be considered within the context of existing natural factors of population regulation and that their use should be minimal and precisely targeted. He attracted, stimulated and trained a formidable group of future leaders in the field of pest management whose efforts encompassed a concept of supervised control, one that evolved into integrated pest management. Well over 60 of his 300 scientific publications are directly concerned with the concept and practice of integrated pest management, and selected publications have been translated and published in German, French, Italian and Spanish.

In recognition of his administrative potential he became, in 1959, Chair of the Department of Entomology and Parasitology, a

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position he held until 1973. Under the combined leadership of Ray and his dean, E. G. Linsley, the department grew, diversified, and consolidated its place on the Berkeley campus. Using the 1960-1975 Master Plan for Higher Education in California and the Kerr policy of decentralization of administrative authority, the department became one of Entomological Sciences, with an instructional Department of Entomology and Parasitology and four autonomous research divisions, including one in biological control and another in invertebrate pathology, with a combined total of 46 faculty members and an academic ranking of first in the United States.

Late in his career, Ray served as Associate Project Director of the International Biological Program, a National Science Foundation project entitled The Principles, Strategies and Tactics of Pest Population Regulation and Control in Major Crop Ecosystems (1970-1977). He also served as Project Director for the University of California for Pest Management and Related Environmental Protection (U.S. Agency for International Development (UC/AID)), and from 1979 until his retirement in 1982 served as the Executive Director of the Consortium for International Crop Protection which took over supervision of the UC/AID project.

Accolades for his professional achievements include the C.W. Woodworth Award for Outstanding Achievements in Entomology, given by the Entomological Society of America; an honorary degree of Doctor of Agricultural Sciences from College van Dekanen, Wageningen, The Netherlands; Fellow, American Academy of Arts and Sciences; Fellow and Honorary member and President of the Entomological Society of America; Fellow, California Academy of Sciences; Fellow, Entomological Society of Canada. In 1981, he was elected to the National Academy of Sciences. As a well-deserved tribute near the end of his career, he was co-recipient of the 1997 World Food Prize for his enduring efforts to promote integrated pest management, which is credited with drastically reducing the use of chemical pesticides throughout the world. After his retirement he was awarded the UC Berkeley Citation for his distinguished achievements in agricultural entomology and his notable service to the University.

On a more personal level, it was Ray's tolerance, encouragement and willingness to discuss problems and ideas that characterized

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his stewardship. No matter the hour, or how pressing the work, his door was open to colleagues and students alike; to anyone in need of advice or merely an ear to bend. His energy, patience, and eagerness to be of help were amazing. He will be sorely missed by those of us who knew him both as a person and as a colleague.

He is survived by his wife of 59 years, Elizabeth J. Smith; two children, Kathrine Stark of Lafayette and Donald Smith of McKinleyville, California; a sister, Betty Webler, in Alaska; and seven grandchildren.

William Allen John Casida Edward Sylvester

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Leo Harry Sommer, Chemistry: Davis

1917-1999

Professor Emeritus

Professor Leo H. Sommer was born on September 21, 1917 in New York City. His entire college education as well as his first academic position was at Pennsylvania State University in State College, Pennsylvania. He received his B.S. in 1941, his M.S. in 1942 and his Ph.D. in 1945 working in the laboratory of Frank C. Whitmore. He began as an Instructor at Penn State in 1943 while still a graduate student, and was appointed Assistant Professor in 1947, Associate Professor in 1952 and Professor in 1960. During the 1950-1951 academic year, Professor Sommer was a Research Fellow and for the 1961-1962 year he was a Guggenheim Fellow at Harvard University. During the latter year he began work on his pioneering book *Stereochemistry, Mechanism and Silicon*, published by McGraw-Hill in 1965. In 1963 at the Los Angeles National Meeting of the American Chemical Society, Professor Sommer was honored with the Frederic Stanley Kipping Award in Organosilicon Chemistry sponsored by the Dow Corning Corporation.

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Then in 1965 he moved with most of his Penn State research group to the Chemistry Department at Davis, which had just begun a major expansion and had moved into a new building. He remained at Davis until his retirement at age 70 in 1988. While at Davis he served as research mentor for more than 25 graduate students and postdoctoral fellows.

Professor Sommer's research was generously supported over the years by the National Science Foundation and by the Dow Corning Corporation. He published a total of 144 technical papers, mostly in the *Journal of the American Chemical Society* or in the *Journal of Organometallic Chemistry*. He also received 41 patents between 1950 and 1963 which were assigned to the Dow Corning Corporation. His research interests, beginning with his M.S. and Ph.D. thesis projects and continuing after he became a faculty member, were mainly in the areas of stereochemistry and organosilicon chemistry. In 1947 he formulated a program of mutual cooperation with the Dow Corning Corporation that continued for almost 30 years. Professor Sommer's early work was focused primarily on synthesis, kinetics of reaction, reaction mechanisms and substituent effects of new types of aliphatic organofunctional silicon compounds. Later his research developed into studies of reaction rates at bridgehead silicon, rearrangement reactions of alpha-haloalkylsilyl hydrides, synthesis of optically active organosilicon compounds, and stereochemistry of substitution at asymmetric silicon. Near the end of his research career his contributions were directed toward the photochemical and pyrolytic generation of and chemistry of reactive organosilicon intermediates containing multiple-bonded (unsaturated) silicon. In all of these areas Professor Sommer's work has continued to be frequently cited.

Besides his research endeavors, Professor Sommer was also a dedicated and enthusiastic teacher. His favorite course at Davis was a large, lower-division, lecture-laboratory course in organic chemistry for non-majors. He was well liked by all of his students who in their evaluations commented on his special "concern for their enjoyment of the course." In the last few years before he retired, Professor Sommer introduced some poetry reading into his lectures to lighten up his classes, and this was something most of the students found to be "refreshing and inspiring." His exams also usually included a poetry selection. One of his favorites was from Robert Frost's "Stopping by Woods in a Snowy Evening" (1923):

*The woods are lovely, dark and deep
But I have promises to keep
And miles to go before I sleep.*

For relaxation, Professor Sommer enjoyed listening to traditional jazz. He died at his home on February 1, 1999, and is survived by his wife of 54 years, Sara F. (Sally) Sommer of Burlingame, California;

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and by his three sons, Eric of Vancouver, B.C., Jeffrey of Roseville, California, and Scott of Davis, California. He is greatly missed by his family and colleagues and by his many former students.

Edwin C. Friedrich Raymond M. Keefer Richard E. Kepner

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Arthur Richard Spurr, Vegetable Crops: Davis

1915-1999

Professor Emeritus

May 20, 1999 witnessed the passing of Arthur Richard Spurr, one of the University's most dedicated plant scientists. Spurr was born on July 21, 1915 in Glendale. He began his life-long love of working with plants when he started selling camellias at hotels in Pasadena at age 7. Later, as a young man, he was a “tree doctor” in the orange groves on the Irvine Ranch in Southern California.

Spurr received a bachelor's degree in subtropical horticulture in 1938 and a master's degree in botany in 1940 from UC Los Angeles as well as a master's degree in 1947 and a doctorate in 1948 in biology from Harvard.

He served as a medical administrative officer in the Army Air Force in Europe and Africa during World War II and retired as a lieutenant colonel in the Army Reserve.

He joined the UC Davis faculty in 1948 in what was then the Division of Truck Crops. His research specialties included plant mineral nutrition in various vegetable crops.

Spurr was one of the world's leading authorities on the use of microanalysis to localize the distribution of elements in tissue, in particular involving the use of electron microscopy, microprobe X-ray analysis, and secondary ion mass spectrometry (SIMS). He was the first plant scientist to apply the last technique. He published extensive research and reviews on the applications of microanalysis. His research on microprobes led to invitations from the Cavendish Laboratory and other leading centers in England and France while on two leaves in 1971-72 and 1977-78.

