Lou Henry Hoover (1874–1944): **An Independent Woman of Action**

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Lou Henry on a family trip to camp. Acton, California, USA, 22 Aug. 1891. Lou really walked all the way; she sat on one of the park burros for fun and was photographed. Courtesy Herbert Hoover Presidential Library, photo 31-1891-05.

When Lou Henry was born to Florence Ida Weed and Charles Delano Henry in Waterloo, Iowa, USA, on 29 March 1874, her father named her "Lou" for the boy he was hoping she'd be. Another girl, Jean, was born in 1882. Their father worked at several positions before moving the family to southern California in 1885, partly for his wife's health, and also where he finally succeeded as a banker; they subsequently settled in Monterey, Califorinia, USA, in 1892. Charles, an avid outdoorsman, took Lou fishing and hunting, hiking and camping, ice skating and horseback riding, rock collecting and mineral prospecting. She savored these times.

Lou was tall for her generation (5'8"), and her love of physical activity and the outdoors was an enthusiasm she retained all her life and went on to share with others, particularly via the Girl Scouts and the National Amateur Athletic Federation (predecessor to the NCAA). "The happiest part of my own very happy childhood and girlhood was without doubt the hours and days, sometimes entire months, which I spent pseudo-pioneering or scouting in our wonderful western mountains with my father in our vacation times. So I cannot but want every girl to have the same widening, simplifying, joy-getting influences in her own life" (LHH Speech, Hoover Library, quoted in NAblog).

Lou Henry's postsecondary education began in 1890 at a "normal school"—designed for training high-school graduates to become teachers. She started at Los Angeles Normal (now UCLA) and completed her degree in 1893 at San Jose Normal (now San José State). She originally chose the Los Angeles school, in part, for its emphasis on physical activity, even for women students, and because the institution had what she said was the best gymnasium west of the Mississippi. She also joined a school club where members gathered and displayed samples of the natural world.

GEOLOGY AT STANFORD

Lou was not sure what profession she could pursue, as possibilities were limited for a woman at that time; her early experiences with substitute teaching and bank clerking were not satisfying. While holding temporary jobs, she attended public lectures by John Casper Branner, the recently appointed chairman of the geology department at the new Stanford University (opened 1891). Branner's lecture, "The Bones of the Earth," inspired her, and with his encouragement, she entered Stanford in 1894 as its first woman undergraduate geology major. She was joined at Stanford a year later by her sister Jean.

It was in Branner's laboratory that Lou Henry met her future husband (and later President of the United States), Herbert C. (Bert) Hoover, who described himself as Branner's "handy boy." Bert recalled, "I felt it my duty to aid the young lady in her studies both in the laboratory and in the field. And this call to duty was stimulated by her whimsical mind, her blue eyes, and a broad grinnish smile..." (H. Hoover, 1951). There is little detail about exactly what Lou studied in her geology major, but courses in the curriculum included dynamic and structural geology, economic geology and assaying, topographic geology, mineralogy and petrology, historical geology, and paleontology.

Professor Branner and other faculty encouraged students to work on summer geology field surveys throughout the west, and soon field camp became a popular part of the curriculum, but for men only (until 1964). "So while the boys headed off [for the summer] with their maps and hammers, Lou Henry, '98, the first Stanford woman to graduate in geology, had to stay behind on campus, cataloging rock



Lou Henry in a chemistry lab at Stanford University, 1895. Courtesy Herbert Hoover Presidential Library, photo 31-1895-10.

^{*}Michele Aldrich passed away in November 2016 after a brief illness. This article includes material from her unpublished studies of Lou Henry's time at Stanford and her work on De re Metallica, with access to Michele's papers and permission to use those materials by Mark Aldrich.

specimens" (https://stanfordmag.org/contents/stanford-history-asnapshot). However, on a class field trip she quickly convinced her classmates that she was more at home in the wilds than many of them when she vaulted over a fence as they discussed how to help her.

While J.C. Branner encouraged Lou Henry to pursue a career in geology, she was disappointed that he did not offer her an assistantship, and whereas he envisioned her working in the classroom and lab, she wanted to do research and observation in the field. Branner encouraged her to pursue graduate work leading to teaching, but prospects were not encouraging. Meanwhile she was corresponding with Bert, who had graduated and was working in Australia as a mining engineer.

