

# Cultures of light: Electric light in the United States, 1890s-1950s

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## Abstract:

Cultures of Light is set within a period that stretches from the late nineteenth to the mid-twentieth century in the United States, an era in which nearly every aspect of American life was impacted to a lesser or greater degree by the introduction, distribution and integration of electric power and light. By no means attempting to comprehensively examine the impact and effects of this expansive transformation, this thesis has a narrow but meaningful target, defined by key intersections of electric lighting and American culture. Primarily concerned with the investigation of culturally bound ideas and practices as mediated through electric light and its applications, my thesis is focused on particular instances of this interplay. These include its role in supporting nationalizing narratives and agendas through large-scale demonstrations at world's fairs and exhibitions, in the search for and expression of modernism and its variations in the United States. Similarly electricity and electric light throughout the better part of the twentieth century was scaled to the level of the individual through a number of mechanisms and narratives. Most prominently the electric light industry employed gendered discourses, practices and beliefs in their efforts to grow the market, calling upon the assistance of a host of cultural influencers, from movie stars to architects to interior designers, instigating a renegotiation of established approaches to the design of architecture and the visual environment. Connecting common themes and persistent concerns across these seemingly disparate subject areas through the examination of cultural beliefs, practices, rituals and traditions, Cultures of Light seeks to illustrate the deep and lasting significance of electric light within American society in the twentieth century.

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What makes Edison's contribution to electric lighting so extraordinary is that he didn't stop with improving the bulb -- he developed a whole suite of inventions that made the use of light bulbs practical. Edison modeled his lighting technology on the existing gas lighting system. In 1882 with the Holborn Viaduct in London, he demonstrated that electricity could be distributed from a centrally located generator through a series of wires and tubes (also called conduits). Both Thomas Edison and Nikola Tesla experimented with fluorescent lamps in the 1890s, but neither ever commercially produced them. Instead, it was Peter Cooper Hewitt's breakthrough in the early 1900s that became one of the precursors to the fluorescent lamp. Electricity provides clean, safe light around the clock, it cools our homes on hot summer days (and heats many of them in winter), and it quietly breathes life into the digital world we tap into with our smartphones and computers. Although hundreds of millions of Americans plug into the electric grid every day, most of us don't give the history of electricity a second thought. In the era of modern power plants, coal has always generated more electricity in the U.S. than any other fuel source. In recent decades, we have seen other sources compete for second place: first hydroelectricity, then natural gas, nuclear power, and natural gas again. Source: Energy Information Administration. Street lighting in the United States was introduced to the US by inventor Benjamin Franklin, who was the postmaster of Philadelphia, Pennsylvania. For this reason, many regard Philadelphia as the birthplace of street lighting in the US. The colonial-era streetlights were lit by candles placed inside a glass vessel, which kept the candle from being blown out by wind. Franklin's design was four-sided, with four separate panes of glass, so that if one pane of glass was broken, the lamp did not need to be The cinema of the United States, often generally referred to as Hollywood, has had a profound effect on cinema

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across the world since the early 20th century. Its history is sometimes separated into four main periods: the silent film era, classical Hollywood cinema, New Hollywood, and the contemporary period. While the French Lumière Brothers are generally credited with the birth of modern cinema, it is indisputably American cinema that soon became the most dominant force in an emerging industry. Since Light was made to count as a quantifiable entity at the same time as it came to count for something in human terms. Measuring the intensity of light was fraught with difficulties closely bound up with human physiology, contentious technologies and scientific sub-cultures. Explorations often begin with meanderings, tentative forays and more prolonged expeditions. As the title hints, the subject was long on the periphery of recognized science. The illustrations in the book reinforce the reality of social marginalization, too: depictions of light-measurers are rare. Certainly their shrouded and blackened apparatus made photography awkward; but the reliance on human observers to make scientific measurements came to be an embarrassment to practitioners.