Jeremy Zallen
*American Lucifers: The Dark History of Artificial Light, 1750–1865*

Jeremy Zallen’s *American Lucifers* is a labour and commodity history of artificial light before the advent of electricity. Tracing the human – and sometimes nonhuman – costs associated with technologies like whale oil, camphene, stearine and phosphorous matches, Zallen reveals the exploitation involved in escaping from the cycles of the sun. The illumination of antebellum America rested on a grim network of enslaved labour, child labour, and the mass destruction of animals, whatever benefits it had. Round-the-clock light also enabled the punishing workdays of industrialising America. Moreover, the means of antebellum light were often hazardous to labourers and consumers alike, with light turning to fire far too often. Instead of a progressive tale of technological improvement, Zallen shows that the early evolution of artificial light was fitful, volatile and dark indeed.

Zallen lays out his story in six chapters, all of which deal with a technology of non-electrical light. Chapter One describes the slaughter of whales for their oil and the arduous, multi-faceted labour needed to turn cetaceans into candles. Chapter Two turns to the enslaved labour involved in the extraction of turpentine – and thus the production of the highly-unstable lamp fluid camphene – from the pine forests of the South. Chapter Three delves into the hazards and inequities behind that symbol of early modernity, the gaslit antebellum city. These cities were powered by cheap gas derived from coal. However, mine explosions triggered by the dangerous ‘firedamp’ (methane) – often ignited by the flame within workers’ Davy safety lamps – were a recurring peril, especially for the enslaved miners tasked with the most dangerous work (p. 95). Perversely, Zallen tells us, the safety lamp was anything but: it allowed miners to go deeper into mines in search of coal, and thus exposed them to greater quantities of firedamp. Zallen also sees a ‘gaslit class struggle’ afoot in cities. Middle and upper classes benefitted from illumination, while workers were disproportionately exposed to gas explosions and some operated internal factory gasworks for no additional pay (p. 131).

Chapter Four covers the ordeal of America’s hogs – who are (forced) labourers as well as products, according to Zallen (p. 137) – driven to their deaths in Cincinnati to make pork and candles. Chapter Five chronicles the human toll of match-making – phosphorous poisoned the children unlucky enough to toil in match factories, often costing them their jaws. The final chapter uses the Civil War to make ambitious arguments. Zallen focuses on the oil of West Virginia and how it might have galvanised the Confederacy and industrial slavery (p. 242). He also revises the standard account of the rise of petroleum-generated kerosene in the early 1860s and the displacement of
other technologies of illumination. Zallen credits the destruction wrought by the Civil War on the South’s turpentine industry for stimulating the uptake of kerosene as much as the inherent attractions of kerosene itself (p. 244).

On the whole, this is a rich, well-researched study, full of interesting ideas and memorable phrases – whales are, after all, ‘blubbery means of light’ (p. 11). A few lines of critique occur to me, though. The first concerns the searing anecdotes of human and nonhuman suffering that populate the book. The travails of phosphorous-infused, glow-in-the-dark Manchester children are heartbreaking (p. 170). As are accounts of the deaths of enslaved people in Virginian mines, or of women seamstresses scalded by camphene-related fires (pp. 101, 59). Zallen emphasises the pain and misery of people ensnared in America’s artificial illumination commodity chain rather than paper over their agony with detached prose. This is by design – he tells us early on that we must ‘jump down into the darkness and the dirt’ to understand the history of artificial light (p. 10). But some might find the volume and detail of these anecdotes excessive.

Readers will enjoy Zallen’s creativity, which is manifest in his analysis and the terms he coins. But not every conceptual leap he takes is sound, at least to me, or well-evidenced. Zallen dubs Ohio Valley’s pigpens, the Cincinnati slaughterhouses, and the routes between them the ‘pigpen archipelago’ (p. 139) – but the evocation of the infamous gulag archipelago of the Soviet Union seems overwrought. The comparison was also only superficially explained (pp. 293–4, note 7), a recurring issue in this book full of complex connections and ideas. While I agree that hogs were both product and (forced) labour, the comparison to the prison-labour camps that snuffed out generations of Soviet political dissidents is unsettling. This will likely be the conclusion of anyone who thinks human suffering is more significant than nonhuman suffering. But the comparison founders on other grounds too. The inmates of the gulag were there primarily to be punished, not to produce goods. Hogs were imprisoned and killed in the Ohio Valley – as grisly and ugly as it was – for food and light, not as part of an especially abhorrent political punishment regime. Their treatment was also only somewhat worse than the preindustrial life of an American fodder animal, and, sadly, their lives might well have been better than those of many animals in modern American agriculture.

These critiques notwithstanding, this is a provocative, creative book that readers of many different stripes will find informative and generative. In particular, it will appeal to environmental historians and historians of antebellum America, labour and human–animal relations. I also hope Zallen’s book will inspire similar work. As Zallen suggests (p. 9), there is no doubt that other dark tales of exploitation lurk behind the luminous, progressivist glow of the many trappings of technological modernity.

BARRIE BLATCHFORD
Columbia University