

MEMORIAL STATEMENTS

Cornell University Faculty

2009-2010

Office of the Dean of Faculty

Ithaca, New York

Memorial Statements Included

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Preface

The University Faculty has always followed the practice of including within the faculty records a memorial resolution on the death of one of its members. The faculty modified this custom that was begun in the earliest days of Cornell University in 1938 as follows:

Upon the death of a member of the University Faculty, the President or Dean of Faculty shall formally notify the Faculty at the next meeting and those present shall rise in respect for the memory of the deceased member. The Provost shall then appoint a committee to prepare an appropriate memorial statement. Such statements shall not be presented in the form of resolutions, as in the past, but shall be annually collected, edited, and printed by the University in a memorial booklet, which shall be sent to members of the Faculty, to the families of the deceased members, and shall be filed with University records.

This booklet, prepared by the Office of the Dean of the University Faculty, contains articles in memory of those thirteen University Faculty members whose deaths were reported in the period from July 1, 2009 through June 30, 2010. The names of the committee members who prepared the statements are given at the end of each article.

Jonathan Peale Bishop

October 27, 1927 — January 22, 2010

Jonathan Peale Bishop was born in Paris, and spent part of his childhood in France, where his father, the poet John Peale Bishop, was living the expatriate writer's life. It wasn't until 1933 that the family moved back to the States, where Jonathan attended the Middlesex School before entering Harvard College in 1944. He broke off his undergraduate studies in 1945 when he was drafted into the Army, and served as a medical technician on troop ships in the Atlantic and Pacific theaters for a couple of years before returning to college. After graduating, he earned a doctorate at Harvard in 1956 with a dissertation on Victorian travel writing. He taught at Amherst and at UCLA before joining the Cornell faculty in 1961, where he remained a vivid presence in the English Department and in the larger Writing Program until his retirement in 1999.

In conversations, as in the classroom, Jonathan was intensely declarative. Words like “perhaps” or “apparently” – necessities, one would think, of East Coast Elite Intellectual discourse – were not part of his lexicon. He could be funny, ironical, or whimsically extravagant; he could shape subtly inflected propositions, but always in the declarative mode, as sayings he stood behind. This was invigorating for his students and colleagues, and not a little daunting. One of those colleagues recently wrote of him, “He was the single most conscientious-least careerist-academic I ever met; with a heart so purely willing that it was almost scary. He believed in the truth, found only part of it in British and American literature, and went looking for it everywhere else, whether he ever got a raise or not.”

It was this intensity of purpose that no doubt led him from an early interest in the transcendental imaginings of writers like Wordsworth and Emerson to his embracing Catholicism in his forties and devoting much of his later writing to exegetical work on Biblical texts and on religious topics like the notion of the Covenant and the meanings of the Eucharistic sacrifice.

In his first book, *Emerson on the Soul* (1964), Jonathan had traced the ways in which that writer's journal entries were transformed into his more formal lectures and essays, a stylistic exercise that produced the alluring voice, blending philosophical argument and personal reflection, that is Emerson's signature. Jonathan would later refer rather breezily to this work as “my tenure book, Emerson...on the whole,” but his engagement with Emerson's prose shaped his life as a writer. His own journal entries – he filled many notebooks with them – became the source for five

subsequent books—*Something Else* (1972), *Who is Who* (1975), *The Covenant: A Reading* (1982), *Some Bodies: The Eucharist and its Implications* (1992), and *In time* (1999)—each at once speculative and autobiographical.

Jonathan read in order to write, and his reading had an astonishing range. In the ten years it took him to compose *Some Bodies*, for example, he read the Church Fathers and dozens of theologians and scholars of the Eucharist. That was to be expected, but he also read-and incorporated into his argument-works by scientists (on the Big Bang, on cellular evolution), by philosophers (from Parmenides and Plato to Merleau-Ponty and Foucault), by theorists of metaphor (Max Black, Paul Ricoeur and Jonathan's Goldwin Smith neighbor, Dick Boyd), by historians like Ernst Kantorowicz and critics like M.H. Abrams, by feminist scholars of the body (Elaine Scarry, Luce Irigaray), by poets like Richard Wilbur and Seamus Heaney. And invariably he would mine his journals for pertinent anecdotes: *Some Bodies* ends with two stories, one about a recent walk around Walden Pond, and the other about his "burial at sea," in Beebe Lake, of a dead goldfish he found floating in a Kendal aquarium.

During his time at Amherst, Jonathan had taught in that college's idiosyncratic freshman writing course, one which eschewed textbooks and rhetorical exercises in favor of assignments that obliged students to report and reflect on their experiences, another Emersonian project of a sort. So, soon after his arrival at Cornell,

Jonathan and two colleagues launched a similar course. In its first years, in the early Sixties, just before Freedom Summer and the anti-war protests began to focus the energies of many undergraduates, being asked to think and write about their time here at Cornell struck a chord, spoke to their hopes and disaffections, and produced some fine work. The course, "Writing from Experience," became popular, grew to numerous sections, and remained among the Department's offerings for decades, much of that time directed by Jonathan himself. His investment in autobiography, his particular way of conceiving of its value, can be said to have influenced thousands of freshmen, not to mention the graduate students and faculty who came to teach in the program. In addition to his work in the Writing Program, he was known as an exhilarating and demanding teacher of courses in American literature and culture.

Jonathan was a long-time member of the Cornell Catholic Community, where he is remembered both for his good works-the sabbatical term he spent in Rochester, assisting at the Catholic Worker shelter, his dependable presence at Ithaca food kitchens-and for the lucidity of the homilies he delivered, explicating the weekly Biblical text, at Sunday services at various local retirement homes.

His colleagues in the English Department will remember him for the energy and thought he brought to his teaching and as a writer of compelling prose and an exceptionally learned and subtle literature intelligence.

Jonathan is survived by his brother Robert, his former wife, the novelist Alison Lurie, their three sons, John, Jeremy and Joshua, and grandchildren Wells, Susanna, and Jonathan A. Bishop, currently a student at Cornell.

Neil Hertz, Chairperson; Katherine Gottschalk, Reeve Parker

Cletus Daniel

December 26, 1943 — April 18, 2010

When Cletus Daniel died suddenly, his family lost a devoted husband, father, and loving grandfather; Cornell lost a distinguished scholar; students lost a brilliant teacher; staff members lost a friend and advocate; and those who loved him and were honored to be his friends lost an irreplaceable part of their lives.

We know that Clete was adamantly opposed to any public celebration of his life, but as his family stated in his obituary, we believe “in our hearts that he could accept, if not understand, our strong need to share our reflections on the life of this most private and beloved man.”

Clete was born on December 26, 1943 in Salinas, California only a few months after his family had left the coal fields of western Kentucky. He grew up listening to his father’s grim stories of the brutal hardships that digging coal underground inflicts. Clete spoke often of how what he called life’s darker possibilities gained confirmation and reinforcement from that dangerous and exhausting work and how difficult it was for so many to have humane values in the midst of constant reminders of life’s cheapness.

Clete also grew up in a culture of pervasive poverty. He was a gifted student but described school more as a respite or haven from his home life, and also as a promise of life’s possibilities where a hug or an affectionate pat on the shoulder was a nice add-on. He said that learning to read was emancipating. He also said that *Dick and Jane* described a world that he longed to inhabit: a peaceful, orderly, predictable place where the food was bountiful, the fun was wholesome, and the parents were loving but responsible.

Clete found himself in classes with the children of wealthy growers who controlled the central California economy. The chasm of opportunity and affluence that lay between him and his fellow students made a lasting impact on him. He spoke and wrote, for example, about the class divide between Mexican workers in the fields and the agribusiness landowners. This instilled in Clete a passion for justice that was at the core of his teaching and writing.

After high school, Clete went to work at the Campbell’s Soup factory in Sacramento. His hilarious descriptions of the soup-making process and its “ingredients” vastly increased the membership of Soup’s Anonymous’ twelve step program. If you’ve ever eaten their Cream of Mushroom soup, you’ll want to stop now. He took advantage of California’s free (at the time) community college and state university system to obtain his bachelor’s and master’s

degrees at San Jose State University. He then completed the doctoral program at the University of Washington. ("They paid me to go to school" he would later recall. "What a racket.")

Clete would relate how he often watched the Southern Pacific passenger train as it came through town and wondered what it would feel like to sit in the brightly-lit dining car and be observed by motionless watchers such as himself. He would add that he was never bold enough to imagine that someday he could be that traveler.