Spurr's efforts to improve techniques to facilitate microanalysis of elements in biological tissues led to a high point in his career—

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the development of a low-viscosity epoxy resin embedding medium for electron microscopy. This aqueous system avoided distortion of tissues and other problems engendered by other solvents in vogue at that time. Spurr also formulated three staining/counterstaining procedures compatible with his embedding sequence. This technique was later patented and an industrial firm was contracted to market the resin. Publication of this system in 1969 revolutionized microtechniques for biological materials in general, attracting international attention. Applications extended to mineral specimens, industrial materials, even to the study of moon rocks. Such diverse uses resulted in extensive citation of Spurr's publication. At the time of his retirement in 1983 it was ranked among the 50 most cited articles in all sciences and Spurr was ranked among the five most cited

authors in plant sciences in modern times.

Spurr and his wife, Winifred, rendered invaluable service to the Davis community in several capacities. They were pioneers in the early development and construction of the Davis Parent Nursery School—a model for such institutions at that time. Again, they became charter members of the Davis Unitarian Fellowship (later Church) in 1955. In 1971, he helped spearhead an effort to save the UC Davis Arboretum, an effort that was successful in raising necessary funds to sustain the Arboretum as a viable entity. Subsequently, he was a long time trustee of Friends of the UC Davis Arboretum and served as its president pro tem and later president in 1974-76.

Despite severe health problems, Spurr managed to continue his studies when retired. His fascination with plant life continued unabated; even in his final period when barely able to move, he was often observed in his garden, if only to instruct helpers. He is survived by his wife, three sons, a daughter, and a sister.

Charles M. Rick Donald Nevins Lawrence Rappaport

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John L. Stanley, Political Science: Riverside

1937-1998

Professor

With the death of John Langley Stanley in February of 1998, UC Riverside and the entire scholarly world lost a brilliant teacher of political philosophy and an internationally respected scholar. To his wife, Charlotte, and their three children, Andrea, John (Jay) and Margo, the loss of the deeply loving and equally beloved father and husband cannot be measured. In an important way, John Stanley lived deep within his family and they with him.

John's students delivered their own message about the loss of this superb teacher in the form of a surprising number of letters and telephone and e-mail messages to the Political Science Department. The gist of the collective expression was that John was one of the best or the best teacher any of them had ever encountered. But those of us in Political Science already knew that, as we had been hearing it from students for three decades in both face-to-face encounters and in the mass from their “comments” on the course evaluation forms. In the corridors of Watkins Hall, John was a striking and unforgettable physical presence for three decades and more. Partly this was due to his restless vitality but mostly due to his resonant voice articulating a flawless American English. For many of us it is hard to live with the thought of not hearing him again in the corridors or at meetings.

John was born in Boston, Massachusetts, in November, 1937 and spent his early years in Newton, Massachusetts. His family moved to Rye, New York, where he was educated in the public schools. He matriculated at Kenyon College in Ohio in 1956 and graduated with honors in political science four years later. John enjoyed a year at Selwyn College, Cambridge, where he studied

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modern European history. In 1961 he enrolled in the doctoral program of the Government Department at Cornell University, after being awarded a prestigious Woodrow Wilson Fellowship. There he concentrated on political theory, particularly the intellectual contributions of Georges Sorel.

In the 1950s and 1960s, Sorel's reputation was at its nadir. Cursed as an apostle of violence or a precursor of fascism (Sartre labeled his works “fascist utterances”), or as an advocate of elitism as well as having been dismissed by Lenin as a “professor of confusion,” Sorel appeared to be ready for the dustbin of history. John saved him from this fate. While still in graduate school and before arriving at UCR in 1965, John, in

collaboration with his wife, Charlotte, began a translation of Sorel's *The Illusions of Progress*. That translation was published in 1969 to a warm critical welcome. The work included an extended introduction by John and, with that publication, we can say that the modern study of Sorel began.

John's project was not to rehabilitate Sorel, although some rehabilitation was accomplished by the time John had finished writing about him. Rather, John wanted to make a thorough and analytical investigation of the corpus of Sorel's works. He showed Sorel's work to be nuanced and learned, though not popular in an age in love with the doctrine of progress. In *From Georges Sorel: Essays in Socialism and Philosophy* (a compilation of selections of Sorel's works) translated by John and Charlotte with an introduction by John, he continued his serious close examination of Sorel and along the way convincingly shattered the notion that Sorel was a "precursor" of fascism or a reactionary authoritarian. His masterwork on Sorel was *The Sociology of Virtue: The Political and Social Theories of Georges Sorel*, published in 1981. That established John's reputation as arguably the world's leading authority on Sorel. Two other translations followed, including a work that Sorel wrote in Italian, and to accomplish this John learned Italian. His last Sorel book, published in 1990, was *From Georges Sorel vol. 2: Hermeneutics and the Sciences*, in which he presented and analyzed Sorel's writings on interpretive problems in religion, art, science and political theory.

There are few testable hypotheses in political theory, yet John was always alert to the possibility of finding counter-examples to

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his own beliefs as well as the assertions of others. A memorable example was his response to Hannah Arendt, who had proposed that totalitarianism was an invention of the twentieth century. In a 1987 article in *The Review of Politics*, John pointed out features of Shaka's rule of the Zulu empire in the early nineteenth century that corresponded to Arendt's definition of totalitarianism. To look beyond the traditional domains of Europe and Asia was typical of the originality and compass of John's thought.

With the same intellectual courage and insight that led him to Sorel, John, acting on Hegel's dictum that "the owl of Minerva rises at dusk," turned his attention to Marx, specifically challenging the stance of a group of "Western Marxists" who were attempting to present "Marxism with a human face," dissociating him from Engels and "scientific determinism." John would have none of this, and proceeded, in a series of five articles in scholarly journals, to delve into the early Marx, Marx's critique of Hegel and his relation to Engels' dialectics of nature. Along the way he demonstrated his originality and changed the views regarding Marx of more than a few scholars. He was well into writing a comprehensive work on "Marx's View of Nature" when, alas for the world of Marx scholarship, as well as for all of us who knew him, his last illness took him with shocking suddenness.

Turning to his teaching, John had a larger than life persona in the classroom. He was a blithe spirit, full of buoyancy and vitality. He had a fine speaking voice that he inherited from his father, who had migrated to this country from England and become a successful radio actor, succeeding Basil Rathbone as Sherlock Holmes on the Mutual Broadcasting Network. John was a man of multiple gifts, and the most striking was his skill as a lecturer. He was an exemplary lecturer in political philosophy and theory classes that drew large crowds. His lectures combined wit, vast learning in classical, medieval and modern political theory, love of his subject, and theatricality. He was able to hold student interest while discussing abstruse and unfamiliar themes. Young Americans live and breathe individualism, and John had to introduce them to cultures where individualism scarcely existed as a concept. His students frequently commented on the difficulty of the subject as they were taken through theory "from Plato to NATO," as he called his year-long series of political theory courses. He

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drew large crowds despite the difficulty students had understanding Hegel and Marx and despite John's fairly tough grading.

He was as much at home in the graduate seminar as in the lecture hall. Again the subject matter was difficult, but many were so attached to John that they went on to do their dissertations under his direction. He was invariably generous with his time and attention. Those of us who shared the hallway with him over the years had the common experience of knocking on his door long after five p.m., hoping for a brief word and finding him deep in discussion with a thesis student. “Later, dear boy!” he would call and turn again to the student. He enjoyed being a dissertation director. He would survey language, grammar, punctuation and figures of speech, as well as substance and statistics. However, he was not a controller, even if the student wanted him to be one. His students wrote about Arendt, Ellul, Aron and Sartre among others.

In this age of grade inflation, John Stanley was a pillar of tradition and rectitude. It was extremely difficult to get an “A” in his courses. The “D” and “F” were not dead letters in his grading system. He always assigned term papers, even in the larger courses and never gave “objective” exams. His rule was that he would read something by every student, no matter how many T.A.s there were to assist him and every student was required to speak to him personally about the choice of a subject for the paper. He had learned the importance of a direct relationship with students at Cornell, where he studied with Mario Einaudi and Andrew Hacker. Both were great teachers renowned for the amount of time they gave to their students' work. John hoped that word of his success would filter back to Ithaca, and some of us who knew them made sure they were aware of John's accomplishments as a teacher and scholar. They were not surprised.

