

At a meeting of the FACULTY OF ARTS AND SCIENCES on November 18, 2008, the following tribute to the life and service of the late George Whitelaw Mackey was spread upon the permanent records of the Faculty.

GEORGE WHITELOW MACKEY

BORN: February 1, 1916

DIED: March 15, 2006

George Whitelaw Mackey was born February 1, 1916, in St. Louis, Missouri.

In 1938 he received his bachelor's degree in mathematics from the Rice Institute (now Rice University). His mathematical talent was recognized nationally when he became one of the top five William Lowell Putnam winners during his senior year at Rice. As a result, he received a full scholarship to Harvard for graduate work.

He earned a master's degree in mathematics at Harvard in 1939 and a Ph.D. in 1942 under the direction of Marshall Stone. Marshall Stone was, in the 1930s and early 1940s, the leading American figure in the then new field of functional analysis. The Stone-von Neumann theorem (originally conjectured by Hermann Weyl) lies, to this day, as one of the key foundations of the mathematical basis of quantum mechanics. George Mackey's lifelong research continued the Stone tradition, amplifying and extending it to include and unify seeming disparate mathematical disciplines such as number theory, ergodic theory, group representations, and mathematical physics.

He spent a year in 1941 at the Institute of Advanced Studies before completing his Ph.D. and a year on the faculty of the Illinois Institute of Technology, and then returned to Harvard in 1943 as an instructor in the mathematics department, where he remained until his retirement as Landon T. Clay Professor of Mathematics and Theoretical Science in 1985. For many years, George Mackey served as a tutor in Kirkland House.

The following is an excerpt from the eulogy delivered by Professor David Mumford on the occasion of the memorial service for George:

I met George in the fall of 1954—fifty-three years ago. I was a sophomore at Harvard and was assigned to Kirkland House, known then as a jock house. In this unlikely place, George was a nonresident tutor, and we began to meet weekly for lunch. . . . He showed me what a beautiful world

mathematics is. We worked through his lecture notes, and I ate them up. He showed me the internal logic and coherence of mathematics. It was his personal version of the Bourbaki vision, one in which groups played the central role. Topological vector spaces, operator theory, Lie groups, and group representations were the core, but it was also the lucid sequence of definitions and theorems that was so enticing—a yellow-brick road to more and more amazing places.

This was my first exposure to what higher mathematics is all about. . . . In those days he led the life of an English don, living in a small apartment with one armchair and a stereo. Here was another side of the life of the intellectual: total devotion to your field, which was something I had never encountered so intensely in anyone in my family circle. When I graduated, my mother came to Cambridge and wanted to meet one of my professors. We had lunch with George. After that, she said, “This is what I always thought a Harvard professor would be like, the real thing.” . . .

George’s outspokenness and his brutal honesty probably got under everyone’s skin at some point. He never adjusted his message to his listener. . . .

Back in the 1960s, government funding of mathematical research was just starting, so of course everyone was applying. Not George. He rocked the Boston mathematical community—not for the last time—by saying what no one else dared: the government was wasting its money, because all of us would do math all year without the two-ninths raise they were offering. He would not take it. Besides, on a darker note, he predicted all too accurately that when we were bought, the government would try to influence our research.

In the summer of 1955, George Mackey gave a course on group representations at the University of Chicago. The lecture notes for that course spread far and wide and instructed a whole generation of mathematicians. These notes went through several incarnations: Berkeley notes of 1965, Oxford notes of 1966–67 eventually ending up as the book *Unitary Group Representations in Physics, Probability, and Number Theory*, published in 1978. Another book with a profound influence on the next generation of mathematicians and mathematical physicists was his *Mathematical Foundations of Quantum Mechanics*, first published in 1963.

George Mackey married Alice Willard in December 1960 and their daughter, Ann, was born in February 1963.

George Mackey died on March 15, 2006.

Respectfully submitted,

Andrew Gleason†

Calvin Moore

David Mumford

Clifford Taubes

Shlomo Sternberg, Chair