In 1973, this "almost accidental academic" traveled to Ithaca to become a Cornell University faculty member and Assistant Professor of History in the ILR School. Clete was a brilliant teacher who prepared every class thoroughly as a basis, not for rote lecturing, but for exciting and substantive classroom discussions with his students. He received a Distinguished Achievement in Teaching Award in 2002. His dedication to students also motivated him to become Director of the ILR School's Credit Internship Program in 1989 and to oversee its development into world-wide opportunities for students that have changed many students' lives for their own good and the good of others.

Clete's research concerned people too poor, powerless, or dark skinned to fight back and who, too often, developed a sense of resignation and defeat. He believed that working class had the same ratio of fools to saints as every other class, but he knew from the first-hand experience of his early years that the working class was not and could not be the real malefactors of society.

His first book, *Bitter Harvest: A History of California Farmworkers 1870-1941*, was a history, as he described it "of the powerlessness of an occupational group: the men, women, and children who worked for wages in the fields and orchards of California." It explained how that powerlessness was a product of the political and economic power of organized agribusiness interests. Clete dedicated the book to his father "who worked with his hands." He also acknowledged his indebtedness to those who inspired the book: the Mexican farm laborers "who worked alongside me in the lettuce fields." He called them his "first heroes." He wrote that they showed and taught him compassion, that "they never permitted the wretchedness of their lives to rob them of their dignity," and that, although "their names are not remembered," their "faces and singular heroism are inedibly etched in my memory."

In *Chicano Workers and the Politics of Fairness: The FEPC in the Southwest 1941-1945*, Clete wrote about the approximately three million Mexican and Mexican-Americans who were among those whose "race, color, creed, gender or national origin rendered them ineligible to participate fully and equally in the singular competition for material gain and social advantage that this country afforded." Here he developed further the theme of the gap

between American promise and practice and the experiences of “ineligible Americans” trying to reconcile the America of their dreams with the America of their experience.

Clete’s other books, *The ACLU and the Wagner Act: An Inquiry into the Depression Era Crisis of American Liberalism* and *The Culture of Misfortune: An Interpretive History of Textile Unionism in the United States*, extended his exploration of power and powerlessness and of efforts to reconstruct American society “at long last along the lines of the nation’s professed democratic ideals.” We know that Clete would have objected to a “then he wrote” remembrance, so we will say no more about his distinguished scholarly contributions.

More than anything we remember all the small things that made him the man that we love. Clete was as quick with a hug as he was with good natured humor. He loved to laugh at your expense or his own and would laugh until the tears welled up in his eyes. He loved red wine and Swiss chocolate, reading *The Onion* and watching the Simpsons. He hated having loose threads on his clothes and he was an insanely impatient driver. He loved well made shoes, his socks always matched his pants, and he had an amazing collection of ties. Clete liked to look good, but it was not about vanity, but a response to a childhood where the shoes never fit, the socks always had holes, and the clothes were never new. To say he had a salty tongue would be an understatement, and he had the highest respect for people who took swearing to an art. He loved jazz, generously sharing his vast collection with his friends, and he spoke with a mix of envy and pride about his musician brothers. He was a true skeptic, but never let that morph into pessimism or cynicism. He loved words and would spend hours crafting emails, letters, and lectures. He believed that being a father was the most important thing he had ever done as a man. He loved rumbling summer thunder, the sound of the ocean in Cannon Beach, Oregon, and an oak tree on Libe’s Slope that he believed was beautiful in every season. Van Gogh was his favorite painter, Paris his favorite city, Mexican his favorite food, and as a young man, Clete dreamt of traveling to the world that Hemingway wrote about, but seemed so alien to the young man from Salinas.

Clete was a deeply private person with a very small circle of close friends. For those of us privileged to be in that group, he was expansive and open, funny and playful, tender and generous, and fiercely protective. He believed anger was the hallmark of his personality, and he was quick to anger, rarely forgave a slight, and could send an email so withering as to “make our sphincter tighten,” in his words. But that anger never led him to joylessness. If anything, he was able to find laughter even in life’s darkest moments. It is this example that is the hardest to follow for those of us who miss him so much. While Clete believed anger to be his hallmark, in fact it was his kindness. Above all, he was kind and compassionate and most admired kindness in others. As he put it, “smart is good,

but kind is better.” He could not abide the pretense and inordinate self-regard of what he called “self-promoting careerist gas bags.” He gloried in puncturing those gas bags with his piercing wit.

In his 1992 ILR Commencement address, Clete said that the “uniquely human nutrients – tolerance, generosity, understanding, compassion – sustain and invigorate the spirit as well as ennoble the mind.” He lived out those words in every aspect of his life. Clete Daniel was truly a man for all seasons, a colleague for all seasons, and a friend for all seasons. Nothing will be the same without him.

James Gross, Chairperson; Lee Dyer, Risa Lieberwitz

James E. Dewey

January 15, 1917 — August 25, 2009

James E. Dewey, a retired Cornell University Professor of Entomology, passed away at age 92 on August 25, 2009 in Ithaca, New York.

Dr. James E. Dewey was born in Geneva, NY on January 15, 1917. He received his B.S. degree in Entomology from Cornell University, his M.S. from the University of Tennessee, and his Ph.D. from Cornell University in Entomology (Insect Toxicology).

In the spring of 1944 Dr. Dewey was appointed as an extension specialist in fruit insect control, with the rank of instructor. During this time he made numerous excellent contributions to the state fruit industry, establishing relationships and improving communication with federal and state agencies involved with pesticides.

In 1945, Dr. Dewey joined the faculty at Cornell becoming an Associate Professor in 1947 and a Full Professor in 1954. In the 1950s he conducted pioneering research on the use of *Daphnia magna* as an environmental biomarker and for use as a means of determining pesticide levels in water and on food crops. He served as director of the Pesticides Program in the College of Agriculture and Life Sciences from 1964-1973. His major duties, in addition to research, included teaching courses and supervising graduate students in insect toxicology. At that time he also taught a course in the biology, research and control of fruit insects. One specific graduate course in chemistry and toxicology of insecticides, in which he shared responsibility with the insecticide chemist, was regarded as the top course of its kind in the country. Later in his career, he devoted considerable effort to preparation of educational programs and manuals for the safe application and handling of pesticides in agriculture.

Over the course of his career, Dr. Dewey continued to offer his expertise to various state and federal committees that were formulating rules for the safe use of pesticides with emphasis on avoidance of residues in food and milk. His impact on the formation of state and federal pesticide legislation was significant. Dr. Dewey also served as the President of the Eastern Branch of the Entomological Society of America from 1980-1981. He was the recipient of numerous awards, including the New York State Agricultural Society Distinguished Service Citation (1975), the USDA Award for Superior Service in Cooperative Extension (presented by the Secretary of Agriculture at a ceremony in 1983), and the Northeast Agricultural Aviation Association Outstanding Service Award (1999). Dr. Dewey was elected an honorary member of the Entomological Society of America in 1984.

Dr. Dewey was predeceased by his wife of sixty-two years, Agnes. He is survived by his daughter Elizabeth of Dryden, New York.

Arthur A. Muka, Chairperson; Lisa E. Westcott, Jeffrey G. Scott

Esther Gordon Dotson

October 21, 1918 — October 28, 2009

Esther Gordon Dotson, Professor Emerita of Art history died, after a long illness, a week after she and her family celebrated her 91st birthday. She was born in Westerly, Rhode Island, a granddaughter of the Rev. Adoniram Judson Gordon, the founder of the Gordon College in Wenham, Mass., and the daughter of the Rev. Arthur Hale Gordon, a Baptist minister who held pulpits in Atlanta, Buffalo, and Middlebury, Vermont. Her husband, Arch Dotson, a professor of government at Cornell, predeceased her in 2006. She is survived by her stepson, Bruce Dotson, a professor at the University of Virginia, his wife, Diane, their children and grandchildren, and nine nieces and nephews of the Gordon family.

Esther inherited her family's commitment to good deeds and causes and was a founding member of the Loaves and Fishes Ministry, serving meals to the poor at St. John's Episcopal Church; a long-time volunteer with the Southern Tier Episcopal Peace Fellowship and of Meals-on-Wheels; and one of the earliest drivers of the not-for-profit Gadabout Transportation Service, helping the elderly and disabled get to church and around Tompkins County. She actively supported challenged citizens, defended the rights of immigrant families, helped people to obtain affordable housing, and collected surplus food from stores for delivery to migrant workers.

Esther was an active member of St. John's, and was one of the first women to serve on the Vestry. Her brothers and sister shared in her life of active Christian commitment as well. Esther's brother John was a Presbyterian minister who, just after the Hungarian uprising of 1956, installed the erstwhile Hungarian minister of agriculture and his family on the Gordon family farm in New Hampshire. Esther's brother David administered the U.S. effort to blockade commerce with the Nazis during World War II.