John's breadth and charm inspired enduring friendships across the spectrum of the campus, from his colleagues in mathematics and the sciences to those in the fine arts. He was an academic type who, alas, is becoming an endangered species in the humanities and social sciences: a “triple threat.” He could teach brilliantly, publish frequently, and do service for the campus enthusiastically; and all at the same time. His speeches at Senate meetings were memorable for their wit and substance. He served on

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CAP (as chair during his third year) on which his high, but fair standards, no doubt, found a receptive audience. The last two years of his life were spent representing the University of California as its associate director of the British study center in London. Here, he showed a fourth talent—one that few would have predicted—as an administrator. He brought light, wit, and an evergreen charm to our lives. We miss him.

Francis Carney Kenneth Barkin Thomas Morton

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Herbert Stern, Biology: San Diego

1918-1998

Professor Emeritus

Herbert Stern was born in 1918 in Montreal, Canada; he died in his eightieth year on New Year's day of 1998 in La Jolla, California. He grew up in a poor family, speaking mainly Yiddish at home. As a child he salvaged ice chips from ice delivery wagons and sold them to neighbors, thereby earning about 30 cents per week. During his teenage years he worked with his father, manufacturing pants for sale to retailers; when that enterprise became unprofitable, he worked in the small neighborhood grocery store that his father acquired. Herb learned English, of course, but he also studied Hebrew, became fluent in it, and retained some fluency throughout his life. His family treasured and encouraged education, and Herb was an excellent student; thus it was that he was privileged to attend McGill University. (At that time, and for another decade or so, McGill was economical with dispensing the privilege of its instruction and prestige to young Jews.) Herb graduated in 1940 with a B.S. in botany and continued with graduate studies in plant genetics (or as it was then known, botany-genetics) at McGill but interrupted these studies to join the Royal Canadian Air Force during World

War II, training as a navigator. After his return from military service he finished graduate studies and received his doctorate.

During his time as a graduate student, Herb began his study of *Trillium erectum*, a plant of the lily family. He worked with this organism for many years, investigating the division of germ cells, a process that is usefully slow in *Trillium*. After earning his Ph.D., he broadened his training with work in analytical microchemistry

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as well as plant physiology and genetics during two years at the University of California Berkeley. He then took a position as a Lecturer at the University of Witwatersrand in Johannesburg, South Africa but stayed only during the 1948-1949 academic year. In 1949, he began a six-year period at Rockefeller University, working first with Alfred Mirsky on the physiology of the cell nucleus and, at the end of this period, with David Goddard, at the University of Pennsylvania. In 1955, he was appointed head of biochemical cytology at the Canadian Department of Agriculture in Ottawa, where he stayed for five years. He then moved, again for five years, to the University of Illinois in Urbana, serving as Professor of Botany. His final move, in 1965, brought him to the newly constituted Department of Biology at the San Diego campus of the University of California.

It was during the decade of the 1960s that Herb developed studies of cell division that led to his groundbreaking work in the field of meiosis. (Meiosis is the process in which the germ cells, which generate the organism's progeny, reduce their chromosome number by one-half in preparation for combining with the mating haploid germ cell at fertilization.) There were two keys to Herb's success in this endeavor. The first was his appreciation of the potential that the lily offers for detailed analysis of meiosis because its germ cells divide synchronously within a developing bud, and because the germ cells' stage in the meiotic cycle is directly correlated with the length of the bud and can therefore be judged in a direct visual way. The fact that meiosis takes place over an extended period of slightly more than a week provides a degree of temporal resolution not present in systems in which meiosis occurs rapidly. The second key to his success was his development, with Ito (in 1967), of cultured lily microsporocytes as their experimental material. Microsporocytes are the cells within which meiosis occurs, leading to the production of pollen. Stern and Ito found that microsporocytes are able to maintain their natural schedule and pace of meiosis in a suitable culture medium.

By these means, the stage was set for a program of research that Herb carried out over the subsequent 15 years in collaboration with Yasuo Hotta (who had joined Herb while he was still in Canada.) In this work, Stern and Hotta demonstrated a meiosis-specific program of molecular events geared to the first-meiotic-prophase

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functions of homologous chromosome pairing and genetic exchange. They found that, at the time of pre-meiotic DNA synthesis, small, periodically disposed DNA segments comprising less than 1 percent of the total genome remain unreplicated. The replication of this DNA is delayed until the time of homologous chromosome pairing; when this laggard replication ultimately does take place (semi-conservatively, as is normally the case), the synthesized product is not ligated immediately into the bulk of genomic DNA. Stern and Hotta proceeded to look for proteins whose schedules of appearance correlated with these events of DNA replication and crossing-over. Contemporary advances in analyzing DNA replication and recombination in bacteria suggested what might be looked for in the process that the lily so clearly and beautifully laid out before them. Indeed, in due course, they found several such proteins, one of which was temporally correlated with the delayed DNA replication. At a subsequent stage, in anticipation of chromosome crossing-over, three new proteins were found to appear in succession. The first was an endonuclease that was seen to generate single-strand breaks in a specific subset of moderately repeated DNA families; these nicks initiated a round of repair DNA synthesis, and the induction of the repair was seen to depend on the presence of a small RNA, apparently transcribed from the very same, moderately repeated DNA segments. Two more proteins appearing in this sequence had activities associated with unwinding and reassociation of the nicked DNA strand. Stern and Hotta provided an interpretation of this series of events in relation to a plausible mechanism

of chromosomal crossing-over. They were able to show that the majority of these events do not take place, or proceed at a markedly reduced level, in a so-called achiasmatic *Lilium* hybrid in which homologous pairing and crossing-over are virtually nonexistent. They also made the remarkable observation that doubling the chromosome complement of this hybrid lily, which reestablishes chromosome pairing, reinstitutes the normal meiotic program. This observation suggested to them that structural changes in chromatin associated with chromosome synapsis are crucial to progression through the first meiotic prophase.

The special character of this work was that it constituted a very early molecular approach to a classical problem in genetics and

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cytology: the mechanism of crossing over in meiosis. The work was, in a sense, premature; it proceeded, for the most part, without the tools that make current genetic analysis so powerful, and it focused on the lily, with its huge genome. The mechanics of crossing-over and meiosis and their associated regulation of protein synthesis and activity are likely to be first understood in yeast, because of the enormous advantages provided by its small genome and powerful genetic methods of analysis, and because of the focused attention of a very large scientific community. Herb's work on lily microsporocytes compels admiration for its pioneering quality and for its subtlety and analytical skill.

As a founding member of the UCSD faculty at the time our unique college system evolved, Herb became an early advocate for teaching and service to nurturing young minds. Throughout his life, he held the belief that scholarship and social justice were not competing virtues. Consequently, he was an early champion for the new and innovative Third College on the UCSD campus whose educational philosophy served the needs of disadvantaged students. On several occasions, he served as Acting Provost and led undergraduate seminars in the Third College Science & Technology Program. He was a dedicated teacher, and during his tenure in San Diego he taught courses at all levels, from lower division courses for non-majors up to graduate courses. If there was a teaching requirement to be met, Herb was always willing to pitch in, but his principal courses concerned the biology of reproduction and chromosome behavior. His office was always open to his students, and they came to appreciate his help and wise counsel.

Herb served his department, his campus and the University of California essentially continuously and in a very wide range of administrative capacities from the time of his arrival at San Diego to the end of his career. He was devoted to the ideal of faculty responsibility for academic governance, vigorous in its defense when he thought it encroached upon, and also sensitive to the responsibility for quality of participation.

