Lewis ends her discussion with a startling example of a gender role reversal as a female mulatto slave confesses that, with the aid of herbs and magic obtained from an Indian, she was able to invoke the devil. The role reversal comes in her adoption of male dress to disguise herself, and, with the devil’s empowerment, participate in the murder of various men. Moreover, most defendants who were able to make direct pacts with the devil were male. In subsequent confessions, the woman retracted her claims of murder, but maintained that she was able to communicate with the devil. It was only the supernatural appearance of San Antonio, she said, that convinced her to abandon her ways and confess all to the Inquisition. In this example, Lewis poses important questions about realms of power and the categorization of individuals in relation to such power. For this mulatto slave woman, witchcraft empowered her, but ultimately, she returned to the realm of sanctioned power that enslaved her. Such actions, Lewis concludes, demonstrate that witchcraft in colonial Mexico worked not in opposition to colonial power but rather affirmed hegemonic structures that organized both the sanctioned and unsanctioned realms into hierarchical categories of caste. Lewis’s astute arguments and extensive archival research offers new perspectives on religion, class, gender and race in colonial Mexico and, at a broader level, the ways in which power is constructed.


The last movie Arnold Schwarzenegger made prior to becoming the Governor of California was *Terminator 3: The Rise of the Machines*. Jonathan Sawday’s book about technological fantasies of the early modern period, *Engines of the Imagination: Renaissance Culture and the Rise of the Machine*, shares more than just its subtitle with this apocalyptic film. Like the Terminator himself, Sawday travels back in time in order to eliminate, once and for all, the stubborn resistance to artifice and technology that survives in—and sometimes still defines—twenty-
first-century academic work in the humanities. Sawday, moreover, goes much further back in time than his big-screen counterpart. As evidenced by the book’s cover image, the right wing of Hieronymus Bosch’s *Haywain Triptych* (c. 1500), Sawday’s “rise of the machines” occurs long before Stanley Kubrick’s Hal 9000 computer, William Blake’s “dark satanic mills,” or even Adam Smith’s pin factory. Sawday nonetheless makes use of all these post-Renaissance machines, and many others too, as he frequently colors outside the lines while filling in “the imaginative history of machines and mechanisms within European culture between 1450 and 1700” (xv). His thesis, in short, is that “the confrontation between mechanical culture and nature,” which Leo Marx had outlined in *The Machine in the Garden* (1964), is not “a peculiarly American phenomenon of the nineteenth and twentieth centuries” but, rather, a conflict that industrialized nations inherited from the European Renaissance (294-5). “How the machine came to occupy this ambiguous position” in late modernity, explains Sawday at the end of his first chapter, “represents the thread of the narrative of this book” (30). Sawday’s narrative “thread,” like that of Daedalus, “the legendary founder… of the mechanical arts” (215), leads the reader through a labyrinth of historical anecdotes, philosophical arguments, canonical literature, and sumptuous illustrations until, stumbling back to the future in the concluding chapter, we discover our present ambivalence toward machines somehow makes more sense as a result of all these circuitous detours. Although this reviewer ultimately found the book’s dizzying copiousness and disorienting capaciousness a welcome change of pace from recent work in the areas of early modern literature and science, some readers, historians especially, might balk at its methodology or lack thereof.