At the Dotsons' farm on Danby Hill, where the whole department was invited for Christmas cheer and an opportunity to cut a Christmas tree, she sunbathed luxuriously in her solar-paneled, red barn, the first solo commission of her former student Richard Meier, Cornell '56-now an internationally known architect, and designer of Cornell's Weill Hall, the new Life Sciences Technology Building-preferring it to the old farmhouse on the property which was rented out. The barn accommodated her needs as an art historian, giving her a grand second-floor studio with a northern exposure and a twenty-foot ceiling, with a bookcase covering one whole twenty-foot wall.

Both Dotsons were interested in alternative energy and land preservation, working with the Finger Lakes Land Trust to protect large tracts of land, and helping to create a community park in Danby. They were staunch members of the “Updike Road Unimprovement Association,” a neighborhood alliance devoted to preserving their unpaved road in its unpaved condition.

Esther Dotson graduated *summa cum laude* (and junior Phi Beta Kappa) from Vassar College in 1939 and taught art history after graduation and during her graduate studies at New York University’s Institute of Fine Arts (IFA) back in the days when one could teach on the university level without a Ph.D. in hand. Survival was no easier then than now, however. When she was a graduate student at the IFA she subsisted on something she called the “wolf diet”-consisting of a large meatloaf that she sliced into seven pieces, one for each dinner of the week to come-though later, when she could afford it, she proved she was an accomplished French chef. She completed her Ph.D. in 1973 with a dissertation entitled “Shakespeare Illustrated” a study of English painting, book illustration, aesthetic theory, and stage practice, and, after stints at Ithaca College and Wells College, became the first woman appointed to a full-time professorship in the Department of the History of Art at Cornell, from which she retired in 1989.

At Cornell Professor Dotson was an inspiring teacher whose course History of Art 240, “Introduction to the Renaissance,” became one of the most popular undergraduate courses at Cornell in the 1970s and the 1980s, although she was a tough grader. Her ultimatum to her full-house audience was always the same: “Look at the images I am showing you. Think about what I am saying. I will give you a handout with all the names spelled properly and the dates written down correctly.” She received the College Art Association’s Award for Distinguished Teaching of Art History in 1986. The citation read in part: “The many letters from former students...all emphasize one quality above all others, and that is the immense amount of personal care that she takes with every one of her students.... She is praised for articulate and carefully planned lectures, for her breadth of learning, for her demanding standards and for her sense of humor, but it is by the personal attention far beyond that expected of any faculty member that she has distinguished herself.” In her acceptance remarks, Professor Dotson said with characteristic grace, “If I have been a good teacher, it is because I have had good teachers.”

Esther happily contributed to team-taught courses as well as her own. For a number of years she co-taught the Renaissance Culture Course with Carol Kaske (English), and continued to offer lectures on Michelangelo after her retirement, when Bill Kennedy (Comp. Lit.) took her place as course leader with Carol. Her lectures to “Art, Isotopes, and Analysis,” at the time cross-listed among five departments and three colleges, were among the

highlights of the course. Several of the engineers and scientists enrolled in the course subsequently took Art History courses. When the Sage Collection of Casts of Greek and Roman Sculpture was still on display in Goldwin Smith Hall, she would take a newly-cleaned statue and surround it with photographs of all the Renaissance and later art that had been inspired by it. The exercise was of benefit to both the classicists and the Renaissance art historians in Goldwin Smith.

Esther's commitment to her students and the time she gave to them, in person and in comments on their work, was remarkable. She was equally generous to graduate students, who were deeply devoted to her, and to her younger colleagues, not only offering hospitality, but arranging meals with some of the prominent scholars on campus. She was the engine behind the appointment of the distinguished British art historian Michael Baxandall as A.D. White Professor at Large. She also served as Director of Undergraduate Studies in the History of Art Department.

Esther Dotson's extensive, two-part article, "An Augustinian Interpretation of Michelangelo's Sistine Ceiling," published in the *Art Bulletin* in 1979, argued that the theologian Egidio da Viterbo was the author of the program of narrative scenes. Presenting aspects of the ceiling in relationship with Egidio's writings along with the pervasive influence of those of St. Augustine, particularly *The City of God*, she revealed a profound knowledge of the religious and philosophical ideas current in the papal court. The question behind this essay and its mixed critical response is how much theological significance to give to details of the narrative scenes and what kind of theological messages were being promulgated in the papal court of the early sixteenth century. Dotson's study has been taken seriously by both critics and defenders and is still-over 30 years later-considered canonical for its valuable and original observations.

At the time of the Sistine ceiling's restoration Professor Dotson served as a consultant to the project and in recognition of her scholarly contribution was received at the Vatican by Pope John Paul II. She was also editor-in-chief of the journal *Marsyas*, and she published articles in *Collier's Encyclopedia of Art*.

In her article "Shapes of Earth and Time in European Gardens," published in an issue of the *Art Journal* devoted to earth works in 1982, Esther understood Renaissance gardens first of all as earth shaping. In a strikingly original analysis of the Sacro Bosco, or Sacred Grove, at Bomarzo near Viterbo, the creation of the aristocrat Vicino Orsini, she pointed out fallen and semi-ruined architectural elements that suggest a process of creation and destruction that was purely fictitious. She related these both conceptually and thematically to a very popular forged account of an Etruscan golden age first published in 1498 by Nanni di Viterbo.

In addition to all these serious matters, Esther set some sort of record at Cornell for locking herself out of her office, to the point where one of us was given a master key by the building manager with which to let her back in. Her many one-liners, among them “O Salome, please, not in the fridge!” are not the sort of thing one finds in a scholarly publication, but were recalled by many former students and colleagues at the time of her memorial service at St. John’s last winter.

Esther was preoccupied over many years with the 18th-century Austrian architect Johann Bernhard Fischer von Erlach. Her research has come to fruition in a posthumous book, written in collaboration with her former student, photographer Mark Ashton, which will be published by Yale University Press in late 2010 or early 2011. On hearing of the positive reviewers’ reports and its acceptance by the press last fall, she said that at last she could rest.

Service and scholarship were the traditions in which Esther Dotson grew up and in which she lived her life. She lived greatly. She loved the world deeply, loved those around her deeply, and gave her utmost to her work, to her family, students and colleagues, and to her community.

*Peter Ian Kuniholm, Chairperson; Claudia Lazzaro; Carol V. Kaske
Many thanks to Esther’s nephew, John Hellegers,
some of whose family information and prose we have used,
with his kind permission, for this memorial statement.*

Leon A. Heppel

October 20, 1912 — April 9, 2010

Dr. Leon Heppel came to Cornell in 1967 as a Professor in the new Section of Biochemistry after a distinguished career at the NIH, which ended when he retired from the NIH Public Health Service. In 1958, Dr. Heppel had been appointed chief of the Laboratory of Biochemistry and Metabolism, National Institute of Arthritis and Metabolic Diseases and he held that position until he left NIH.

At Cornell, Dr. Heppel was an important figure, along with Dr. Quentin Gibson and Dr. Efraim Racker, in transforming Biochemistry at Cornell University from a small department in the College of Agriculture into a major university program with greatly increased visibility. Leon's well-deserved election to the National Academy in 1970 made an important contribution to this visibility increase. Even though Leon came to Cornell as a tenured professor, he set an example for all department members with his long hours in the laboratory and his enthusiasm for science. Dr. Heppel, although a quiet person, was quite outgoing and interacted with many people at Cornell. He enjoyed the outdoors and took regular walks with small groups of colleagues around the campus and the plantations. He also was very interested in art and he regularly asked people to name the artist of his current favorite picture.

Dr. Heppel had a very impressive research career that started with early studies of potassium nutrition in rats as a graduate student at Berkeley in the late 1930s. He then went to The University of Rochester Medical School where he showed that muscle cells were permeable to sodium and potassium ions, a seminal observation that changed membrane physiology. After obtaining his M.D., Leon joined the Public Health Service at the NIH where he carried out toxicological studies during the war. Then in 1948 he joined the new enzyme research section headed by Dr. Arthur Kornberg and began his study of enzymes involved in nucleic acid metabolism. He became a major figure in this field and interacted with many other enzymologists both as a mentor and as a collaborator. He was a co-chairman of the first Nucleic Acids Gordon Conference in 1962. He helped in identifying a key regulatory molecule, cyclic AMP and the use of his library of synthetic oligonucleotides led to determining the genetic code for which Dr. Nirenberg won a Nobel Prize.