He served as Department Chair of Biology from 1967-1975 and again from 1983-1986. During these terms of service, he

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was responsible for appointing many of the Department's senior faculty, including several who served along with him as chairs during the two decades from 1975 to 1995. Most of us tend to idealize at least some aspect of the past; scholars are more prone than most to do so. That qualification notwithstanding, we remember with admiration and, from the contemporary perspective, wonder, the trust that his faculty colleagues, staff, and students placed in him. The basis of that trust was his clear devotion to the common good, patience and tact in hearing every complaint and considering every plan, sympathy and personal help in the face of personal difficulty, constantly demonstrated willingness to back words with involvement, a genuine and complete lack of pretense, and an ability to remind others, without overt preaching or sanctimony, but by example, of the ideals of a scholarly community in a just society.

Herb's service to the Academic Senate at UCSD included membership on every one of its key committees (Graduate Council, Budget, Executive and Policy, Academic Personnel, Educational Policy, Committee on Committees), in several instances as Chair. He served the Universitywide Academic Senate in many of the

same capacities and also served one term as Chair of the UCSD Academic Senate. His reputation for principled judgment tempered by human sympathy made him valued in academic and professional service outside our University—in grants panels, professional societies, and academic review matters.

While in Berkeley, Herb met and married his first wife, Betty. The marriage, which did not survive their year in South Africa, led to the birth of a son, whom Herb never really knew. In 1951, he met his second wife, Ruth, a recent Swarthmore graduate doing summer research at the Woods Hole Oceanographic Institute. In the fall of that year she became a freshman medical student at Washington University. Two years later she and Herb were married, and she transferred to New York University for the remainder of her medical training. She did her residency in pediatrics when they moved to Ottawa. He is survived by Ruth Stern and by four children, Herbert David, born in California and now

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residing in Sweet Home, Oregon; Rebecca Huston, born in Ottawa and now residing in Portland; David, also born in Ottawa and now residing in Ithaca; and Jonathan, born in Urbana and now residing in Oakland.

Peter E. Geiduschek Cecil W. Lytle Daniel L. Lindsley

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Lewis H. Stolzy, Soil and Plant Nutrition: Riverside

1920-1999

Professor of Soil Physics, Emeritus

Lewis H. Stolzy, Professor of Soil Physics, Emeritus died on January 12, 1999 from complications of Parkinson's disease. He is survived by his wife, Ardyth, and daughters, Janice and Lisa, all of Riverside; his son, Kevin, of Bloomington; and two grandchildren. Professor Stolzy was renowned for his studies on how soil physical effects, particularly aeration, affect plants.

Professor Stolzy was born on December 11, 1920 in Byron Center, Michigan. After serving in the armed forces during the Second World War, he started his career as a soil conservationist with the U.S. Department of Agriculture in 1948. During this time, he attended Michigan State University where he earned his B.S., M.S., and Ph.D. degrees, respectively, in 1948, 1950, and 1954, all in soil science. He came to Riverside in 1954 as an irrigation engineer in the Department of Irrigation and Soil Science, which was then headquartered at UCLA. He was transferred in 1958 to the Department of Soil and Plant Nutrition at UCR. He was promoted to Associate Soil Physicist in 1961 and to Professor of Soil Physics in 1967. He remained an active, highly visible, and productive member of the faculty until his retirement in 1991.

During his career, Professor Stolzy mentored 12 Ph.D. students who later went on to distinguished careers of their own. He also mentored a host of visiting scientists and post-docs from all over the world. He was recognized as one of the four co-inventors of the platinum micro-lectrode that was used for measuring oxygen diffusion rates. This discovery led to the unified concept of soil hypoxia based on rates of oxygen supply to roots, the rates of oxygen demand, and the resistance of oxygen in soil. Many of Professor

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Stolzy's earlier studies were extremely useful for determining irrigation practices for maximum crop production. He was among the first to develop a portable neutron probe for measuring soil water content directly in the field. The results of his field research were formative in establishing management practices in citrus orchards. Professor Stolzy's research into soil water infiltration and oxygen status in soil was not confined solely to the physical descriptions of these processes, but was integrated with the organisms affected by water and oxygen depletion. In addition to his studies on plant roots, he collaborated with plant pathologists in assessing how aeration effected the reproductive cycles and growth of nematodes as well as root-rotting

fungi. In his later years, he broadened his research scope to include the effects of aeration on the persistence of nitrates and soil pollutants of agriculture.

Professor Stolzy was recognized for his scientific accomplishments and service. He was a Fulbright Scholar in 1964, a fellow of the American Society of Agronomy in 1969, and a Fellow of the Soil Science Society of America in 1976. He received the Agronomic Research Award, which is presented to one scientist annually, in 1978 by the American Society of Agronomy. Professor Stolzy was the author or co-author of 286 scientific publications during his long and distinguished career. Upon retirement, the Soil Science Society of America held a day-long symposium dedicated to career achievements of his that inspired research by others. The presentations were published collectively in the October 1992 *Journal of Soil Science*.

Colleagues, students, staff, and all who knew Professor Stolzy would probably agree that his research achievements were eclipsed by his magnanimity and generosity. Those who went to coffee breaks with him and observed how much more frequently he lost the coin flip (beyond reasonable randomness), would agree that it was his ordination to be a generous person. Had Leo Durocher ever met Professor Stolzy, he would have observed that nice guys do finish first. He was particularly helpful to students, younger faculty, and those less advantaged. It was not uncommon for him to turn over a grant to a young arriving faculty member, or to give generously of his time to assist those below him in climbing the ladder of

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academia. He did this without any intent of receiving a return. Professor Stolzy understood and practiced the concept that excellence is best nurtured, not by personal gain, but by the next generation.

Dennis D. Focht John Letey

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Harold Earl Verrall, Law: Los Angeles

1902-1995

Professor

Harold Verrall came to the UCLA School of Law as one of the five members of the original faculty in September 1949. The others were L. Dale Coffman, the founding Dean; Roscoe Pound, the retired Dean of the Harvard Law School who was considered the leading figure in American legal education in the first half of the 20th century; Rollin Perkins, a specialist in criminal law; and Brainard Currie, who went on to become the leading scholar of his time in the area of conflicts of law. This hardy group taught classes for the first two years of the school's existence in quonset huts near Royce Hall. Professor Verrall remained at UCLA until he reached mandatory retirement age in 1970, at which time he joined the "Over 65 Club" at the Hastings College of Law. He taught there for a number of years before retiring to the Long Beach area where he died at 92, the last surviving member of the original faculty.

Professor Verrall received a B.A. degree in political science from the University of Iowa, an M.A. from the University of Minnesota in the same subject, an LL.B. also from Minnesota, and an S.J.D. from Yale University. He served on the law faculties of Louisiana State University and Cornell University in non-tenure positions before becoming a tenured member of the Vanderbilt University law faculty in 1931, where he remained, with time out for government service during the war years, until his move to UCLA in 1949. During his last few years at Vanderbilt, Professor Verrall served under L. Dale Coffman as Dean, and Dean Coffman became his mentor. When Dean Coffman came to UCLA, he invited Professors Verrall and Perkins to accompany him, and they accepted.

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At UCLA, Professor Verrall taught the first-year course in real property, an advanced course in California community property law which he developed, and an elective advanced course in future interests law. Professor Verrall was a conscientious, knowledgeable teacher, whose elective course in one of the most difficult areas of property law, future interests, always attracted large enrollments. Former students and colleagues remember that his office door was always open and student and collegial visits were warmly welcomed.

Professor Verrall's career-long research emphasis at UCLA was in the field of California community property law. He was a pioneer in the field. Early on he served as a consultant to the California Law Revision Commission on Community Property Law, and in 1960 the West Publishing Company brought out the first edition of his casebook, *Cases on California Community Property Law*. Our former Dean, Susan W. Prager, herself a community property scholar, notes that this book was “exceptionally well researched.” It is fair to conclude that Professor Verrall's work organized the study of this important field and made it accessible to law students as well as lawyers, whom he lectured on the subject. Several later editions of his casebook were published with Dean Arthur Sammis of Hastings as co-author. Professor Verrall was a consultant to the Law Revision Commission on other issues during his career, among them landlord-tenant law, an emerging area of legislative interest at the time, and the complex doctrine of “worthier title.”

