LITTLE, Dorothy (Manning) Smiley. October 6, 1909—October 18, 1988. STANFORD UNIVERSITY (BA 1933, MA 1934, PhD 1937).

Dorothy Manning was the eldest of five surviving children of Esther Mae (Crandall) (1883–1954), originally from San Francisco, California, and William Albert Manning (1876–1972), born in Salem, Oregon. Esther Crandall earned a bachelor's degree in 1903 and a master's degree in 1905 in Greek from Stanford and was a PhD student in psychology there at the time of her marriage in 1908. W. A. Manning spent a year in Nicaragua with a half-brother before beginning his undergraduate studies. He earned a bachelor's degree in 1900 from Willamette University in Salem, Oregon, and a master's degree in 1902 and a PhD in 1904 in mathematics from Stanford University. He studied at the Sorbonne during the year 1904–05 and then returned to the mathematics department at Stanford where, except for a visiting position, he spent the remainder of his career.

Esther Crandall and W. A. Manning were married on September 18, 1908, and made their home in Palo Alto. He had a visiting position at the University of Illinois in 1909–10, and it was in Champaign, Illinois, that Dorothy Manning was born. There were three more daughters: Rhoda (1912–2006), Helena (1914–1939), and Sylvia (1917–2005). Twin boys were born in 1920 but died shortly after birth. The surviving son, Laurence Albert, was born in 1923. The family moved from Palo Alto to the Stanford campus, an unincorporated area, in 1925.

Dorothy Manning attended public schools in Palo Alto and graduated in 1928 from Palo Alto Union High School. She entered Stanford in the fall of 1928, the year Marie Weiss received her doctorate in group theory as a student of W. A. Manning. Dorothy Manning was registered for two quarters in each of the last two of her five years as an undergraduate at Stanford and received her BA with great distinction as a chemistry major in April 1933. The following year she completed the work for her MA in mathematics, with a thesis in group theory written under the direction of her father. One year later, in June 1935, her PhD dissertation in group theory was approved by W. A. Manning and H. F. Blichfeldt, and, for the committee on graduate study, Ralph H. Lutz. Her dissertation, written under her father's direction, appeared in the *Transactions* of the AMS in 1936, the year before her degree was granted with a minor in chemistry. During the academic years 1935–36 and 1936–37 Dorothy Manning was an Abraham Rosenberg research fellow at Stanford.

Dorothy Manning's four siblings all attended Stanford. Rhoda entered in the fall of 1929 and Helena in the fall of 1931. Both studied mathematics and earned BA's in 1935 and MA's in 1937. Like their older sister, both wrote master's theses under the direction of their father. Helena died of sleeping sickness in November 1939 after an illness of about a year and a half. Rhoda continued her work at Stanford and earned a PhD in mathematics in 1941 under the direction of Gabor Szegö. She was for some time on the faculty at Oregon State University, where she met and married William H. Wood, a geologist. Sylvia Manning first enrolled at Stanford in the fall of 1935 and studied chemistry for three years. Laurence Manning entered Stanford in 1940 and earned all his degrees in electrical engineering: a BA in 1944, an MS in 1947, and a PhD in 1949. He became a professor of electrical engineering at Stanford.

Book Web Page LITTLE - 2

Dorothy Manning studied at the University of Chicago 1937–38 as a holder of a prestigious National Research Fellowship; the following year she was a member of the Institute for Advanced Study in Princeton. In the fall of 1939 she became an instructor at Wells College in Aurora, New York, and resigned after two years. The notice of her resignation appeared in the August 1941 *Monthly* and included the information that she "has become the bride of Dr. M. F. Smiley of Lehigh University" (48:489).

On August 20, 1941, Dorothy Manning and Malcolm Finlay Smiley were married in Chicago. Smiley was born near Monmouth, Illinois, on December 15, 1912. He did all of his work through the doctorate at the University of Chicago; he earned a BS with honors in 1934, an MS in 1935, and a PhD in 1937, with a dissertation in the calculus of variations. He was a member of the Institute for Advanced Study in 1937–38. In 1938 he went to Lehigh University as instructor and was promoted to assistant professor before he left in 1942. He also taught as a visiting faculty member at Chicago for the summers of 1939 and 1941. There were no children of the marriage.

Dorothy Manning Smiley had no formal employment after her marriage, but M. F. Smiley was associated with a number of institutions. During World War II he was in the US Naval Reserve and taught at the Post Graduate School of the US Naval Academy. He returned to Lehigh as associate professor briefly after the war. He was at Northwestern University 1946–48, at the University of Iowa 1948–60, at the University of California at Riverside 1960–67, and at SUNY Albany from 1967 until his retirement in about 1980 or 1981. In 1954–55, he was a faculty fellow of the Fund for the Advancement of Education, and in 1975 he was an honorary research associate at Harvard. The focus of his research shifted from analysis to abstract algebra.