In his study of *E. coli* ribonuclease, he discovered that this enzyme was not a ribosomal protein as had been reported but it was in a previously unrecognized compartment, the periplasmic space that is between the inner and outer membranes. He developed a procedure, osmotic shock, which specifically released periplasmic proteins.

This led to the discovery of a set of small molecule binding proteins which are present in this space, that are required for a class of ATP-dependent transport systems (ABC transporters). He started to study the mechanism of these transport systems and continued this research at Cornell. One of his students, Ed Berger, provided clear evidence that ABC transport systems used ATP as the energy source to drive active transport, while so called membrane bound systems used the proton motive force. Later Dr. Heppel carried out detailed biochemical studies of the E. coli ATPase F1 that inter-converts the proton motive force and ATP and which is responsible for ATP synthesis. At the end of his career, Dr. Heppel studied the role of extracellular ATP in eukaryotic cells with 23 papers on this topic. Dr. Heppel trained many students and postdoctoral fellows during his career and many of them became successful scientists.

Over his many years at Cornell, Leon was a key member of the section both in his research and as a warm human being and his passing was a major loss.

David Wilson, Chairperson; Peter Hinkle, Ken Kemphues

Paul R. McIsaac

April 20, 1926 — March 15, 2010

Paul R. McIsaac, born in Brooklyn, New York, died at his home in Ithaca, New York of pulmonary arrest at age 84. He had been a member of the EE/ECE faculty for 41 years.

After returning from two years in the US Navy, Paul received the B.E.E. degree from Cornell University in 1949 and the M.S.E. and Ph.D. degrees from the University of Michigan in 1950 and 1954, respectively, all in electrical engineering. During the 1951 academic year, he was a Rotary Foundation Fellow at the University of Leeds, England. Following completion of his doctoral study Paul joined the Microwave Tube Division of the Sperry Gyroscope Company in Great Neck, New York as a Research Engineer. In collaboration with Professor Conrad Dalman, at the time a Senior Research Engineer at Sperry, Paul contributed to the development of state-of-the-art microwave tubes used in high-power radar systems. Conrad joined the EE/ECE faculty in July 1956 when the School began to emphasize graduate-level research. Citing Paul's impressive five-year research record at Sperry, Conrad suggested that Paul would be an excellent faculty addition to the Microwave Tube Research Group. The Faculty viewed Conrad's recommendations favorably and many members recalled Paul's outstanding performance as an undergraduate. With general faculty approval, Paul was appointed as an Associate Professor of Electrical Engineering in 1959. He was promoted to full Professor in 1965, and became Professor Emeritus on July 1, 2000.

Paul's career at Cornell was devoted to teaching, research, and service to the EE School, the College of Engineering, and the University. He helped to develop the junior-year-level courses, EE 303 and EE 304, Electromagnetic Fields and Waves I and II that he taught numerous times during regular academic terms. In addition, he taught the first of these courses to engineering cooperative students during 30 summer sessions. On a regular basis, he also taught the sophomore-year-level course, EE 210, Introduction to Circuits. He taught a graduate course, EE 583, Electrodynamics, with the goal of giving first-year graduate students a thorough understanding of the fundamentals of classical Electrodynamics and the Electrodynamics of continuous media, followed by a graduate course, EE 584, Microwave Theory, with the goal of applying modal theory to waveguides, cavities and microwave junctions. His research was centered on electromagnetic theory and the analysis of structures for application to microwave, millimeter, and optical devices and systems. The objective of this research was to explore the properties of general classes of structures using as a basis the symmetry operations (both spatial and non-spatial) belonging to the structure and its constituent media. These symmetry operations determine, to a large extent, the electromagnetic characteristics of a structure. Uniform and periodic waveguides and transmission systems

and multimode junctions and coupling systems are included. Over the years Paul directed the research of many graduate students in these and related fields.

Paul was highly regarded by his students as an excellent and dedicated Instructor. In attempting to explain some of the more esoteric concepts in Maxwell's Equations, Paul found that his knowledge of modern art provided him with useful classroom analogies. For example, one can draw an analogy between the photons that make up an electromagnetic signal and the myriad dots of color used in neo-impressionist paintings (e.g., by Seurat), or to the blobs of color used by the abstract expressionist Rothko. In the former case, adding or subtracting a few dots does not appreciably alter the painting; this is analogous to classical Electrodynamics, which assumes vast numbers of photons (valid through the millimeter range). In the latter case, adding or subtracting a single blob creates a new painting; this is analogous to the realm where few photons are involved and quantum Electrodynamics must be used (at light frequencies).

Paul served two separate terms as Coordinator of Graduate Studies in the EE School from 1962 to 1965 and from 1973 to 1975 before becoming Associate Dean in charge of research and graduate education for the College of Engineering, a position he held from 1975 to 1980. From 1984 to 1987 and again from 1992 to 1995 Paul was the Coordinator of Graduate Studies in the School, the only Cornell EE Professor who had been in that office four times. From 1965 to 1966 he was a Visiting Professor at Chalmers University of Technology in Göteborg, Sweden, and from 1987 to 1988 he spent another sabbatical at the Royal Institute of Technology in Stockholm. In between these yearlong sojourns, Paul was invited to give doctoral exams to several of his Chalmers students, a signal honor. Over the years he consulted with the Westinghouse Electric Corporation in Elmira, New York (1959-65), the Cornell Aeronautical Laboratory in Buffalo, New York (1960-63), the Sperry Gyroscope Company in Great Neck, New York (1961-65), and the Hampton Institute in Hampton, Virginia (1968-70). Paul was a member of the IEEE, Sigma Xi, and the American Association for the Advancement of Science. He authored or co-authored over 40-refereed journal and conference papers.

Paul was known to colleagues and associates as a quiet thoughtful man. But he had an innate sense of humor that was well demonstrated by his accounts of undergraduate days when he was earning part of his college expenses by working as a part-time engineer and control room operator for the Cornell radio station WHCU. Since he possessed a calm clear bass voice, well suited for radio announcing, one of his duties was to introduce the early Sunday morning broadcasts. Since the daily live broadcast of the Cornell Agricultural Farm and Home Hour coincided with the Columbia Broadcasting System (CBS) soap operas, another one of his duties was to transcribe the soaps

for later rebroadcast. Paul said he learned a lot more than he really wanted to know about “The Adventures of Helen Trent” while those transcriptions were in progress. Paul also recalled that the Farm and Home Hour always started with a live broadcast of the Cornell Library-tower chimes. This feature was accomplished by means of a live microphone in the hands of an assistant operator who was usually stationed near a public telephone booth adjacent to the tower. In addition to the chimes concert, listeners were occasionally treated to some interesting conversations emanating from that telephone booth.

During the five years that Paul worked for Sperry he played the French horn with the Huntington Symphony Orchestra, an amateur group of local engineers and other professionals who were also competent musicians. Paul said proudly that the orchestra produced some fine concerts under the direction of Thomas Pickering, the inventor of the Pickering loudspeaker. As often happens, Paul had not played for many years, and, in fact, gave his horn to his son. Paul and his wife, Lou, were patrons of the arts, enjoyed Bailey Hall concerts, and were frequent visitors to museums in this country and abroad. In addition to a fondness for classical music, Paul admitted listening to jazz occasionally, providing it was of the pre-1950s variety. They were both fond of theater and often visited the Stratford Summer Festival in Ontario, Canada. Paul and Lou also enjoyed art appreciation as a pastime, with interests that ranged from primitive to modern art.

Paul and Lou Heldenbrand, married in September 1949, in Royersford, Pennsylvania, spent the majority of their 61 years of their life together principally in Ithaca. Paul is survived by his wife Lou, of Ithaca, New York; his daughter, Wendy L. McIsaac and her husband, Harvey Sheldon, of London, England; his daughter, Karen Jo McIsaac and her husband Oscar Torres, of Fairfax, Virginia; his daughter, Kathleen A. McIsaac, of Ithaca, New York; his son, Hugh P. McIsaac and his wife Nancy, of Denver, Colorado; and eight grandchildren.

It was as a teacher that Paul made his greatest contribution to the School. He was an excellent and dedicated Instructor, highly regarded by all his students and admired by his colleagues. Over all, to paraphrase President James A. Garfield, also at one time a college President: a log with Paul McIsaac on one end and a student on the other would be the foundation of a great University.

Simpson Linke, Chairperson; G. Conrad Dalman, Clifford R. Pollock, Charles E. Seyler

Richard Magruder Phelan

September 20, 1921 — June 1, 2010

Remembering a Teacher's Teacher and an Engineer's Engineer.

