HASEMAN, Mary Gertrude. March 6, 1889–April 9, 1979.

INDIANA UNIVERSITY (BA 1910), BRYN MAWR COLLEGE (PHD 1917).

Mary Gertrude Haseman, was born in or near Linton, Indiana, the seventh of nine children of Elizabeth Christine (Schultze) (1853–1929) and John Dieterich (also Diedrich, Diederich) Haseman (1847–1924), both born near Linton. Her siblings were Joseph H. (1876–1972); William Peter (1878–1932); Charles (1880–1931); John D. Jr. (1882–1969); Leonard (1884–1969); Oscar (1886–1967); Bertha (1891–1970); and Arthur (1895–1969). All nine children from this farm family in central Indiana were college educated, and five of them earned doctorates. Gertrude Haseman's six older brothers all received bachelor's degrees from Indiana University; five also earned master's degrees from Indiana. Four of the six earned PhD's: William Peter from the University of Pennsylvania in physics in 1907, Charles from Göttingen in mathematics in 1907, Leonard from Cornell in entomology in 1910, and John from Columbia in zoology in 1911. Her younger brother and sister both earned master's degrees.

Gertrude Haseman attended high school in Linton, where her oldest brother was superintendent of schools. She entered Indiana University in 1907 and graduated cum laude in mathematics in 1910. Cora Hennel and Gertrude McCain were fellow students at Indiana; Hennel was a graduate student the entire time Haseman was an undergraduate, while McCain was a senior 1907–08 and returned for a short period in 1909 as a graduate student. Haseman first took a position as professor of mathematics at Vincennes University, then a two-year college in southwestern Indiana, for the year 1910–11.

From 1911 to 1915 Haseman was a graduate student at Bryn Mawr College: as a graduate scholar in mathematics 1911–12 and as a resident fellow 1913–1915. She worked as a tutor in the Bryn Mawr Tutoring School from 1912 to 1915. During her first year at Bryn Mawr, she gave presentations to the journal club on projective groups in three dimensions and on a method of successive approximations or iteration; her fellow graduate student presenters that year were Gertrude I. McCain and Eula A. Weeks (King). In 1913–14 she reported on two papers by A. Kneser in algebraic geometry. She attended lectures of Frank Morley, and probably also Arthur Coble, at the Johns Hopkins University during 1915–17, while she also taught at the Roland Park Country School in Baltimore. She wrote her dissertation under the direction of Charlotte A. Scott and passed her final examination in May 1916. Although her doctorate was not awarded by Bryn Mawr until 1917, her name was submitted to School and Society for their "list of American doctorates conferred during the academic year 1915-1916" and appears on the list of doctorates in mathematics published in the Bulletin of the AMS (23 (1917): 197). Haseman noted in her dissertation vita that at Bryn Mawr she also studied under the direction of J. R. Conner in mathematics and W. B. Huff in physics, the subject in which she minored.

The results of Haseman's dissertation have appeared in books and papers in knot theory, especially since the mid-1980s. In a 1988 review in the *Bulletin* of the AMS of two such books, Joan Birman noted that T. P. Kirkman, C. N. Little, and Haseman "assembled the first tables of knots, which have been used ever since, and can be seen, modulo surprisingly few corrections, at the end of both of the books under review.... Empirical data is of course at the heart of any subject,

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and so this set of painfully assembled data has had an enormous impact on the subject" (19:552). In an essay in *The History and Science of Knots*, Pieter van der Griend describes her work as a "brave expedition into the then uncharted regions of 12-crossing knot-projections" and calls her dissertation "charming" (1995, 223).

In 1917–18 Haseman taught at the Harcum School in Bryn Mawr and during 1918–19 at the high school in Linton, Indiana. She joined the University of Illinois faculty as instructor in 1920. While there she studied during two summers in the early 1920s at the University of Chicago, hearing lectures of E. J. Wilczynski and E. H. Moore. While she was at Illinois, Haseman and a colleague, Josephine Burns Glasgow, spoke at an MAA meeting about preparing students to take calculus who had minimal mathematics in high school. They also produced a mimeographed mathematics text, Freshman Mathematics: Book 1, which is in the library at Southern Illinois University Edwardsville. Haseman spoke at another MAA meeting about curve tracing and wrote a paper on that subject, a copy of which is in the University of Illinois mathematics library; the paper is based on a course of lectures given at Bryn Mawr by Charlotte Scott. In 1925 and 1926 Haseman served as second vice president of Sigma Delta Epsilon, the graduate women's scientific fraternity.

