



IN MEMORIAM

Thomas Vincent McEvelly
Professor of Seismology, Emeritus
UC Berkeley
1934 – 2002

Tom McEvelly was born on September 2, 1934, in East St. Louis, Illinois, and passed away on February 22, 2002, in St. Louis, Missouri, after a courageous eight-month battle against cancer. With his passing the field of seismology lost an insightful and gifted scientist; the University of California and the general scientific community lost a strong and effective leader; and many individuals lost a close friend.

Tom grew up in the St. Louis area and obtained a B.S. in geophysical engineering from St. Louis University in 1956. He then went to work doing seismic exploration for the California Company, working on crews in Louisiana and Mississippi and advancing to the position of party chief. In 1960 he returned for graduate work at St. Louis University and completed the Ph.D. in 1964. During this time he worked part-time for the Sprengnether Instrument Company, and this began a lifelong interest in the design and operation of seismic instrumentation. In 1964 he accepted a faculty position in the Department of Geology and Geophysics at the University of California, Berkeley, and advanced to professor in 1974. Tom's formal teaching duties ended in 1994 when he accepted an early retirement package, but he continued with a very active research program, supervision of graduate students and postdoctoral researchers, and service to numerous professional groups and government agencies.

Tom's approximately 300 research contributions, including over 100 in refereed journals, covered a broad range of topics, mostly in the field of seismology. They included studies of crust and upper mantle structure, detailed investigations of earthquake sources around the world, exploratory studies of geothermal energy, contributions in support of a nuclear test ban treaty, tests of earthquake prediction scenarios, application of seismic reflection methods to a variety of tectonic problems, and use of controlled sources to measure anisotropy and temporal changes in seismic velocity.

What is unique about this body of research is Tom's intuitive ability to recognize and then capitalize on opportunities where new field experiments could produce the high quality observational data that are the lifeblood of a field such as seismology. These experiments typically involved innovative uses of new technology that Tom had either developed himself or imported from other scientific fields. In the 1960s and 1970s he helped design and implement a number of recording experiments at the Nevada Test Site that helped illuminate differences and similarities between nuclear explosions and earthquakes. He was also one of the moving forces behind the Near Field Project, an attempt to trap an earthquake within a seismic network located along the San Andreas Fault in central California. In the 1970s he began working with the Earth Science Division of Lawrence Berkeley National Laboratory (LBNL) on the exploration for new sources of geothermal energy, which involved a number of geophysical investigations in California, Nevada, and Mexico. One of Tom's early papers was on the Parkfield earthquake of 1966, and in 1984 he and former student Bill Bakun pointed out some interesting properties of recurring earthquakes at Parkfield, which led to an extensive monitoring program designed to better understand earthquake processes and to evaluate methods of predicting earthquakes. Tom played a central role in initiating and shepherding the Parkfield Prediction Experiment and had primary responsibility for one element of the program, the deployment of a borehole seismic network that continues to operate to this day. In the 1990s a similar experiment was begun along the

Hayward Fault in the San Francisco Bay Area, with Tom again centrally involved in the initiation and operation of the project. Interspersed between these major projects were a number of smaller experiments that involved studies of earthquakes or earth structure in Iran, China, Tibet, Greece, Chile, and New Zealand, as well as numerous studies throughout California. Finally, throughout his career Tom was indispensable in providing the imagination and technical expertise that helped maintain the Berkeley Seismographic Stations as one of the premier seismological observatories in the world.

As a teacher Tom was extremely generous in sharing both his time and knowledge with students in the full range of undergraduate and graduate courses that he regularly taught. His graduate course in advanced seismometry was unique in offering a type of hands-on experience with seismic instrumentation that can be found in very few universities, and evidence of this course is easily recognized in the careers of the many students who took advantage of this opportunity. Tom excelled in teaching on a one-to-one basis and this made him very effective in mentoring the many graduate students whom he supervised, who took his courses, or who went to the field with him. Most of all, Tom never lost his fascination with science and the desire to continue learning, and he was very effective in passing these traits on to students.

With his broad range of knowledge, excellent communication skills, innate understanding of human nature, and unlimited supply of good humor, Tom was a very effective leader of scientific projects and groups. His colleagues valued his integrity and wit and were continually amazed by the imaginative manner in which he found easy solutions to delicate diplomatic issues. He served as editor of the Bulletin of the Seismological Society of America between 1976 and 1985. He was chairman of the Department of Geology and Geophysics between 1976 and 1980 and was director of the Earth Sciences Division at LBNL between 1982 and 1993. Tom's style featured a combination of tough criticism and gentle humor that allowed him to maintain both high standards and high morale in these leadership roles. These same qualities made him much sought after as a member of numerous professional and governmental committees. Other honors included election as a fellow of the American Association for the Advancement of Science, a fellow of the American Geophysical Union, and an honorary member of the Seismological Society of America. He was awarded the Berkeley Citation in 1995.

Tom's reputation throughout the seismological community as one who could make experiments work became particularly evident in the 1980s when the experiment known as IRIS (Incorporated Research Institutions for Seismology) was being contemplated. Tom was selected as the first president and chairman of the board of directors for this fledgling attempt to unite academic scientists behind a plan to secure the funding necessary to rebuild much of the seismological infrastructure of the United States. The success of this endeavor has been truly remarkable, and the manner in which seismology is taught and practiced has been changed forever; but only a few remember that there were some major problems to overcome in those early days. In those early battles, Tom's role was critical in providing the leadership that turned a dream into a reality.

While his legacy as a scientist can be found in the literature, institutions, and general practice of seismology, the individual that was Tom McEvelly is more difficult to describe and is best preserved in the memories of his many friends, whether they be coworkers at the University, students he supervised, colleagues from around the world, or members of the Berkeley community. Tom enjoyed his life and cheerfully shared it with others. He both understood and liked people, was by nature an optimist, could find the humor in just about any situation, and had a knack for creating an atmosphere where others felt relaxed and comfortable. Whether it was a scientific meeting, work in the field, a party at his home in the Berkeley hills, or just a passing conversation, any occasion seemed to be more interesting and more enjoyable when Tom was present. Regrettably, the wave and smile that were always there as Tom drove past in his 1967 green Ghia convertible are no longer a part of the Berkeley scene.

With his infectious enthusiasm for life, Tom McEvelly was able to fit a very full life into 67 years, and the people and events that he encountered along the way all benefited from his unique blend of wit and wisdom. The field of seismology has been permanently changed by his contributions, and his influence endures in the lives of those who had the privilege of knowing him.

Tom is survived by his wife Dottie, children Mary, Susan, Ann, Steve, Joe, and Adrian, and nine grandchildren.

Lane Johnson
Ernie Majer

Frank Morrison