Professor Verrall began teaching law in 1928, more than 70 years ago, in a different age of legal education. We cannot avoid looking back at him today as old-fashioned. But he embodied some of the ennobling aspects of this age gone by. He saw his principal mission to be to teach a complex body of law to students in terms that they could understand. No trips around the world to conferences for him. He was always patiently available to students in his office to help them learn. He was cordial to all. His students and colleagues remember his infectious laughter which shook his body. His research was basic and it was published

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only after he had spent, in some cases, years in developing it. There is something to be said even today for his set of educational values.

William D. Warren

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Louis Jolyon West, Psychiatry & Biobehavioral Sciences: Los Angeles

1924-1999

Professor

On January 2, 1999, Louis Jolyon “Jolly” West, the former chairman of the UCLA Department of Psychiatry and Biobehavioral Sciences, died of a rapidly advancing, malignant tumor.

Born in 1924 in Brooklyn, New York, of immigrant Russian-Jewish parents, he grew up in poverty in Madison, Wisconsin. Like many children of recent immigrants, he was bent on obtaining an education. Entering the University of Wisconsin at the age of 17, he determined to fight in World War II against fascism. He enlisted in the U.S. Army and was sent to the University of Iowa in the Army Specialized Training Program, and then to the University of Minnesota School of Medicine from which he graduated in 1948. After a year of internship in internal medicine, he served a three-year residency in psychiatry at the Payne Whitney Clinic of New York Hospital and Cornell University School of Medicine. In 1948 he had transferred to the U.S. Air Force Medical Corps, and in 1952 was appointed Chief of Psychiatry Service at the Lackland Air Force Base, San Antonio, Texas. While holding this position, he had also been appointed Professor and Head of the Department of

Psychiatry, Neurology and Biobehavioral Sciences at the University of Oklahoma School of Medicine—the youngest person ever to have held a chairmanship in psychiatry in the United States until, or since, that time. In 1969, he moved to UCLA to head its department and direct the Neuropsychiatry Institute.

Implicit in the foregoing are the outlines of an American success story—the poor immigrant son, who by dint of his intelligence and energy, makes the best of freedom and the opportunity

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offered to him to realize himself. What is not so usual in this familiar American story is that from an early age and throughout his life, West fought for the equal rights of others so that they might have similar opportunities for self-realization. Always larger than life, he was bold and courageous. He led the way toward the integration of medical fraternities, and the civil right changes in the South. He battled actively and ceaselessly for individual freedom and dignity, opposing prejudice, bias, bigotry, violence, torture, and the subjugation, punishment and mistreatment of others by governments, the judiciary, the military, kidnappers, cult, leaders, and phony prophets. He took the side of the poor, minorities, children, the disenfranchised, the mentally ill, the ignorant and the weak.

It should come as no surprise that his own clinical and research contributions focused on the effects of man's inhumanity to man, of sleep deprivation, of mind-altering and hallucinogenic drugs. He studied the psychophysiology of hypnosis and suggestibility (including their effects on pain perception), meditation, and of the emotions. He published theories of dissociative reactions, hallucinations and dreams. And throughout his career he concerned himself with alcoholism and its treatment. Later he extensively studied the social phenomena of the 1960's—the civil rights movement, the hippie culture and the green rebellion—and the pervasive violence in our society.

Through his interest in social pathologies, their origins and consequences, West extended the vista of psychiatry beyond its usual concerns. Following his retirement from the chairmanship of the department, he thought deeply and developed programs in the prevention of mental illness, addiction and crime.

His interests and his vision led him to create two departments—of Psychiatry **and** Biobehavioral Sciences—at the time when the two predominant underpinnings of American academic psychiatry were psychoanalytic concepts, or the treatment of the seriously mentally ill by lobotomy, metrazol or insulin injections, and ECT.

He defined the biobehavioral sciences in a multidisciplinary and multifunctional manner as the basic sciences of psychiatry, spanning the spectrum from epidemiology to cultural anthropology, to the study of primate behavior, pharmacology, neurochemistry, neuropsychology, psychophysiology, psychoendocrinology,

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psychoneuro-immunology, cognitive neurophysiology, neuroanatomy, and computer modeling of psychotherapy, and human brain development.

Jolly West served his country and his profession well. He was a consultant of the U.S. Air Force, the VA, the USIA, the U.S. National Academy of Sciences, the Peace Corps, the NIMH, the Department of HHS, the AMA, the APA, the American Specialty Boards, and private foundations. He served on the editorial board of 12 publications and on many medical school committees.

He received many honors and awards, including an honorary doctorate of humane letters from Hebrew Union College. During his career, he gave numerous prestigious, endowed lectures, both here and abroad.

The egalitarian principles that guided Jolly West's life were exercised in the way he ran his department. He had a fierce loyalty to it and its members, and to UCLA; he supported and promoted both. He ran the department with a light hand, encouraging and supporting his young colleagues, attracting many senior, distinguished colleagues, and allowing its members the optimal degree of freedom to pursue their interests.

He is survived by his wife of 54 years, Kathryn, a distinguished clinical psychologist; two daughters, Anne and Mary; and a son, John.

Herbert Weiner Joe Yamamoto

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Lynn Maxey Wiley, Obstetrics and Gynecology; Cell Biology and Human Anatomy: Davis

1947-1999

Professor

On Saturday, June 19, 1999, Lynn Wiley died in an airplane crash. A licensed commercial pilot, she was carrying four skydivers to a parachute jump when the plane crashed on takeoff. For the previous 14 years Lynn had led an effort to determine whether the paternal germline in mammals is capable of responding to DNA-damaging agents such as radiation in ways that will affect the phenotype of future generations. This question about the potential for “paternal effects” from environmental exposures is highly controversial and volatile and has substantial health implications if the answer is positive.

Lynn was born in Tucson, Arizona, on February 24, 1947. She studied biological sciences (B.S., 1968) and radiological sciences (M.S., 1971) at the University of California Irvine. She obtained her Ph.D. degree in anatomy from the University of California San Francisco in 1975, and began her research career in mouse preimplantation embryo development. Her first research paper was published in the journal *Nature* in 1974. Following postdoctoral training, she was appointed Assistant Professor of Anatomy at the University of Virginia. She joined the faculty of the University of California Davis in 1981 and reached the rank of Professor in 1993. She had joint appointments in the Department of Cell Biology and Human Anatomy and in the Department of Obstetrics and Gynecology, where she was Chief of the Division of Reproductive Biology.

In 1988, Lynn published a paper in *Radiation Research* describing a novel assay using embryo aggregation chimeras to detect

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non-lethal changes in the proliferation rates of x-ray irradiated mouse embryos, and in the following year she showed that this adverse effect could be transmitted to the embryo following whole body irradiation of the male, which targeted spermatogenesis. Over the next 10 years her work led to the report of heritable effects on embryo cell proliferation rates in the F2 generation following subclinical doses (1.0 Gy) of paternal F0 irradiation during critical stages of spermatogenesis. This was the first report of any type of heritable effect in mammals resulting from non-sterilizing parental irradiation. Lynn used the rigorous definition of “heritable” as an effect that appears in the F2 and subsequent generations, rather than in the F1 generation. Lynn also found that there were phenotypic effects, expressed as reduced body weight and hepatomegaly, which appeared to increase in magnitude across two or three generations. These observations led her to hypothesize that genomic instability may be the underlying mechanism responsible for first initiating the genetic changes and then prompting their subsequent propagation across successive generations.

