Executioner's Current: Thomas Edison, George Westinghouse, and the Invention of the Electric Chair. *By Richard Moran*. New York: Alfred A. Knopf, 2002. xxii + 271 pp. Illustrations, notes, index. Cloth, $25. ISBN 0-375-41059-7.

Reviewed by Paul Israel

Richard Moran's *Executioner's Current* is one of three recent books that examine how the effort to find a more humane form of capital punishment intersected with the "battle of the currents," whose leading antagonists were Thomas Edison, proponent of the direct-current (DC) electric system, and George Westinghouse, champion of the alternating-current (AC) electric system. The other two books are Mark Essig's *Edison and the Electric Chair: A Story of Light and Death* (2003) and Jill Jonnes's *Empires of Light: Edison, Tesla, Westinghouse, and the Race to Electrify the World* (2003). Moran is a professor of sociology who became interested in this earlier effort to devise a more humane form of execution while he was investigating contemporary debates over capital punishment, in particular the controversy over lethal injection. Moran's book raises critical questions about what constitutes a humane form of execution and whether, in fact, any form of execution can be considered humane. He is less interested in the commercial competition between lighting interests, although it plays an important role in the story he tells.

Moran begins with a vivid account of the execution of William Kemmler, the first criminal put to death by the electric chair. He then provides a brief overview of the battle of the currents between Edison and Westinghouse. Moran connects the two stories by detailing the effort in New York State to find a more humane form of capital punishment, which resulted in passage of the electric execution law. The most important proponent of electrocution was Alfred Southwick, a Buffalo dentist, who, after witnessing an accidental electrocution in 1881, began to subject dogs to experimental electrocution in order to demonstrate that it was a quick and painless procedure. As a member of the New York commission appointed to investigate forms of capital punishment, Southwick overcame Edison's opposition to this extreme penalty, prevailing upon him to support the campaign to replace hanging by electrocution. Because of his reputation, the inventor's

views carried great weight with the commission, which ultimately recommended electrocution.

Edison's motivation, Moran notes, was partly based on the possibility of commercial gain. He wrote a letter to the commission suggesting that the high-voltage AC generator produced by Westinghouse, his chief commercial rival, was the most efficient electric generator for this purpose. In so doing, Edison hoped to associate the Westinghouse system with electrocution. Moran's account of the part played by Harold P. Brown, a self-taught electrician, supports this view. Brown approached Edison with a request to use the inventor's laboratory for experiments involving the electrocution of dogs. The commercial value of the publicity surrounding the results of these experiments, which were designed to prove that alternating current at high voltages was more dangerous than direct current, promised to benefit Edison's commercial interests and predisposed him to grant Brown's request. The rest of the book describes Kemmler's criminal trial and the judicial hearings that were held to determine whether electrocution constituted cruel and unusual punishment, including Edison's and Westinghouse's involvement on opposite sides of this question.

Moran has conducted an exhaustive examination of newspaper accounts, government documents, and court records related to the development of New York's electric execution law and the trial and execution of Kemmler. His chronicle of these events is especially well told. Readers, however, might prefer less detail in his recounting of Kemmler's original trial and of the judicial hearings and appeals on the constitutional questions surrounding the use of the electric chair. The sheer number of details tends to overwhelm the analysis and obfuscate Moran's arguments about expert opinion and the limitations of science and technology.

That Moran's primary interest is in the capital punishment debate is evident in the chapters that focus on the battle of the currents. Other recent books on the subject have described this battle more successfully, relying less heavily on secondary sources when covering these events. Many of the sources are problematic, and he overlooks my recent biography, *Edison: A Life of Invention* (1998), which delves into the reasons for Edison's resistance to high voltage. As a consequence, he gets a number of things wrong. Some of the errors are technical points, such as his use of "electromotor" instead of

"electromotive" force. But Moran also failed to grasp the extent to which Edison did investigate high-voltage AC and, contrary to the claim made in these pages, not only designed but also patented an AC/DC converter, as well as a high-voltage DC system, for long-distance transmission. Ultimately, Edison did not adopt this technology, because he believed that high voltage was unsafe. Commercial interests clearly played an important role in Edison's actions, but so too did these safety concerns. Moran is correct in pointing out that Edison could be stubborn about adopting technology that he had not invented. Because Moran relies on older biographies of Edison, Nikola Tesla, and Westinghouse, rather than undertaking the kind of original research on which the rest of the book is based, his account of the battle of the currents offers little that is new. In addition, he does not have a good understanding of the larger electric industry. For example, he fails to clarify the role that arc lighting played in the debates over the dangers of high voltage. And his discussion of the acquisition of the Brush Electrical Company by the Thomson-Houston Company reveals that he does not understand that the two companies competed in arc lighting, not in AC incandescent lighting. Thus, the book is less useful to those who are interested in the commercial battle of the currents that played such an important role in the development of the electric chair.

Paul Israel is director and editor of the Thomas A. Edison Papers at Rutgers, the State University of New Jersey. He is the author of Edison: A Life of Invention *(1998) and* From Machine Shop to Industrial Laboratory: Telegraphy and the Changing Context of American Invention, 1830–1920 *(1992) and coauthor* of Edison's Electric Light: Biography of an Invention *(1986). He is currently working on a study of the patent system and intellectual property in technology.*