Richard M. Phelan, 88, Professor Emeritus of Mechanical and Aerospace Engineering, died June 1, 2010 in Ithaca, New York. Surviving are his wife of 58 years, Olive; his son, William and family of Ithaca; and his daughter, Susan and family of Rochester, New York.

Professor Phelan was born on September 20, 1921 in Moberly, Missouri, the son of Frederick William and Ethel Ray Phelan. After earning his Bachelor of Mechanical Engineering degree from the University of Missouri in 1943, Dick joined the U.S. Navy, working there until becoming an instructor at Cornell in 1947. He earned the Master of Mechanical Engineering in 1950, ultimately becoming Professor of Mechanical Engineering in 1962 and Emeritus Professor in 1988.

At the end of World War II, the large influx of graduate students resulted in a serious housing shortage, and many were housed in the Watkins Glen Hotel --- bused to and from Cornell. Thus Dick began his Cornell experience surrounded by the U.S. Navy's monotone "battleship gray" everywhere and on everything before he was able to move to a small basement apartment in Collegetown.

Dick published three widely-used textbooks: *Fundamentals of Mechanical Design*, 1956, 1962, and 1970; *Dynamics of Machinery*, 1967; and *Automatic Control Systems*, 1977. The first two were dedicated to his wife, Olive, typist and editor for all.

He was a longstanding member of the American Society of Mechanical Engineers, American Society for Engineering Education, Society for Experimental Stress Analysis, American

Gear Manufacturers Association, American Association of University Professors, New York Academy of Sciences, American Association for the Advancement of Science, Sigma Xi, Phi Kappa Phi, Pi Tau Sigma, and Tau Beta Pi.

Sabbatical leaves were spent at the University of Michigan; Lawrence Radiation Laboratory; traveling and lecturing in the U.S., Yugoslavia (as a Fulbright Scholar), and China.

Dick's own thesis involved design and development of a laboratory rig to simulate dynamically loaded journal bearings. Experimental results from the ingeniously designed rig became the inspiration for later theoretical studies by students and colleagues.

Much later in his career Dick collaborated with president emeritus and former dean of engineering, Dale Corson, to create the intricate mechanism hidden in the base of the sundial installed on the Engineering Quadrangle in 1980 to commemorate Dale's earlier retirement.

As suggested by the successive titles of his textbooks, Dick's central interests gradually moved from mechanical design to feedback control systems, where he became a passionate advocate for a control strategy he called "pseudo-derivative control" (PDF).

Dick's enduring hobby was playing the trumpet, first in a swing band and later as a charter member of the Ithaca Concert Band. He also had an interest in trains dating back to his childhood when his father was a railroader. His HO-gauge model train collection/layout was helpful in his control system course when students were promised they could "play trains" when they came to his home for dinner.

After his retirement in 1988, Dick and Olive travelled widely, covering all seven continents. Whether ballooning over the savannah of Africa or schmoozing with the penguins in Antarctica, it was a rewarding and magical time for both.

When he wasn't traveling, Dick could reliably be found in the Statler Club at 11:30 having lunch and spirited conversation, and sharing his travel photos with other mostly emeritus faculty members.

Dick's dual legacies of students and textbooks still reflect on Cornell. Administrators note that he ranked at the top of student-administered teaching evaluations, and alumni routinely asked about him more than any other. Following his death, former students wrote to describe him as a model teacher, outstanding researcher, and effective motivator. Others who knew him well noted his high integrity, complete honesty, and consistent fairness. Bill Nye ("The Science Guy" and former student) published an extensive appreciation, saying, "He was a good man, who lived a good life. His ideas will, one day, change the world. He certainly changed me and for that, I will be forever grateful".

John Booker, Chairperson; Donald Bartel, Peter Harriott

George Staller

May 7, 1927 — July 13, 2009

George Staller was introduced to Economics in the traditional European manner – as a student in the law faculty at the Charles University (Prague) from which he received his degree in 1949. He continued his studies at Hastings College (Hastings, Nebraska) earning his B.S. degree in 1942 and entered Cornell's Ph.D. program in Economics that same year.

George quickly acquired an enviable reputation as a graduate teaching assistant for the large lecture courses in introductory Economics, taught by senior members of the faculty. He combined a conscientious dedication with a remarkable capability of exposition and patience in explaining the key concepts introduced in the lectures, made palatable by a generous supply of Czech humor.

He completed his Ph.D. degree in 1957 with the defense of his thesis entitled, "Czechoslovakia's Industrial Production 1947-1957," and spent the academic year 1957-58 at Harvard working at the Russian Institute with Professor A. Bergson.

George was a scholar who studied the planned economies of the Soviet Union and Eastern Europe with a special interest in Czechoslovakia. Most of his scholarly work involved trying to compile data for those countries so that it would be possible to measure their growth rates and then to utilize that information to make comparisons in a consistent fashion between planned and free-market economies.

Several of his papers dealt specifically with trying to understand the economy of Czechoslovakia. During the 1940s and 1950s the centralized system of Czechoslovakia worked extremely well. In fact, Czechoslovakia did as well as or better than not only many of its communist neighbors but also many of the European nations that maintained a free-market economy after the War. As George argued in his work, Czechoslovakia's success could largely be explained by strong demand within a completely protected market, underutilized and expanding capacities, and a skilled labor force. The Soviet bloc nations needed Czech-manufactured goods for their reconstruction and, in return, were willing to supply Czechoslovakia with fuels, raw materials and foodstuffs at favorable rates. In the 1960s, however, the situation was very different: the Communist bloc nations slowed down their industrialization drive, their manufacturers started competing with Czech exports; and, in addition, they could reach outside the bloc for sophisticated, high-quality machinery the Czechs could not match because their research and development

had fallen behind. Thus, between 1961 and 1965, unlike during the 1940s and 1950s, the Czech economy virtually stagnated.

In trying to understand the workings of the Czech planned economy, George had much broader interests in mind. He wanted to discern not only whether planned economies in general could compete with capitalistic ones in terms of growth but also whether they could overcome some of the flaws inherent in the capitalistic system. When adherents tout the superiority of planned over free-market economies, they typically make several claims. These claims include: planned economies grow faster, they provide full employment, they are not subject to fluctuations in output, and they have more stable international trade. Many economists had studied the first two of the claims. George decided to analyze the veracity of the last two. In his paper, "Fluctuations in Economic Activity: Planned and Free-Market Economies, 1950-60" in the *American Economic Review*, 1964, George argued that the planned economies of the Communist block were subject to fluctuations in economic activity to a degree equal to or greater than that experienced by the free market economies of the OECD. In a second paper, "Patterns of Stability in Foreign Trade: OECD and COMECON, 1950-1963," *American Economic Review*, 1967, he found that the OECD countries and the United States had more trade stability than COMECON countries and the Soviet Union.

Thus, while a large part of his academic career was spent studying planned economies as such, his special interest focused on trying to determine how planned economies stacked up against capitalist ones, and from his research, he concluded that planned economies could not be shown to be superior to free market economies.

George's research formed the basis for his undergraduate courses on the Soviet Union, Eastern Europe and his graduate seminar on Comparative Economic Systems. He particularly enjoyed participating with his friends Myron Rush (Government) and George Gibian (Russian Literature) in teaching multi-disciplinary courses on the Soviet Union and Eastern Europe. These efforts, coupled with his continued involvement with the Introductory and Intermediate Macroeconomics courses, now in the role of professor guiding a half-dozen graduate teaching assistants, led to his receipt of the Clark Teaching Award (College of Arts and Sciences). Other forms of recognition followed: in 1998, on the occasion of its 650th anniversary, his alma mater, Charles University (Prague), where he had taught annually since 1990, awarded him its *Doctor Honoris Causa* degree; in 2002, he received an Outstanding alumni award from Hastings University; and in 2009 the first annual George J. Staller Lectureship in Economics was delivered by Nobel Laureate Amartya Sen in honor of George's teaching at Cornell.

In addition to deep devotion to and pride in his family, George will be remembered by his students and colleagues for his generous hospitality, centered around good food and drink, both at home and in the office, where his door

was always open, and often the last to close. He could be as entertaining as any stand-up comedian when the occasion required, and could offer profound insight and advice – often with proverb in Latin, French, German, or Russian, which he would quickly, if somewhat loosely, translate.

Tom E. Davis, Chairperson; Alfred E. Kahn, Uri M. Possen

Haruo Tashiro

March 24, 1917 — December 08, 2009

Haruo Tashiro, Cornell University Professor Emeritus in the Department of Entomology at the New York State Agricultural Experiment Station, passed away peacefully in Golden, Colorado at the home he shared with his son, Steve, and Steve's wife, Patricia. He was 92 years of age. "Tash," as he was affectionately called by his many friends and colleagues, was a world leader in the biology and management of insects and mites on turfgrass and woody ornamentals.

