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**HAGEN, Beatrice L.** July 4, 1899–July 22, 1987.

UNIVERSITY OF KANSAS (BA 1920), UNIVERSITY OF CHICAGO (MA 1926, PhD 1930).

Beatrice Liberty Hagen was the youngest child of Lena (Sessler) (1865–1948), originally from Illinois, and Louis Hagen, born in Wisconsin in 1857. She was born in Barton County, near Ellinwood, in central Kansas, where her father was a farmer. In the 1900 census it was reported that her parents had been married sixteen years and that there were four children living of five born. They were Bertha (1884–1973), Charles (1890–1951), Maude (1892–1974), and Beatrice. All were born in Kansas.

Beatrice Hagen received her elementary and secondary education in public schools and graduated from Ellinwood High School in 1916. She then attended the University of Kansas, where [Wealthy Babcock](#) was one year ahead of her; [Florence Black](#) was an instructor and graduate student during Hagen's final two years at Kansas. After receiving her bachelor's degree in 1920, she taught in Kansas high schools; she was in Burlington 1920–22 and in Dodge City 1923–24.

In 1924 Hagen entered the University of Chicago, where she studied for the next two years and received her master's degree in 1926, having written a thesis with E. P. Lane. She then taught at Ozark Wesleyan College in Carthage, Missouri, in 1926–27. Ozark Wesleyan had opened the previous year and closed in 1932. She also taught at Nebraska State Normal College (now Chadron State College) in Chadron 1928–29. After further study at Chicago and completing a dissertation in projective differential geometry directed by Lane, she received her PhD in 1930.

Hagen's first position after her degree was at Fort Hays Kansas State College (now Fort Hays State University) 1930–31. In 1931 she took a position as instructor at Pennsylvania State College (now Pennsylvania State University), where she remained until her retirement in 1959. She was promoted to assistant professor in 1940, to associate professor in 1945, and to professor in 1956, three years before her retirement. Among her female colleagues at Penn State were [Helen Brewster Owens](#), [Teresa Cohen](#), [Aline Huke Frink](#), and [Ethel Moody](#). It appears that in the late 1940s Hagen gave a speech on women in astronomy to the local chapter of Sigma Delta Epsilon (now Sigma Delta Epsilon-Graduate Women in Science) at Penn State. The text of her talk appears in the Owens Papers.

Hagen was appointed a temporary associate professor at Kansas State University in Manhattan after her retirement from Penn State and taught there 1960–62. In 1964 she moved to Great Bend, Kansas, where she made a home with her two sisters, Bertha and Maude. Bertha had remained in the area, cared for her parents, and helped with the family farm. Maude, who attended the University of Kansas, was a French teacher in Hiawatha, Kansas; she moved to Great Bend after her retirement. Both Beatrice and Maude did tutoring after retiring. Beatrice Hagen was a member of the Sunshine Club in Ellinwood, about ten miles from Great Bend, and was a Presbyterian. In 1940 she described herself as a Republican.

In a February 14, 1978, letter to one of the authors, Beatrice Hagen reported that “women were quite frankly advised not to enter the higher fields of mathematics, physics and chemistry because there was difficulty in obtaining satisfactory positions.” She also noted that “World War II and committee work filled my time, plus the feeling that what I did in the line of research was not very important made most of my ‘playthings’ go unpublished. Only a few people do important research.”

Not all of her research went unpublished; in 1941 an article with [Ruth B. Rasmusen](#), a fellow student of E. P. Lane, appeared in the *Bulletin* of the AMS.

Beatrice Hagen died at the Ellinwood District Hospital a few days after her eighty-eighth birthday. She was the last of her immediate family and was survived by several cousins. She was buried in the Lakin-Comanche District Cemetery in Ellinwood.

**Organizational affiliations:** AMS, MAA, Sigma Delta Epsilon, AAUW, Phi Beta Kappa, Sigma Xi, Pi Mu Epsilon.

**Thesis and dissertation:**

**1926** Transformation from conjugate to asymptotic parameters. MA thesis, University of Chicago, directed by Ernest Preston Lane. Typescript.

**1930** Quintuples of three-dimensional varieties in a four-dimensional linear space. PhD dissertation, University of Chicago, directed by Ernest Preston Lane. Typescript. Private edition, 1932, distributed by the University of Chicago Libraries.

**Publications:**

**1940** with C. C. Wagner, E. Johnson, Jr., and C. H. Graves. *Introduction to Statistics*. State College, PA: Pennsylvania State College. Subsequent eds.: 1941, 1944, 1949, 1952.

**1941** with R. B. Rasmusen. Comments on canonical lines. *Bull. Amer. Math. Soc.* 47:298–302. Reviews: *JFM* 67.0651.03 (E. Salkowski); *MR* 2,301b (J. L. Vanderslice); *Zbl* 025.08301 (W. Haack).

**1943a** Review of *Logarithms, Trigonometry, Statistics*, by H. R. Cooley, P. H. Graham, F. W. John, and A. Tilley. *Amer. Math. Monthly* 50:322–23.

**1943b** Review of *Plane Trigonometry, Solid Geometry, and Spherical Trigonometry*, by W. W. Hart and W. L. Hart. *Amer. Math. Monthly* 50:450–51.

**References to:** AmMSc 5–8, 9P–11P; AmWom 1935–40.

“Beatrice L. Hagen.” (Obituary) unidentified newspaper clipping.

**Other sources:** Master’s thesis vita 1926; PhD dissertation vita 1932; Owens questionnaire 1937; Owens Papers; personal correspondence with author 1977–78; communication with Charles W. Sessler, cousin and administrator of Beatrice Hagen estate; US Census 1900, 1910, 1920 KS, 1930 IL.

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