An important difference between Lynn's work and that of others is that she evaluated endpoints related to the control of cell proliferation rate, an idea that was inspired by her previous 14 years performing mouse embryo chimera assays. Lynn found that competitive cell proliferation disadvantage was prevented by the addition of exogenous growth factors, and it was this observation that led her to look for differences in growth factor-stimulated signaling kinase activities in the livers of F3 offspring. She found that the F3 offspring from

paternal F0 irradiation exhibited significant alterations in resting levels of some key signaling protein kinases. One implication of Lynn's research is that the true situation regarding paternal effects from human radiation exposures during spermatogenesis may not become apparent until the current F1 cohort is older and the F2 generation is available for evaluation.

Another distinction of Lynn's work is that she restricted her analyses to the F1 offspring that were conceived 6 weeks after paternal F0 irradiation and to subsequent generations produced by these F1 offspring. The importance of this design is that all of her observations were focused on a genetic response that was initiated in the Type A/B spermatogonium, which is also the most radiation-sensitive stage for cell killing (LD50 is 0.45 Gy in the

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mouse, 0.25 Gy for the human). Since developing sperm cells spend only 10 to 15 percent of their time at this sensitive stage of spermatogenesis, only about 10 to 15 percent of a population-at-large is likely to sustain such paternal effects from an acute exposure. In the context of human exposures, such effects could be obscured in epidemiologic studies.

Lynn was a gifted teacher of gross anatomy and non-Mendelian modes of inheritance to medical students and of reproductive biology, reproductive toxicology, and reproductive genetics to graduate students. She had one of the heaviest teaching loads of any senior member of the medical school faculty, and she thrived on developing new courses and on new approaches to teaching. This year, Lynn was nominated for the prestigious UC Davis Prize for Undergraduate Teaching and Scholarly Achievement. She took a personal interest in the lives of her graduate students for whom she served as a mentor, role model and friend.

Lynn was a member of the Radiation Research Society, the Society for Developmental Biology, the Society for the Study of Reproduction and the Environmental Mutagen Society. She was a past member of the Editorial Board of *Biology of Reproduction* and served on the Physiological Sciences and Radiation Study Sections of the National Institutes of Health. She served on numerous committees of the National Aeronautics and Space Administration and was a member of the Committee on Space Biology and Medicine of the Space Biology Board of the National Academy of Sciences. She was the author or co-author of some 70 journal articles and book chapters.

We remember Lynn as a person who lived all aspects of her academic and personal life with remarkable intensity. She found a joy and excitement in science that never waned as she progressed from a starting Assistant Professor to a seasoned senior investigator. She had a love of learning, of competition, and of individual achievement that sustained her through the mountains and valleys of her academic career. Lynn was highly respected by her colleagues, beloved by her students, and will be greatly missed by all of us who knew her.

James W. Overstreet Kent Erickson Lloyd Smith

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Garff B. Wilson, Rhetoric; Dramatic Art: Berkeley

1909-1998

Professor of Rhetoric and Drama

Chairman of Public Ceremonies

Garff Wilson died in Berkeley on May 5, 1998 at 89 years of age. Among the post-World War II Berkeley alumni who stayed in contact with their alma mater, he was, on a personal level, almost certainly the most

widely known member of the academic staff.

He began his services to the University as an Assistant Professor in the Department of Speech (later to become the Department of Rhetoric) in 1941. But that was not his introduction to the Berkeley campus. Born on January 1, 1909 in Ogden, Utah, he received an undergraduate scholarship from UCB, where he remained until he had achieved an M.A. (1933). He remained an intensely loyal partisan of all things Berkeley for the rest of his life. After his graduation, he received a Ph.D. from Cornell University, taught at Humboldt State University and returned to Berkeley as a member of the academic staff in 1941. He subsequently served as Captain in the U.S. Army in World War II.

Upon his return to the Berkeley campus in 1946, he was caught up in the extraordinary enrollment of veterans that for several years strained every campus facility. He began to make his particular administrative skills known. Beginning with an assignment from President Robert Gordon Sproul to enhance the rather dull New Student Reception, he went on to become the head of the tightly knit group who developed and administered the public ceremonies on campus. He also became a favorite teacher in the Speech (later Rhetoric) Department and, because of his avid interest in athletics, that portion of the student body found him a most valuable advisor. And this was undoubtedly the beginning

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of both his extraordinary acquaintance among alumni and of their loyalty to him.

Through the late 1940s, the 1950s, and up to the middle of the 1960s, Berkeley, as one of the leading academic institutions in the country, had a series of impressive guests whose visits required planning and who, once present, required personal guidance. For their public appearances and personal wishes, Garff and his staff were responsible. These guests included President Kennedy, Eleanor Roosevelt and Robert Frost. Or, as he summarized the visitors, “One God, one Pope, five Kings, three Queens, 10 Princes and Princesses, two Presidents of the U.S. and a host of other notable figures.” As the campus mentor-guide-support presence to these and other notables, he came to have a peculiarly famous anonymity as “the Unidentified Man on the Right” of many a newspaper photo.

At the center of his being was the drama. A small, dapper man often given to the bow tie, but never the baggy tweeds of the academic, he had for some years a joint appointment with the Dramatic Arts Department. His two books are about the stage and, more narrowly, about the art of acting. In his *History of American Acting* (1966) and his later *Three Hundred Years of American Drama and Theater* (1973), he laid special emphasis on the Victorian era for what he confessed in print were “purely sentimental reasons.” In the assessment of historic stage performers there is little aid, as Wilson said, beyond “the comments of the leading critics of their time.” He gave them their due. And he felt his evaluation was likely to be more valid if he himself were in sympathy with the era. Indeed he was willing to give a past era the competence of its own esthetic as it was integrated with its culture.

And so it is that as one reads his history of the shifting styles of acting on the American stage, one becomes aware that his peculiar gift, what he drew upon constantly, was a giving of himself to the fittingness, the appropriateness, of all the parts of the scene; what in an older era was called *decorum*.

As he could greet presidents and famous poets without embarrassment or pomposity, so every year he could read the eulogy to 1920s great football coach Andy Smith as the solo performer in

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the traditional bonfire rally before the annual Cal-Stanford football game.

He could fulfill his annual command performance at the Men's Faculty Club, where he sat by the fire and read aloud Dickens' *A Christmas Carol*, entering with seeming ease the characters of Bob Cratchit and Tiny Tim, or intoning old Scrooge with that Garff twinkle in his voice.

Robert Bullis Wolcott, Dentistry: Los Angeles

1915-1999

Professor Emeritus

Founding UCLA dentistry professor and 48-year teaching veteran Dr. Robert Bullis Wolcott died March 24th after a long battle with neck cancer. He was 84.

Inspired by his dentist father, Wolcott enrolled in dental school at Marquette University in Milwaukee in 1937, working three jobs between semesters to make ends meet. He attended to patients in a mental sanitarium, shoveled furnace coal and washed dishes in a restaurant—all of which he claimed were better than his previous job repossessing cars in Chicago in the middle of the Depression.

Professor Wolcott graduated from Marquette in 1941 and then began 21 years of service in the U.S. Navy. During this time he started a naval school of dental practitioners in Guam, served aboard the U.S.S. Midway and headed naval dental research facilities in Bainbridge, Maryland, and at Great Lakes Naval Training Center. In 1951, he earned his master's degree (in biochemistry) from Georgetown University. Additionally, while working at the Navy Medical Center in Bethesda, he met Gladys, a chemist and medical researcher. They were married in 1946. He is survived by Gladys; his daughter, Debbie Hayhoe, of Reno, California; his son, Bob of Davis, California; and four grandchildren.

Upon retirement from the U.S. Navy as a Captain in 1962, Professor Wolcott began his academic career at UCLA when together with Dean Reidar Sognnaes he developed the academic and physical plans for the UCLA School of Dentistry. The school accepted its first class in 1964, and Professor Wolcott was its first chair of operative dentistry and clinic director. Under the leadership of

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Dean Sognnaes and Professor Wolcott, the school's reputation for excellence grew rapidly, prompting class size to jump from 27 to 96 students by 1971.