Tashiro received his B.S. degree (1945) in Botany and Zoology from Wheaton College in Illinois and his M.S. degree (1946) and Ph.D. degree (1950) in Entomology from Cornell University. He was a research entomologist with the U.S. Department of Agriculture (USDA) in Geneva, New York, from 1950-63, before becoming the investigations leader and research entomologist with USDA at Riverside, California. In 1967, he returned to Geneva to serve as Professor of Entomology until his retirement in 1983.

Throughout his active scientific career, Tashiro produced numerous publications on the biology, ecology and management of insects affecting horticultural crops and turfgrass. Perhaps best known is his 1987 publication, *Turfgrass Insects of the United States and Canada*. This book was the first comprehensive reference to bring together under one cover a discussion of practically all insects and other arthropods destructive to turfgrass in the United States and southern Canada. It soon became the standard reference for the subject. The book was revised in 1999 by Tashiro, his former graduate student, Pat Vittum, and Mike Villani, who succeeded Tashiro as the turfgrass and soil ecologist at Cornell.

Among his many accomplishments, Tashiro conducted seminal studies on the European chafer (*Rhizotrogus majalis*) during the 1950s and 1960s, elucidating the biology of the insect, identifying trapping techniques, and identifying management strategies. He also studied the grass webworm (*Herpetogramma licarsisalis*) and the fiery skipper (*Hylephila phyleus*) during sabbatical leaves in Hawaii.

Tashiro was not only an excellent scientist but an accomplished artist. His detailed drawings of insects, his skill in cartography and his photos grace the pages of his books on turfgrass insects. His artistic skills were recognized by many, including his colleagues Paul Chapman and Siegfried Lienk. Since they were not able to find an artist who could provide the morphological accuracy necessary to illustrate a book on insects affecting apples in New York, they asked Tashiro if he was willing to try. After a few trial paintings, they were pleased with the efforts and

asked him to collaborate. From 1963-68 Tashiro prepared watercolor renditions of 56 species of tortricid moths whose larvae damage leaves and fruits of apples. The book, *Tortricid Fauna of Apple in New York*, was published by Cornell University in 1971 and remains a classic.

Tashiro was born in Selma, California, on March 24, 1917. During his youth, Tashiro was among the approximately 110,000 Japanese Americans interned in camps during World War II because of their ancestry-an act the federal government apologized for in 1988. In 1942, he married Hatsue Morimitsu whom he had met at their church in Sacramento. Rumor has it that he courted her by bringing gifts of vegetables from his family's farm in nearby Orosi. Tashiro and his wife moved east to Cornell so he could obtain his advanced degrees at Cornell University and together developed many long-lasting friends in the area. Tashiro always considered Geneva his home and he and Hatsue raised three children there. He was involved in many civic organizations including devoting many hours to leadership activities in the Presbyterian Church. Tashiro was an avid golfer, even into his late 70s, and was a renowned horticulturalist who created an arboretum around his house.

He is survived by his daughter, Elaine Gerbert and her husband, Pierre (Lawrence, Kansas); his son, Steve and his wife Patricia (Golden, Colorado); and his daughter, Wendy (Byron Bay, Australia). Tashiro was predeceased by Hatsue on April 7, 2006.

She was buried in Dinuba, California, where Tashiro will also be laid to rest. Tashiro will be remembered as a gentleman, excellent scientist and an inspiration to his family and friends.

James Hunter, Chairperson; Anthony M. Shelton, Pat Vittum

Kenneth Torrance

August 23, 1940 — February 15, 2010

Professor Kenneth E. Torrance was born on August 23, 1940 in Minneapolis, Minnesota; he died at age 69 on February 15, 2010 in Ithaca, New York.

Ken received degrees of B.S., M.S. and Ph.D. (1966) in Mechanical Engineering from the University of Minnesota. He then became a Research Associate (1966-68) at the Fire Research Section of the National Bureau of Standards in Gaithersburg, MD, where he studied how fires develop in buildings.

In 1968, Ken came to Cornell as Assistant Professor of Thermal (Mechanical) Engineering. For a sabbatic year, he was a Postdoctoral fellow at NCAR (National Center for Atmospheric Research). In due course, he became Professor of Mechanical Engineering in the School of Mechanical and Aerospace Engineering, and, after 2001, occupied the chair of Joseph C. Ford Professor of Engineering.

At the time of his death, Ken Torrance had been a member of the Cornell Faculty for 42 years. Along the way, he served the University, College of Engineering, and his Department in a wide range of capacities, notably three years as Associate Dean of Engineering for Research and Graduate Affairs.

In his professional career, Dr. Ken Torrance was a master of the science of heat and energy transformation, and its application to a wide range of practical applications. He was a leader in theory, computation, and experiment. His research was always done with students, and credit for results was generously shared with them. Having supervised 46 MS/Ph.D. theses and 28 undergrad engineering projects at Cornell, Dr. Torrance trained generations of engineering scientists to deal effectively with the great energy issues of the future, not just in Mechanical Engineering, but in the fields of Aeronautics, Geology, Architecture, Computer Science, Agricultural and Biological Engineering, for whom he co-supervised student theses. Dr. Torrance and his students published important fundamental contributions to the knowledge of heat convection in planetary mantles, for example in geothermal processes. They also studied heat exchange processes in the Earth's atmosphere, especially in and around cities. In his laboratory, Dr. Torrance was the first to determine the thermodynamic structure of boiling convection in porous materials. His research provided understanding of how fire spreads on the surface of liquid fuels. He also performed important studies of methods for component cooling of miniaturized electronics, and pioneered numerical methods for various heat transfer computations.

Perhaps his most notable accomplishment was to show that to be successful, “computer graphics”, or computer generation of realistic synthetic visual images of objects and scenes, must fully account for the radiometric properties of the objects and media involved. Collaborating with faculty and students in the Cornell Program of Computer Graphics, he went on to develop a measurement laboratory in which such properties are determined, and he pioneered the development of physical models and computational methods by which the goals of computer graphics are then achieved, even for enclosures with multiple reflections. He introduced radiosity algorithms now recognized as breakthroughs for computer graphics. Much of the software now used for realistic simulations in flight simulation, computer games, architectural rendering, the entertainment industry, automobile design, and cosmetic products, is based on Ken’s theoretical and experimental work. He also extended his radiation energy-transfer ideas to problems of food inspection and microwave heating.

The great impact of Ken’s experimental talent and computational leadership in the computer-graphics field were recognized when he was given the prestigious SIGGRAPH Computer Graphics Achievement Award of the Association of Computer Machinery (ACM).

Dr. Torrance’s 7 conference keynote speeches, on Boiling in Porous Media, Mantle Convection, and Image Synthesis, are all evidence of his wide scientific influence. He was elected Fellow of the American Society of Mechanical Engineers, and served on important committees for the ASME Heat Transfer Division. He received three “best paper” awards from the ASME. He was also a Fellow of the American Association for the Advancement of Science.

Owing to Ken Torrance’s personal and scientific reputation at Cornell, and his generous spirit of helpfulness, he was in great demand for committee service, far beyond what is usually expected of a university professor. For the University at large, he was a member of the General Committee of the Graduate School, the Executive Committee of the Materials Science Center, and the Faculty Council of Representatives (as Chair of its Research Policies Committee). He also served for a time as an Advisor for CURW (Cornell United Religious Work).

For the College of Engineering, in addition to his service as Associate Dean, Ken served on the College Policy Committee, the College Computing Policy Committee, the Facilities and Master Plan Committee, Lecture Halls Renovation Committee, and the Duffield Hall Safety Evaluation Committee (especially concerned with the design of laboratory exhaust stacks). For the Mechanical and Aerospace School, Ken most notably served as Graduate Faculty Representative for the Field of Mechanical Engineering, as Chair of the Graduate Area of Fluid and Thermal Sciences, and as Faculty Advisor to the Student Section of ASME.

Students and colleagues of Ken Torrance testify to the benefits they derived from their associations with him. In all his studies, Ken pursued and gained understanding by very hard work, and then happily conveyed that understanding to colleagues and students; his three teaching awards demonstrate the regard in which students held him. Ken was one of the first in the country to introduce a course on Computational Fluid Mechanics and Heat Transfer; generations of Cornell students have taken this course. Students testify that as an advisor, Ken obviously prepared and deliberated carefully in his own mind before meeting with students. Students found him a warm and receptive mentor and guide, in both technical and professional matters.