WORK WITH MINING ENGINEER HERBERT HOOVER

In late 1898 from Australia, with a job offer in hand to advise China in mining and development, Bert Hoover wired Lou a proposal along the lines of "Going to China via San Francisco. Will you go with me?" They were married on 10 February 1899 and left for China the next day, but their work in China was cut short by the Boxer Rebellion in 1900. In the following years, Lou and Bert Hoover would travel around the world following Bert's profession, a lifestyle that Lou relished. They would see Australia, New Zealand, Burma, Ceylon, India, Egypt, Russia, and most of western Europe. Theirs was to be a full partnership.

In 1907, they settled in London. Visiting the British Museum, Lou saw a copy of Gregorius Agricola's 1556 treatise on mining, De Re Metallica, which she had originally seen in Branner's lab. Finding no suitable translation, and because Lou was proficient in Latin, the geologic couple decided to provide one—she'd do the translation of what had been termed an "untranslatable" text, he the explanation and interpretation of the mining procedures and equipment described therein. Agricola had in fact invented many of the terms, as they did not exist in Latin, which led the couple to develop a library of earlier mining treatises in order to understand Agricola's own knowledge. In Lou's part of their acceptance speech for the 1914 Gold Medal from the Mining and Metallurgical Society of America, she spoke of learning to persevere in "unraveling this great tangle of knotted string."

Lou also helped her husband in the preparation and copyediting of the text Principles of Mining: Valuation, Organization and Administration: Copper, Gold, Lead, Silver, Tin and Zinc (H. Hoover, 1909). She influenced him to include in the book a chapter on character building and ethical principles for young engineers.

In 1911, while traveling England, Lou Henry Hoover had the opportunity to meet pioneering seismologist John Milne, who was living on the Isle of Wight. Recognizing the importance of his work, she interviewed him and wrote an article describing his time in Japan and his fundamental efforts in seismometry and earthquake monitoring. That same year, J.C. Branner nominated Lou Henry Hoover for membership in the Seismological Society of America (incorporated 1910); she was quickly elected and remained a member until her death. Her 1912 paper on John Milne was among the first published by the society.

INFLUENCE ON GIRL SCOUTING AND WOMEN'S SPORTS

Beginning in 1917, Lou became involved in the Girl Scouts of America. She first accepted an invitation to address the fledgling



Lou Hoover (standing) led lessons on wartime vegetable gardening, here with some Girl Scouts, circa 1918. Courtesy Herbert Hoover Presidential Library, photo 31-1918-19.

organization on the importance of food conservation during the war. Soon after, founder Juliette Gordon Low invited her to become acting Girl Scout commissioner for the District of Columbia. A few years later, Lou agreed to become a leader of Troop VIII, but only after reading various materials put out by the Girl Scouts. "I myself made a very careful study of the programs of ... organizations dealing with recreational and educational activities of high school-aged young people ... and I found ... there was just no comparison possible between the Girl Scouts and any other organization of its class" (quoted in Christian, 1994).

A former member of her troop VIII recalled, "Mrs. Hoover was the ideal leader for this group. We were fired with her enthusiasm ... she was generally interested in all of us She taught me about birds to pass my bird finder badge at the National Museum, encouraged me to know more about trees ..., and when I was working on my nature badges, took me all through her house, and made me tell the source, method of processing, and reason for using practically every metal or stone in her home—and she knew her geology." Lou Hoover helped write the "rock finder" badge, her favorite, yet "she was always surprised how many girls preferred homemaking badges to outdoor ones" (quotes from Christian, 1994).

No doubt inspired by Lou, her younger sister Jean Henry Large wrote three books (the "Nancy series") about Girl Scouting: Nancy Goes Girl Scouting (1927), Nancy's Lone Girl Scouts (1930), and Nancy Goes Camping (1931). "Lone Girl Scouts" was a program Lou Hoover helped pioneer to serve girls living in outlying, underpopulated places, so individuals could join and participate in scouting without having to belong to a troop. Lou also worked to generate private support so that Scout dues alone would not be the sole support of the organization.

In the 1920s, with the rapid expansion of newspaper and radio reportage of amateur and professional sports, the National Amateur Athletic Federation was founded. In 1923, Lou Hoover, a strong advocate of physical fitness for girls and women, was named vice president, with the task of creating a women's division, and thereafter served as president of that division for the next 18 years. In this role, she addressed philosophic differences over competition versus participation, issues of facilities and space for women, and the persistent lack of qualified women's coaches.

A ROCK STAR?

Although not a GSA "Rock Star" in the traditional sense, Lou Henry Hoover for her time made significant use of her pioneering geologic education, most notably in her work with mining engineer Herbert Hoover. This background also influenced the nature of her support for girls' and women's development. Lou Hoover also has a remarkable history of war relief, social welfare, civil rights, and other forms of leadership and service, including as First Lady of the United States of America.

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