Dorothy Manning Smiley had earlier been elected to Phi Beta Kappa and was a member of Sigma Xi, a science honor society; Iota Sigma Pi, a chemistry honor society for women; and Sigma Delta Epsilon, an organization for graduate women in science. Long after her marriage she coauthored two mathematical papers, which appeared in the *Monthly* in 1964 and 1965. In a paper that appeared in the *Transactions* of the AMS in 1957, M. F. Smiley wrote, "It is with pleasure that the author acknowledges that certain conversations with his wife, Dorothy M. Smiley, aided materially in the derivation of the results given in this note" (84:426). He also acknowledged her "helpful suggestions" in a 1968 paper in the *Proceedings* of the AMS (19:1029, footnote). Dorothy Smiley retained her membership in AMS until the mid-1970s.

In a December 1997 e-mail to one of the authors, Dorothy Smiley was described by her brother, Laurence Manning, as "the smallest of her siblings (at 5'5"), and light boned." He noted that she "had a quiet orderly personality." He said that "she spoke quietly but very intelligently. She studied the violin as a child, but wasn't very good at it." He recalled, "Dorothy was 12 years older than I was, so during the time that we were at home together I was quite young. I used to look to her as equivalent to an encyclopedia. She seemed to know a lot about many things. My own interest in radio and electronics can probably be traced back to the seed that she planted by constructing our family's first radio. I remember hearing a bit of President Herbert Hoover's inauguration on her set."

Book Web Page LITTLE - 3

The Smileys had several moves into new communities, but Dorothy Smiley's brother reported that, "she always got involved in local activities, usually quickly getting a position on some board or other." She also liked to paint, "and her pictures were carefully done, and most likely still lifes."

After 1967 the Smileys lived in the Albany area, and it was there that Malcolm F. Smiley died in July 1982, shortly after his retirement. After his death Dorothy Manning Smiley moved from her home to an apartment. Later she met Jess Edward Little, a retired chemist. On March 26, 1988, they were married in a Unitarian Church to which they both had connections. Less than seven months later, on October 18, Dorothy Manning Smiley Little died suddenly after suffering a massive heart attack at their home in Slingerland, New York.

Organizational affiliations: AMS, MAA, Sigma Delta Epsilon, Phi Beta Kappa, Sigma Xi

Thesis and dissertation:

1934 [Manning, D.] Concerning simply transitive groups of degree n that contain circular permutations of the n letters. MA thesis, Stanford University, directed by William Albert Manning.

1937 [Manning, D.] On simply transitive groups with transitive Abelian subgroups of the same degree. PhD dissertation, Stanford University, directed by William Albert Manning. Abstract: Stanford University. Abstracts of dissertations for the degrees of doctor of philosophy and doctor of education, with the titles of theses accepted for the degrees of engineer, master of arts, and master of science. 12:87–90.

Publications:

1936 [Manning, D.] On simply transitive groups with transitive Abelian subgroups of the same degree. Trans. Amer. Math. Soc. 40:324–42. Published version of PhD dissertation. Reviews: JFM 62.0087.03 (H. Wielandt); Zbl 015.00507 (W. Magnus). Presented as "On simply transitive permutation groups with transitive Abelian subgroups of the same degree" to the AMS, Palo Alto, CA, 6 Apr 1935; abstract: Bull. Amer. Math. Soc. 41:196 #154.

1964 [Smiley, D.] with M. F. Smiley. The polygonal inequalities. *Amer. Math. Monthly* 71:755-60. Reviews: MR 30 #1384 (E. R. Lorch); Zbl 173.15601 (R. von Randow).

1965 [Smiley, D.] with L. M. Kelly and M. F. Smiley. Two dimensional spaces are quadrilateral spaces. *Amer. Math. Monthly* 72:753–54. Reviews: MR 32 #345 (Editors); Zbl 125.34202 (H. Pachale).

Abstracts not listed above:

1937 [Manning, D.] On simply transitive groups with transitive Abelian subgroups of the same degree. II. *Bull. Amer. Math. Soc.* 43:202 #223. Presented to the AMS, Palo Alto, CA, 3 Apr 1937.

1938 [Manning, D.] On simply transitive groups with transitive Abelian subgroups of the same degree. III. *Bull. Amer. Math. Soc.* 44:642~#398. Presented to the AMS, New York City, 29 Oct 1938.

1942 [Smiley, D.] A note on Burnside's problem. Bull. Amer. Math. Soc. 48 (9, pt. 1): 665 #253. Presented by title to a meeting of the AMS, Poughkeepsie, NY, 8–10 Sep 1942.

Reference to: AmMSc 6.

Other sources: PhD dissertation abstract vita 1937; Owens questionnaire 1940; private communication with Laurence A. Manning, December 1997; Stanford University Archives; WhAm 5 (Manning, William Albert); WhoAm 40 (Smiley, Malcolm Finlay); US census 1910 IL, 1920, 1930 CA; SSDI.

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