He was unfailingly willing – eager – to share his knowledge and understanding; he would feel obliged to provide a scholarly, correct answer even to off-hand questions. Ken was always generous, never demanding credit. Of course, he must have appreciated the awards he received from the computer graphics community, but his bibliography shows many co-authorships in cases for which one imagines he was the intellectual leader.

The range of people and disciplines touched by Ken's generosity is quite amazing, including computational fluid dynamicists, astronomers, analytical chemists, and even a horticulturist (Professor Thomas Whitlow). Tom testifies that his first meeting with Ken not only confirmed his sense that all his grad students should take Ken's course, but also that he now had a friend and colleague with whom he could share his ideas. Ken always provided sage, succinct advice on Tom's experiments with plants, wind and dust. Ken was not just generous with time and ideas; he offered a no longer used wind tunnel, which now has been in Tom's lab for 6 years, helping him with his experiments and reminding him of Ken Torrance, a model colleague, teacher and friend.

Ken's greatest joy in life was spending time with his large family, including his wife of 48 years, Marcia, his brothers Don and John, his children, Charles, Deborah and Catherine, and all their own families including his six grandchildren. He was very proud of all his family's accomplishments, and derived great pleasure in following their activities. He had devoted much time and effort to teaching his children, and leading them on camping trips. In recent years, Ken rekindled his passion for classic cars, spending many hours fine-tuning his '57 Chevy and giving rides.

Ken Torrance was not only a fine scholar and teacher, but he was a supremely good man, responsible, industrious, neighborly and kind, loyal to friends, and loving to his family. He was very proud of his Midwestern heritage, and one supposes he would say that the virtues just named are simply the expected Midwestern values. Of course, these

values found profound expression in his professional life, as his Cornell colleagues well know. Cornell colleagues share a deep respect and affection for this good friend, and deeply mourn his passing.

Donald P. Greenberg, Chairperson; Franklin K. Moore, Zellman Warhaft

Morrill (Morrie) T. Vittum

May 4, 1919 — March 5, 2010

Dr. Morrill Vittum was born in Haverhill, Massachusetts and received a B.S. degree from the University of Massachusetts in 1939, a M.S. degree from the University of Connecticut in 1941 and a Ph.D. from Purdue University in 1944. Following a year in the U.S. Navy during W.W. II, in 1945 he moved to upstate New York and joined the Cornell University faculty. Dr. Vittum spent his career at the New York State Agricultural Experiment Station in Geneva. He spent 23 of his 37 years on the faculty there as the Head of Department of Seed and Vegetable Sciences. During those years he spent sabbatical leaves at the University of California, Oregon State University, and twice at USDA in Washington, D.C. He was also an international short-term consultant and advisor, and for short periods visited Turkey, Romania, and Yugoslavia.

In the early 1970s, he spent over two years at the University of the Philippines in Los Baños, south of Manila, coordinating cultural exchange programs (faculty and students) between that institution and Cornell University. In 1980 he was elected a Fellow of the American Society of Horticultural Science. For many years following his retirement, he served as Secretary and Treasurer of the New York State Seed Association, and was elected an honorary member of that organization in 2000. Dr. Vittum was recognized both nationally and internationally for his expertise in mineral nutrition of vegetable crops. His books *Phosphorus Nutrition of Vegetable Crops and Sugar Beet* (1980) and *Band Application of Phosphatic Fertilizers in Vegetable Crops* (1977) are frequently referenced today. In addition he published extensively on soil testing methodology and interpretation, and the interaction of plant nutrients.

Dr. Vittum was a pioneer in developing the technology on which the Growing Degree Day (GDD) method of determining the maturity of vegetable crops is based. This method of environmental monitoring is used extensively by vegetable processors to schedule planting and harvesting dates of green peas, snap beans and sweet corn.

Dr. Vittum and his wife, Winifred, were world travelers and visited or lived in 49 states and more than 20 countries. After retirement, they participated in many Elderhostels, visited their son, David and his family, living in the Philippines, and visited their daughter, Patricia, living in New Zealand. They always looked forward to returning to their home in Phelps, New York which hosted many guests, visiting scientists and students. The Vittum's valued their roots in New England returned annually for a quiet vacation on the lake listening for the loons.

Dr. Vittum loved the outdoors and nature. During college, he was President of the Outing Club, and he spearheaded efforts to rebuild many hiking trails in the Amherst, Massachusetts area following the Hurricane of 1938. He was an active Boy Scout all his life (an Eagle Scout with three palm branches) and was National Scout of the Year in 1935 (an honor bestowed by the VFW on one scout in the USA each year). He was scoutmaster of Troop 46 in Phelps for many years. He and his wife were both extremely active members of the Presbyterian church in Phelps (later to become the United Church of Phelps), with special interest in the Presbytery's Camp Whitman in Dresden, New York where for years he was a member of the property and endowment fund committees. The Vittum's were enthusiastic members of Foster Parents Plan and sponsored children around the world for more than four decades, and were instrumental in moving the extended family of one of "their children" in the Philippines to the Rochester area. The Vittum's were also host family for the first AFS student in Phelps.

Dr. Vittum is survived by his son, the Rev. David A. (Jean) of Phelps; son, Allan (Andrea) of Penfield; daughter, Dr. Patricia J. Vittum (Laurel Brocklesby), of Sunderland, Massachusetts; four grandchildren; and six great-grandchildren. Dr. Vittum leaves an incredible circle of friends around the world.

Hugh Price, Chairperson; Michael Dickson, Gary Harman

Richard N. White

December 21, 1933 — October 3, 2009

Richard “Dick” N. White, the James A. Friend Family Distinguished Professor of Engineering Emeritus of the School of Civil and Environmental Engineering (CEE), died at the age of 75. He was born in Chetek, Wisconsin and grew up on several different dairy farms in Wisconsin. His father alternated farm ownership with operation of a small contracting firm. Work on the farms, helping his father in construction, and his classroom interests made civil engineering his clear choice while still in high school.

Dick pursued his civil engineering education at the University of Wisconsin, Madison, earning a B.S. in 1956 and an M.S. in 1957. He and his wife Margaret “Marge” C. Howell, met while they were undergraduates and were married in December 1957. After 6-months of active duty in the U.S. Army Corps of Engineers, he returned to Madison to work as a structural designer for a firm of consulting engineers. He continued this work part-time when he re-enrolled at UW-Madison for study leading to his Ph.D. in structural engineering, awarded in 1961. While still a graduate student, he began to develop his famously effective teaching skills by serving as an Instructor with full responsibility for several undergraduate courses.

He joined the CEE faculty in 1961 and rapidly developed a versatile research program to complement his teaching of undergraduate and graduate courses. Although his research interests spanned all the traditional areas of structural engineering – experimental, analytical and computer approaches to concrete, steel and timber structures – he held a special love for topics in concrete and for structural model studies. In support of the last, he led the creation and use of a structural models lab for both instruction and research that was one of the finest in the nation. Among his many publications, he was the senior author (with faculty colleagues Peter Gergely and Robert Sexsmith) of a remarkably successful set of textbooks, *Structural Engineering*, a three-volume series that integrated aspects of mechanics, analysis, behavior, materials and design – and also disseminated widely the essence of the Cornell CEE undergraduate curriculum in structures.

Among his numerous appointments and positions at Cornell, he most notably served as Director of the School of Civil and Environmental Engineering (1978-84). Among his proudest accomplishments as Director was the fundraising, planning, construction and dedication for a 5,000-square-foot addition to Hollister Hall to house the Joseph H. DeFrees Hydraulics Laboratory. He served the College as Associate Dean for Undergraduate Programs (1987-90), and he was named the James A. Friend Family Distinguished Professor of Engineering in 1988.

Dick retired from Cornell in 1999 but remained active in the School until illness overtook him in 2005. Thanks to the financial support of alumni and friends, the Richard N. White Instructional Laboratory was dedicated in 2004 within the newly refurbished Bovay Laboratory Complex of CEE. Posthumously, a fund drive has been launched to endow the continued maintenance and upgrading of this lab as well as the other instructional labs in the School of CEE.

Throughout his 39 years at Cornell, Dick also maintained a part-time consulting practice for dozens of clients, including leading companies, national laboratories, government agencies, publishers and universities. This consulting involved structural analysis, design and development work; structural investigations, reviews, and evaluations; structural research and development oversight; preparation of design aids; and editorial development work.

During the course of his career, he received two teaching awards from Cornell's College of Engineering (1965 and 1996), three "Professor of the Year" honors from the Cornell chapter of the civil engineering honorary society Chi Epsilon (1972, 1987, and 1996), the University of Wisconsin Distinguished Service Citation (1993), and the Collingwood Prize of the American Society of Civil Engineers (ASCE) in 1967. He was elected to the National Academy of Engineers in 1992 and was also named an Honorary Member of the ASCE in 2001.