Professor Wolcott was generous with his time and energy in support of the community, most notably as a champion for underprivileged children. Beginning in 1977, he was active in the Fulfillment Fund which supports special programs for handicapped children, and since 1986 he was involved in planning and securing funding for mobile dental clinics for underprivileged children in the greater Los Angeles area. Additionally, Professor Wolcott was pivotal in the development and success of the West Los Angeles College Dental Hygiene Program which he envisioned as a source of dental hygiene services for clinic patients in the UCLA system. The teaching laboratory used by this dental hygiene program was dedicated and named in his honor in 1982.

Professor Wolcott had a most impressive academic career, publishing more than 55 research articles in addition to the development of numerous instructional aids. Most noteworthy was his involvement in Project Acorde, a nationwide program to develop standardized manuals and videotapes for teaching the techniques of restorative dentistry. He was also active in many professional organizations, often serving in an editorial or advisory capacity. His affiliations included the American Dental Association, the American Academy of Restorative Dentistry, the American Academy of Gold Foil Operators, the American Academy of Operative Dentistry, the International Association for Dental Research and the Fellowship in the American College of Dentists.

Professor Wolcott's teaching contributions can be measured by the recognition he received from both students and colleagues. He was selected as the outstanding Teacher of the Year by eleven School of Dentistry graduating classes, beginning in 1969 and continuing through 1997. The esteem in which he was held by his faculty colleagues is indicated by two awards which bear his name: The Robert B. Wolcott Section of Operative Dentistry Award, which is given annually to a graduating student; and the Dr. Robert Wolcott Award, created in 1987 by UCLA's Epsilon Zeta chapter of the Omicron Kappa Upsilon (OKU) honor society to recognize Wolcott's longtime devotion to the school. The Dr. Robert Wolcott Award is presented each year to a privileged faculty member at the OKU awards banquet. Most recently a fund

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has been established to additionally honor a deserving faculty member.

After retiring from full-time teaching in 1984, the energetic 84-year-old Professor, Emeritus still drove to campus on Tuesdays and Wednesdays where he taught general dentistry and often arrived early to tutor students in the clinic.

Professor Wolcott also received the UCLA Dental Alumni Award in 1983 and on November 1, 1997 he was honored as the School's Honorary Alumnus of the Year. To encapsulate the school's recognition of his extraordinary contributions this award has the following inscription:

*The Gift Of Your Technical Skills
Your Ability To Motivate
Your Passion For Learning And
Your Endless Willingness To Give Of Yourself
Will Always Be The Cornerstone Of
The UCLA School Of Dentistry.*

Robert Krasny Edmond Hewlett Richard Stevenson

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Charles Edward Woodson, Education: Berkeley

1935-1998

Associate Professor

Charles Edward Woodson, a dedicated and revered teacher in the School of Education, died on August 4, 1998 when the small plane he was flying crashed in Medicine Bow National Forest, Wyoming. He was returning from a conference in Madison, Wisconsin. Woodson was an experienced pilot who was a longtime member of the Concord California Flying Club. The cause of the crash is presumed to be weather related. He leaves a wife, Yoko, and a daughter, Maiko.

Woodson was born on July 19, 1935, in Tecumseh, Nebraska. In 1958, he received a B.A. in philosophy and psychology from Baker University in Baldwin City, Kansas. In 1961, he earned an M.A. in history from Meiji University in Tokyo, Japan. Several years later he attended UCLA, where in 1967 he earned a second M.A. in psychology followed in 1969 by a Ph.D. in educational psychology. That same year he was appointed Assistant Professor in the Education Department at Berkeley. In 1974 he was promoted to tenure as Associate Professor.

Woodson's research interests included the interface between people and computers, the educational uses of the Internet, and self-initiated learning (studying) by humans. He published a number of articles in professional journals and presented papers on these topics. Some of his recent journal articles and conference papers included “*A Conceptual Framework for Inference from Experiments*,” “*Development of the Representation*

of Concepts, ” “ *Internet Resources for the Prevention Professional,*” “ *Why are Computer Manuals So Bad?* ” “ *Expert's and Non-expert's Mental*

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Models of Studying,” “ *Learning from Marking Text,*” “ *A Mental Model Alternative to Study Strategies* ” and “ *Modifying Mental Models of Studying.*”

Woodson had an independent spirit and always spoke his mind. He was jovial, enthusiastic and friendly with an offbeat sense of humor. One colleague, now retired, told of the time she had a Japanese student who had a baby and she asked Charles what the appropriate baby present would be. He came back the next day and with a straight face said the appropriate gift would be to pay for the child's wedding or send the child to college.

He was a genuinely caring person who treated all with kindness and generosity without regard to their position in the University academic hierarchy. One professor colleague recounted that when she arrived at Berkeley, Woodson was the only faculty member who welcomed her to the department by taking her out to lunch. She will always remember this act of kindness. A staff member recounted that she was always touched when Woodson would ask about her children and husband and remembered their names and details of their lives. Her husband, who does not work at the University, remarked how unusual it was for a faculty member to be so attentive to the families of staff members.

Woodson was dedicated to his students and took great pride in his teaching, particularly of undergraduates. The students responded to his genuine interest in them. His classes were continually over-enrolled, and he often had to turn students away. Comments, offered as part of evaluations from his undergraduate students—who are notoriously harsh in evaluating their professors—show why he was so well liked. There were comments such as the following:

- “He used a lot of his research in the class and we were part of it which made learning more fun.”
- “He made us become teachers and learn the material like experts.”
- “He was most effective in his passion for the subject material and preparedness and enthusiasm.”
- “He was friendly, helpful.”
- “He was open, intelligent and humorous.”

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- “Most valuable was his encouragement.”
- “He is **really** caring and does the most to help his students.”
- “He was genuinely interested in what students think.”
- “He was very personable, accessible, non-intimidating, very approachable.”

He even received the ultimate compliment from a student: “My best course at Cal.”

Woodson will be missed by his family and friends, and by colleagues and students at Berkeley.

Sarah Freedman Robert Ruddell Herbert Simons Homero Yearwood

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Celeste Turner Wright, English: Davis

1906-1999

Professor Emerita

Celeste Turner Wright was an active member of the UC Davis community for more than 51 years, from the time she came to the campus, then the University Farm in 1928, until after her retirement in 1979. She died

of cancer on September 16, 1999. For 27 of these 51 years, she chaired the Division of English (1928-34), the Division of Languages and Literature (1934-52), and the Department of English, Dramatic Art and Speech (1952-1955). In that time she taught English, Latin, German, and drama, in addition to being “a refining influence” (her words) for the farm boys at what was in 1928 the agricultural branch of UC Berkeley, the Farm annex.

She was born in New Brunswick, Canada, there being no hospital in her home town of Kenio, Maine, on St Patrick's Day and educated in a three-student school. She entered high school at 11 and moved with her family to Pasadena in 1918; she graduated from Pasadena High in 1921. She then attended the Southern Branch of the University of California, a two-year school that added an upper division while she was a student and became UCLA. She graduated at 19, then went to Berkeley, earning a master's degree and a Ph.D. in three years.

Arriving at Davis, Professor Wright achieved many firsts. She was the first woman with a Ph.D. to become a faculty member, the first woman to be tenured, the first teacher of Latin, German, and public speaking, the first drama instructor, the first humanities professor to be honored as Faculty Research Lecturer, and the only woman to have an academic building named after her. The UC

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Davis Dramatic Arts Building was named Celeste Turner Wright Hall on October 9, 1997, celebrating her long commitment to drama, including her dissertation and first book, *Anthony Mundy: An Elizabethan Man of Letters*, about a playwright, her many years of teaching Shakespeare and Renaissance drama, and her founding of the Drama Department and early directing of the first plays produced on campus. Beyond these, the subjects of her scholarly articles ranged from Amazons in literature to Wallace Stevens, Katherine Mansfield, and a classic article on Renaissance imagery in John Steinbeck's *Grapes of Wrath*. For many years, humanities at UC Davis and Celeste Turner Wright were synonymous.

