

The Roaring Twenties in American Mathematics

Karen Hunger Parshall

In December 1918, Edward Van Vleck was “crazy to get back into real scientific work.” The University of Wisconsin mathematician had turned fifty-four just months after the United States had entered World War I in 1917 and had engaged in the war effort as an instructor for the Student Army Training Corps (SATC) on his home campus in Madison. With his usual nine hours of teaching a week augmented by two additional four-hour classes of freshman algebra targeted at SATC students, his “war work,” not surprisingly, had “absorbed all of [his] spare time and energy.” He had been completely diverted from the analytical research that he had been faithfully pursuing since his days in Göttingen as a doctoral student of Felix Klein.

Van Vleck was, in some sense, a member of the “first generation” of research mathematicians in the United States. Although he had done graduate work at the Johns Hopkins University before earning his Göttingen PhD, he, like so many other American mathematical aspirants born in the 1860s, had recognized that the kind of training he sought was largely unavailable in the United States in the early 1890s. He thus went abroad and returned with a personal mathematical research agenda as well as a dual sense of his academic mission. He was a teacher of undergraduate as well as graduate students, but he was also an active *researcher*. After 1904 and thanks to its then president, the geologist Charles Van Hise, the University of Wisconsin to which Van Vleck had moved in 1906 was also coming to share this ethos. It was one of the state universities that had begun to respond to changes in American higher education under way at least since 1876 with the founding of Hopkins in Baltimore. In fits and starts, other institutions followed suit into the opening decades of the twentieth century.

In many ways, World War I had served as a wake-up call to those in academe but, perhaps more importantly, to others in newly created philanthropies as well as to some within the federal government. They had begun to recognize the value of original research for the welfare of the nation; they increasingly saw the need to support research financially. Savvy university administrators witnessed and steadily responded to this trend over the course of the 1920s

and 1930s. They followed the money. Maybe the philanthropies were on to something. Maybe *research* should be more vigorously encouraged within the universities. Maybe faculties *should* be formed and sustained on the basis of research productivity and graduate training, first, and undergraduate teaching, second.

The war had also served as a break in business as usual. In its aftermath, there was a sense within the scientific community more broadly, but within the mathematical community, in particular, of entering into “a new era in the development of our science.” “Every nerve should be strained to get our research back on its feet,” in the view of Brown University’s Roland Richardson. He was apparently not alone in this conviction. He and other American mathematicians poured themselves into their work in the 1920s, but what did that mean? What were their main research interests? Where were those interests fostered? What, in short, was the lay of the American mathematical research landscape in the 1920s? These are the questions that this talk will explore.



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Credits

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