An American Concrete Institute (ACI) member since the late 1950s, Dick was elected ACI Vice President in 1995, served as ACI President from 1997 to 1998, and was Chair of the Standards Board from 2002 to 2005. He was a member of the Technical Activities Committee for 7 years and served as its Chair from 1991 to 1994. He also served a 3-year term on the ACI Board of Direction. White was a member of numerous ACI committees; and he was the first Chair of the ACI Committees 335: Composite and Hybrid Structures, and 444: Experimental Analysis for Concrete Structures. White received the ACI Joe W. Kelly Award in 1992 and was the co-recipient of the ACI Wason Medal for Most Meritorious Paper and the ACI Structural Research Award in 1993 and 1994, respectively. He was named an ACI Fellow in 1974 and was elevated to ACI Honorary Membership in 2006.

During his sabbatical leaves from Cornell, he was a staff associate at Gulf General Atomic (1967-1968) and a visiting professor at the University of California at Berkeley (1974-75), the University of Puerto Rico at Mayaguez (1982), Southwestern Jiaotong University in China (1982), and Durham University in England (1990).

Through his mentoring of many international graduate students and his duties as ACI President, he was able to enjoy travel to a great many places in the world: Egypt, Saudi Arabia, the United Arab Emirates, Qatar,

Puerto Rico, Costa Rica, Colombia, Chile and Brazil, to name a few. He also lectured in many places, including an extended stint in China in the early 1980s that included Beijing, Hong Kong, Shanghai, Wuhan, Xian, and Chendu. Of course, he always carried his favorite camera, recording his trips, the scenery, the people, the foods, and life wherever he was.

Photography was a major pastime for Dick. He enjoyed taking pictures of people, birds, animals, flowers, and all the things around him. He later entered many photographic exhibitions, and had numerous one-man shows of his various works, both locally in Ithaca and a major show in eastern Massachusetts. He also recorded the growing years of his daughter, Barbara, and son, David.

Dick was very proud of his years at Cornell University and of the colleagues and students who were an integral part of his career and life. He enjoyed his many friends and neighbors through his Ithaca years, as well as his beloved schnauzers. He is survived by his wife, Marge, one daughter and one son and their spouses, a sister, and several grandchildren, nieces and nephews.

Dick's personal and professional accomplishments were outstanding as shown, in part, by the array of distinguished awards and recognitions that were presented to him throughout his career. But in addition, we particularly acknowledge the statesmanlike and humane role he performed as a distinguished member of the Cornell University Faculty – a role that infused and yet transcended his specific area of research and which demonstrated his personal warmth, knowledge, compassion and commitment to students, staff and faculty in Civil and Environmental Engineering and in every aspect of the University in which he participated. Dick was uniformly admired and respected and will be long remembered for the many roles he fulfilled as a Cornell faculty member.

John Abel, Chairperson; Kenneth Hover, Walter Lynn, William McGuire, Arnim Meyburg

Robert John Young

February 10, 1923 — April 19, 2010

Robert John Young, Professor of Animal Nutrition, Emeritus, was born in Calgary, Alberta, Canada on February 10, 1923. He grew up on a dairy farm in Chilliwack, British Columbia. Bob Young attended schools in Chilliwack and Sardis, B.C., graduating from the Chilliwack School System in June, 1942. In October of 1942 he enlisted in the Royal Canadian Air Force where he served as engine mechanic and then as radio operator until he was honorably discharged in 1945 with the rank of Flying Officer, Navigator. After military service, Bob entered the University of British Columbia, Vancouver where he received a 5- year B.S.A. with Honors in 1950 and was awarded the Winifred Sader Gold Medal for being first in his class. During this time he met Greta G. Milne whom he married in 1950. He was admitted to the Graduate School at Cornell University where he earned a Ph.D. degree in Animal Nutrition in 1953.

After graduation, Bob accepted a position as Research Associate in the laboratory of C. H. Best in the Banting and Best Department of Medical Research at the University of Toronto where he conducted research on choline and related factors in methyl group metabolism from 1953 until 1956. He held positions as Research Chemist from 1956 until 1958 at International Minerals & Chemical Corporation in Skokie, Illinois and in the Research Division of Proctor and Gamble Company in Cincinnati, Ohio from 1958 until 1960.

Bob Young was appointed Associate Professor of Animal Nutrition in the Department of Poultry Husbandry in 1960. Thus began a highly productive academic career of 26 years as researcher, instructor, and administrator in the College of Agriculture and Life Sciences at Cornell University. The research of Bob and his graduate students and research associates touched on many aspects of poultry nutrition. His contributions include an exquisite demonstration, via the chemical synthesis of specific fatty acyl glycerides, that the chain length and degree of unsaturation of free fatty acids as well as the position of fatty acid moieties in monoglycerides affect the absorption of fatty acids in the chicken. They reported on the zinc requirement of chicks, the calcium and phosphorus requirements of chickens and the pathology of excess calcium in growing pullets, the requirements for indispensable amino acids by chickens and Japanese quail, and the utilization of dispensable amino acids and non-protein nitrogenous compounds for growth and egg production by chickens and quail. Bob Young was called upon to present overviews of poultry nutrition in numerous conference venues. He published some 77 research articles and technical papers and 22 abstracts of presentations at scientific meetings. Many of his publications were cited as resources in the National Research Council-National Academy of Science publication, Nutrient

Requirements of Poultry. He was co-author of the world renowned book, *Nutrition of the Chicken* by M. L. Scott, M. C. Nesheim and R. J. Young (M.L. Scott & Associates, Ithaca, New York) three editions of which were published in 1969, 1976, and 1982.

Bob was energetic and proactive. He had a knack for organization and efficiency. Shortly after his appointment as Associate Professor, he was called upon to serve as Acting Head of the Department of Poultry Husbandry. By 1965 Bob was appointed Full Professor of Animal Nutrition and Head of the Department of Poultry Science and the Cornell University Duck Research Laboratory at Eastport, Long Island. He served in this capacity until 1976 when he was asked to assume the chairmanship of the Department of Animal Science, a position which he held until his retirement in 1983.

Bob Young's administrative ability led to many assignments. Around the time that he was appointed Head of the Poultry Department, for example, he was appointed chairman of the Interdepartmental, Interdisciplinary Task Force on Agricultural Waste Management. The Task Force had responsibility for research proposals, identifying funding, and coordinating research programs on agricultural waste management and nutrient run-off among six departments. He was director of an interdepartmental project, supported by a six-year Rockefeller Foundation grant, entitled The Management of Nutrients from Agriculture that Affect Water Quality. He participated in some 24 University assignments and committees. After his retirement from the chairmanship of the Department of Animal Science in 1983, Bob was appointed for one year as co- Associate Director of Research in the College of Agriculture and Life Sciences and co-Associate Director of the Cornell University Agricultural Experiment Station. He served as Associate Dean of the College from 1984-1985, and Director of the Physical Plant of the College from 1985-1986.

Bob was a member of the American Institute of Nutrition, the Poultry Science Association, Sigma Xi, and Phi Kappa Phi. He took sabbatical leaves at the University of Lund, Sweden in 1966 and the University of British Columbia in 1974 and participated in numerous overseas assignments. In 1966, he spent 5 weeks in Greece under the auspices of the U.S. Feed Grains Council lecturing and consulting with farmers and feed manufacturers on animal and poultry nutrition. He traveled to the People's Republic of China in 1980 as a member of a team of Cornell University faculty invited by the Ministry of Agriculture in the People's Republic to review academic programs in five leading colleges of agriculture, and participated in the signing of a joint Cornell University, Nanjing College of Agriculture cooperative agreement. In the same year he was invited by the Council for Agricultural Planning and

Development in Taiwan to evaluate agricultural research in livestock and poultry as part of the development of a cooperative program. He also traveled to Japan, Argentina and Brazil on professional assignments.

Bob enjoyed travel, and he vacationed overseas with his family on several occasions. He was an avid fan of Cornell hockey and basketball and enjoyed woodworking, sailing and, later in retirement, looking after the aviary in Kendal at Ithaca.

Bob is survived by his wife, Greta, and their son, Kenneth and wife, Madeline, of Ithaca, New York, and their daughter, Donna and her husband Don of Binghamton, New York, two sisters, Dorothy Crockatt and family of Toronto, Ontario, Jean Mitchell and family of Chilliwack, British Columbia, and two brothers-in-law, Allen Milne and family and Wesley Milne of Victoria, British Columbia.

Richard E. Austic, Chairperson; Douglas E. Hogue, Michael L. Thonney