In 1928, her salary was \$2,400. Since that was not enough to live on, although she initially lived in the dorm on campus with the students (there were 350, eight of whom were women), she accepted a job editing agricultural publications during the summers and developed into a highly skilled editor. Many of her colleagues submitted their work to her for her scrutiny. One commented that the essay he received back was literally bleeding with red ink, then admitted that Professor Wright's editing had substantially improved the essay.

Professor Wright was a marvelously engaged teacher and colleague, even after her retirement, participating in department meetings and hiring discussions. When other women joined the faculty, she would make a particular effort to draw them into campus life and would introduce them to others with a keen sense of their talents and expertise. In the later years of her life, her heart was with poetry. In addition to placing many individual poems in well-regarded poetry journals, and even having her poems appear as illustrations of technique in textbooks, she published three books of her own poetry, *Etruscan Princess and Other Poems* (1964), *A Sense of Place* (1973), and *Seasoned Timber* (1977). *A Sense of Place*, which exhibits her fine gift for capturing both the history and emotion of a landscape, won a Commonwealth Club of California medal as one of the best books of 1973. As an enduring legacy to the English Department, which she founded 72 years ago, she began the Celeste Turner Wright Poetry Contest in 1979. Open to all students enrolled at UC Davis, with prizes for the best poems submitted, she endowed it permanently with her own money in 1994; it is now sponsored annually by the American

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Poetry Society. In her honor, the Department of English will sponsor an annual reading by a distinguished creative writer.

Professor Wright is survived by her husband, Veddar Wright, whom she married in 1933, and their son, Vedder Jr., born in 1943. She will be missed as an exemplar of one who undertook tasks early and did them well, and as a model teacher, poet, and colleague.

Benjamin W. Zweifach, Bioengineering: San Diego

1911-1997

Professor Emeritus

Benjamin W. Zweifach, one of the most eminent researchers and teachers in human physiology of this century, died on Thursday, October 23, 1997 in San Diego. He was 86. He was a co-founder of the Bioengineering Program at UCSD, and served in the Department of Bioengineering as Professor, Emeritus. He was recognized worldwide for his more than 60 years of contributions to microcirculation research.

Zweifach was born in New York City, the son of Eastern European immigrants. He received a B.S. degree in biology in 1931 from the College of the City of New York, an M.S. degree two years later, and a Ph.D. degree in 1936, both in the field of cellular physiology from New York University. His first paper, published in 1933, was the first direct micromanipulative study of the capillary blood vessels in a living tissue. In this paper, he showed that these smallest blood vessels in the body were not contractile. This seemingly innocent conclusion dramatically influenced microcirculation thinking for the past half century. This study set the tone for Zweifach's lifelong devotion to the study of the smallest blood vessels in the circulation. During World War II, he studied basic aspects of physiological shock. He clarified the mechanisms that precipitate multiple organ failure in shock, and he discovered several ways to improve an animal's tolerance to shock. This work was especially important in emergency medicine. His success with respect to shock strengthened his belief that understanding of human disease requires the study of microcirculation, a theme that he maintained for his entire career.

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He was an Assistant Professor and then an Associate Professor of Physiology at Cornell Medical School from 1947 to 1952. He returned to New York University and served as Associate Professor of Biology and Pathology until 1958, and then as Professor of Pathology until 1966. He received an Established Investigator Award from the American Heart Association from 1950 to 1955, and a Career Investigator Award from the Health Research Council of the City of New York from 1955 to 1966. By 1960 he had established a brilliant record in the study of the physiology and pathology of small blood vessels.

In 1964, Zweifach won the Claude Bernard Medal in Physiology from Canada. Then he made a major decision to learn and use engineering methods to further his research in microcirculation. He went to the California Institute of Technology in Pasadena as a Visiting Professor, made friends with engineers like Harold Wayland, Yuan-Cheng Fung and Marcos Intaglietta, and essentially changed the direction of his career. In 1966 he accepted an appointment as Professor of Bioengineering at the then-new University of California San Diego, in the Department of Applied Mechanics and Engineering Sciences. Bioengineering was a joint enterprise between the School of Medicine and the general campus. This program, which, beginning in 1966, offered Ph.D., M.S., and B.S. degrees in engineering sciences with specialization in bioengineering, was one of the first of its kind in the United States. Thirty years later, in 1994, the UCSD Bioengineering Program was judged as among the best in the nation by the National Research Council of the U.S. National Academy of Sciences and National Academy of Engineering. Thus, Zweifach was truly a leader in bioengineering education in the United States.

Zweifach was a central player among engineers and physiologists in the development and application of new techniques to study microcirculation. These techniques are the basis for the study of patients today.

He dismantled the barriers that existed at the time between engineering and medicine, taking full advantage of both disciplines to solve problems in microcirculation research. He was the foremost investigator of the mechanical properties of blood vessels, the anatomy of vasculature in different tissues, and the flow properties of blood in microvessels. Together with his students, he discovered rheological mechanisms that today

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are the basis of new drug developments for better treatment of such diseases as ischemia, diabetes and inflammation. He developed systematic procedures to study fluid exchange between the blood vessels and the tissue. He carried out pioneering studies on lymphatic structure and identified basic lymph pump mechanisms. He documented the involvement of the microcirculation in hypertension. Many years ago, he emphasized the importance of the endothelium in health and disease. Today the endothelium is receiving worldwide attention. Shortly before his death, he participated in the discovery of mechanotransduction in circulating leukocytes, which is likely to fundamentally improve the understanding of immunology and hematology. He subjected each of his studies to the most detailed scrutiny without rush to stake out territory. His work is documented in a rich record of several textbooks, well over 300 original research contributions, and several teaching films, as well as numerous proceedings and abstracts. Zweifach's writing is standard knowledge in all medical text books with universal acceptance.

Zweifach was a member of many medical and engineering societies, such as the American Physiological Society, which awarded him the C.J. Wiggers Award in 1993 for major contributions to Circulatory Physiology; and the Reticulo-Endothelial Society of which he was President in 1965. In 1985 he became a honorary Life Member of the same society, which had changed its name to Society for Leukocyte Biology. But he was especially devoted to the growth of the Microcirculatory Society. He was one of its founding fathers in 1954 and served as its president in 1975. In 1972, he was awarded the Microcirculatory Society's highest distinction, the Eugene M. Landis Award. The Microcirculatory Society set up a Zweifach Gold Medal Award in 1982, which is given every four years to one worker with outstanding research in the field. The Veterans Administration Hospital of the University of Arizona, Tucson, established a B.W. Zweifach Research Laboratory for Microcirculation in 1988. Zweifach became Honorary President of the International Institute for Microcirculation in Uppsala, Sweden in 1983, Honorary Member of the British Microcirculatory Society in 1984, Honorary Life Member of the Society for Leukocyte Biology in 1985, and received the Gold Medal at the First Asian Conference on Microcirculation in Beijing in

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1993. Together with his students, he won the Malpighi Gold Medal in 1980, and there were many other honors accorded to him. In 1993 his Alma Mater, the College of the City of New York, recognized his ceaseless effort on behalf of microcirculation in the form of the Distinguished Alumni Townsend Harris Medal.

But Zweifach's true love was service. He was one of the founding editors of the journal *Microvascular Research*, for which he worked ceaselessly until his death. He devoted himself to all matters concerning microcirculation, be it at the University, the National Institutes of Health, the U.S. Army Medical Research Branch, or scientific organizations anywhere in the world. He was an unassuming individual and had a sense of reality. His judgment was unerring. He did not look for activities unless they served the basic mission of teaching and research. The persistence in his character and work habits enabled him to keep focused on a single mission, the development of microcirculatory and bioengineering research and education.

Zweifach is survived by his wife of 59 years, Beatrice; his two daughters, Paula and Marilyn; his son, Mark; three brothers, Louis, Herman, and Bernard; and three grandchildren, Cyrus, Daniel and Abigail.

Marcos Intaglietta Geert W. Schmid-Schönbein Yuan-Cheng Bert Fung