

FRY, Cleota G. December 30, 1910–July 1, 2001.

REED COLLEGE (BA 1933), PURDUE UNIVERSITY (MS 1936, PhD 1939).

Cleota Gage Fry was born in Shoshone, Idaho, the eldest of four children of Coral (Gage) (1891–1959), born in Mitchell, South Dakota, and Holmes L. Fry (1878–1968), originally of Davenport, Iowa. Her parents were married on January 12, 1910. Her mother, with a grade school education, was a housewife; her father, who had completed high school, was a machinist. Her younger siblings were Gladys Viola (1912–1977), born in Dietrich, Idaho; Russell (1919–1944), born in Portland, Oregon, and killed in action in World War II, having completed one semester of college before entering the service; and Eathel Irene (1921–1993), also born in Portland. Both sisters were educated through high school and married.

Fry's early, secondary, and undergraduate schooling was in Portland, where she graduated from Roosevelt High School in 1929. She then attended Reed College, having borrowed money from a lawyer friend, and graduated, probably as a physics major, in 1933. Her undergraduate thesis in the Division of Mathematics and Natural Sciences was "Analysis of textile fibers and fabrics."

An undated letter from Fry to her Reed College physics professor, A. A. Knowlton, sent sometime in 1955 summarizes her activities after her graduation from Reed.

Late in October [1933], I climbed aboard a U[nion] P[acific] train headed east and got off in Chicago. Vivian [Johnson, a Reed College friend] met me, and we took in the World's Fair. I came down to Lafayette, Indiana. Since I could live with Vivian I started sitting in on graduate courses in mathematics and physics. In February I secured a part time job helping Dr. R. B. Abbott on his research on violins. I registered for 10 hours of course work and thereby launched my graduate study. I continued helping on the research program to find out what makes a violin good. To earn a little more money, I also tutored.

I wrote a master's thesis on atomic form factors under Dr. Nordheim. The M.S. degree was granted in February 1936. There being nothing else to do, I started to work on a Ph.D. I changed from physics to mathematics as a major in the fall of 1937 because my thesis problem fell through since most of the work was published [the] previous summer. (letter in author's possession courtesy of Ruby A. Pardue)

In 1939 Fry received her doctorate in mathematics with a minor in physics, having written a dissertation in analysis under the direction of H. K. Hughes. Her PhD was the second in mathematics given by Purdue, the first having been awarded in 1893.

Fry remained at Purdue for her entire career, teaching at various times both mathematics and physics. She was an assistant instructor of mathematics 1939–40 and an instructor of physics 1941–45. During the war years she taught elementary and intermediate physics and was in charge of the physics laboratory. She also organized intensive physics courses for high school students.

The rest of her career at Purdue she was in the mathematics department: as instructor 1945–47, assistant professor 1947–55, and associate professor 1955–77. Her

teaching consisted of mathematics courses from the freshman through the graduate level. In the late 1940s, she was appointed faculty advisor to the mathematics majors. In the period 1952–61 she was also assistant to the dean in the School of Science. Fry coauthored a college mathematics textbook in 1952. In the mid-1950s she taught in a summer program for high school teachers set up by the General Electric Company. She also helped with Purdue's sci-math assembly, where high school students contribute projects and short papers, and with Purdue's spring regional Science Fair. She served on university and departmental committees and was secretary to the faculty of the School of Science, Education, and Humanities for at least three years in the early 1950s. She also served on examining committees for master's degree candidates, and preliminary and final examinations for PhD candidates.

In Fry's 1955 letter to Knowlton she wrote, "Vivian has told you about our house which we built together and the trips we take every summer. We occasionally knock a golf ball around Purdue's two courses. The scores are astronomical. The rest of the time we get our exercise by yard work." She also wrote, "The academic life and work seems to agree with me. Anyway I like it." Vivian A. Johnson was a member of the physics department at Purdue; she retired in 1979 and died in 1985. Their trips included a seven-month trip around the world.

Fry's next-door neighbor described Fry as not even five feet tall, with curly hair and delicate features, a "raving beauty." She said Fry was sweet, happy, and laughed a lot.

Cleota Fry died at ninety in 2001 in the St. Elizabeth Medical Center in Lafayette, Indiana. She had had a heart attack a few days earlier and chose not to have open heart surgery. There is a Cleota Gage Fry scholarship, a need-based scholarship at Reed College, as the result of an annuity purchased by Fry.

Organizational affiliations: AMS, MAA, APS, Sigma Xi.

Dissertation:

1939 Asymptotic developments of certain integral functions. PhD dissertation, Purdue University, directed by Howard Kibble Hughes. Printed version, 1942, reprinted from *Duke Math. J.* 9:791–802.

Publications:

1942 with H. K. Hughes. Asymptotic developments of certain integral functions. *Duke Math. J.* 9:791–802. Published version of PhD dissertation. Review: *MR* 4,137e (I. M. Sheffer).

1952 with W. L. Ayres and H. F. S. Jonah. *General College Mathematics*. New York, Toronto, and London: McGraw-Hill Book Co. Review: *Amer. Math. Monthly* 60:486–87 (B. H. Gere). Second and third eds.: 1960 and 1970. New York: McGraw-Hill Book Co.

1954 Review of *Theory of Equations*, by C. C. MacDuffee. *Science* n.s., 119:730.

Abstracts:

1943 with H. K. Hughes. Asymptotic developments of certain integral functions. *Bull. Amer. Math. Soc.* 49:45 #33. Presented by title to cancelled meeting of the AMS, New York City, 27–28 Dec 1942.

1946 with H. K. Hughes. Asymptotic developments of types of generalized Bessel functions. *Bull. Amer. Math. Soc.* 52:818 #297. Presented by H. K. Hughes to the AMS, Ithaca, NY, 22 Aug 1946.

References to: AmMSc 7–8, 9P–11P; AmMWSc 12P–13P, 14–23.

"Cleota Gage Fry, Dec. 30, 1910–July 1, 2001." *Lafayette Leader*, 6 Jul 2001.

Other sources: PhD dissertation vita 1939; Smithsonian questionnaire 1982; communication with Ruby A. Pardue (friend and next-door neighbor) 2001; communication with West Lafayette Public Library; US Census 1920, 1930 OR; SSDI.

Last modified: March 25, 2009.