Haseman resigned her position at Illinois on October 28, 1927, and left on January 31, 1928. February 1 was the opening day for the new Junior College of Connecticut (now the University of Bridgeport), and Haseman had been hired as its first professor of mathematics. She was there briefly before serving as professor of mathematics and advisor of women at Hartwick College in Oneonta, New York, during the academic year 1928–29. She left after that year, with evidence suggesting a dispute with the college administration. The April 1929 issue of the student newspaper, *Hilltops of Hartwick*, contained the dedication, "To Dr. Mary Gertrude Haseman who, by her unfailing patience and encouragement has endeared herself to both students and faculty of Hartwick College." She was replaced at Hartwick by Roxanna Vivian.

After leaving Hartwick, Gertrude Haseman spent some time with her brother, Leonard Haseman, who was then head of the department of entomology at the University of Missouri in Columbia. A nephew reported that she held a teaching job in the south before returning in the summer of 1936 to live in her former home in Linton, where she remained until about the last year of her life. Some of the time one of her brothers was there; later she lived alone and was cared for by two nephews.

In a conversation with one of the authors in 1986, a nephew said Haseman played piano and harp and was very musical. He said she was interested in lawn work and that she gardened, canned, and was a good cook. Never in the hospital before her final illness, she spent about the last year of her life in a nursing home before her death at age ninety at Greene County General Hospital in Linton. Her siblings predeceased her, and her only survivors were nieces and nephews. She is buried, along with several family members, in Memory Hill Cemetery in Linton.

Organizational affiliations: AMS, MAA, Sigma Delta Epsilon, Sigma Xi.

Dissertation:

1916 On knots with a census of the amphicheirals with twelve crossings. PhD dissertation, Bryn Mawr College, directed by Charlotte Angas Scott. Printed version, 1918, Neill and Co., Edinburgh, reprinted from *Trans. Roy. Soc. Edinburgh* 52 (1917): 235–55. PhD granted 1917.

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Publications:

1917 On knots, with a census of the amphicheirals with twelve crossings. *Trans. Roy. Soc. Edinburgh* 52, pt. I (11): 235–55. Published version of PhD dissertation. Presented, probably by title, to the Royal Soc. Edinburgh, 4 Jun 1917.

1919 Amphicheiral knots. Trans. Royal Soc. Edinburgh 52, pt. III (23): 597–602. Presented, probably by title, to the Royal Soc. Edinburgh, 4 Nov 1918.

Abstracts not listed above: :

1926 with J. B. Glasgow. Freshman mathematics for students with one year of high school algebra. *Amer. Math. Monthly* 33:394 #8. Presented to a meeting of the MAA, Decatur, IL, 7–8 May 1926.

1927 Curve tracing. Amer. Math. Monthly 34:394 #1. Presented to a meeting of the MAA, Bloomington, IL, and Normal, IL, 13–14 May 1927.

Reference to: AmMSc 3.

Obituary. Linton Daily Citizen, 10 Apr 1979.

Other sources: PhD dissertation vita 1917; Bryn Mawr College Archives; Indiana University Archives; University of Illinois Archives; communication with Indiana University Alumni Association; author's conversation with James Haseman, nephew, in Linton, 23 June 1986; Memory Hill Cemetery, Linton, Indiana; communication between Joe Haseman and Patricia Kenschaft, 5 Jan 1981; Biographical Memoirs of Greene County, Ind. with Reminiscences of Pioneer Days, v. III (Indianapolis: B. F. Bowen, 1908), 1203–06; Joan S. Birman, Review: Gerhard Burde and Heiner Zieschang, Knots, and Louis H. Kauffman, On Knots, Bull. Amer. Math. Soc. 19 (1988): 550–58; Pieter van der Griend, "A history of topological knot theory," in History and Science of Knots, eds. J. C. Turner and P. van der Griend (Singapore: World Scientific, 1996), 205–60; US Census 1880, 1900, 1910, 1920 IN; SSDI.

Last modified: December 12, 2008.