

TITLE:

Building New Core Competencies in R&D: Academic Science and the Transformation of Industrial Research at the Westinghouse Electric and Manufacturing Company, 1935-1955

THEME/ABSTRACT:

In 1935, during the depths of the Great Depression, the Westinghouse Electric and Manufacturing Company plunged headlong into nuclear physics research, a new academic field of study that had emerged in a handful of American universities only a few years earlier. While Westinghouse established an elaborate research program built around the first large-scale industrial atom smasher in the United States, rival firms, such as the General Electric Company and the Bell Telephone Laboratories, shied away from speculative studies that lacked clear market incentives. Their modest interest in nuclear physics focused more narrowly on commercial applications—the development at General Electric, for example, of new x-ray technologies for medical diagnostics and therapy. Westinghouse upended these preconceived notions about the commercial value of academic research. The company also sought legitimacy by way of the elite status conferred through direct competition with the university laboratories that put nuclear physics on the leading edge of scientific inquiry.

This presentation will explore the extent to which Westinghouse translated state-of-the-art research in nuclear physics into commercially successful products through the Depression, World War II, and the looming Cold War. It will focus primarily on the tension between those in the corporate hierarchy who favored speculative scientific research as the surest path to radical innovations and those who preferred a more coherent and seemingly less ambitious growth strategy that aimed to complement rather than fundamentally alter the company's traditional technological strengths.