*Engines of the Imagination* begins by going back to the classical and biblical sources, the original myths of technology—from the aforementioned Daedalus to the Tower of Babel—in order to explain how the promises and perils of machinery were understood in a pre-industrial, albeit increasingly mechanical, culture. The first chapter draws the readers’ eyes (and ears) to the windmills, watermills, and furnaces that served as inspiration for fifteenth-century painters and poets alike. The second chapter focuses on Leonardo da Vinci, Michel Montaigne, and Domenico Fontana, the architect who coordinated
hundreds of men, horses, and rope and pulley systems as part of a successful effort to re-erect a 300-ton obelisk in front of St. Peter's Basilica. While the three images excerpted from Fontana’s 1590 publication recounting his engineering extravaganza are among the most arresting in the entire book, Sawday’s account of Montaigne’s “delight in machinery” (46) and his captivation by the hydraulic automata in gardens at Tivoli and Pratolino comes as the biggest surprise. Montaigne has never looked so much like the intellectual identical twin of his seventeenth-century philosophical successor, René Descartes. The third chapter reveals the role played by sixteenth-century “machine books,” particularly Georgius Agricola’s *De Re Metallica* (1556) and Agostino Ramelli’s *Le Diverse et Artificiose Machine* (1588), in restoring mechanics to the status of a high art, complete with expensive folios, wealthy patrons, and royal dedicatees. The fourth chapter, on “Women and Wheels,” seems to stretch Sawday’s thesis to its breaking point: it begins by noting how Norman Rockwell’s iconic image of Rosie the Riveter drew inspiration from Michelangelo’s Sistine Chapel but soon loses traction and starts spinning its own wheels—amid depictions of the Roman goddess, Fortuna, the medieval legend of Saint Catherine, martyred on a set of spiked wheels, and even Tibetan prayer wheels, which “swept China in the early twelfth century” (138)—before acknowledging, somewhat anticlimactically, that “female machine operators are not to be found in the world of Renaissance mechanical culture” (149). The fifth chapter, however, finds Sawday back on track and getting up a full head of steam. This is also where readers of *Seventeenth-Century News* will begin to pay special attention: Francis Bacon, Ben Jonson, Inigo Jones, John Donne, and the late plays of Shakespeare are brought together, productively, under the rubric of “mechanical illusions.” The sixth chapter, on “Reasoning Engines,” charts the rise of the “mechanical philosophy” even as it reveals how new-fangled microscopes and dildos inspired Samuel Pepys and John Wilmot, the second earl of Rochester, respectively. The seventh chapter, a tour de force, is a sustained meditation on “Milton and the Engine.” Here, the reader reencounters many of the highlights from earlier chapters—the Tower of Babel, Fontana’s obelisk, and Agricola’s miners, to name only a few—now in the context of Milton’s Hell. Suddenly, one begins to see how Sawday’s book resembles the
baroque clockwork, ingenious devices, and infernal engines he has been describing all along. Like those Renaissance machines, Engines of the Imagination can indeed be a useful tool, but it is primarily a work of art: an elaborate and overreaching invention testifying to its maker’s devilish virtuosity.

Whereas Humphrey Jennings, whom Sawday acknowledges as an inspiration for his work, had used the construction of Pandæmonium in Milton’s Paradise Lost as the starting point for his own “imaginative history of the industrial revolution,” Sawday transforms Milton’s infernal tower into the terminus ad quem of a pre-industrial fascination with machines that, he argues, had actually begun centuries earlier. Sawday’s portrait of a noisy, overcrowded, ink-stained, and even smoggy early modern era—especially his account of Spinhuït, Amsterdam’s workhouse for vagrant women—frequently borders on the Dickensian. But Sawday’s fondness for prolepsis—typified by a sentence such as “Three hundred years before that twentieth-century fascination with the fusion of machine and animal which Donna Haraway has traced to the ambiguous figure of the cyborg, [Robert] Hooke, the seventeenth-century fabricator of instruments, had already begun to see in nature a form of hybridization between mechanisms and organic life” (225)—also occasionally threatens to undermine his central claim: namely, that we are “the heirs to the mechanical culture of the Renaissance” (70). As Engines of the Imagination makes abundantly clear, the mechanical culture of the Renaissance was itself heir to the mechanical culture of the medieval and classical periods before it. And we are also more immediately the heirs of the industrial revolution recorded by Jennings. So why single out the Renaissance, from 1450 to 1700, as the “advent of mechanical culture” (xv)? Or identify the “rise of the machine” as the defining event of the seventeenth century? These are questions that a previous generation of cultural historians, especially those interested in what used to be called the “scientific revolution,” would have attempted to answer head on. Yet, despite his sensitivity to the changing significance of matter, motion, and mathematics during these 250 years, Sawday does not use the term “scientific revolution,” not even once, in more than four hundred pages. If he had, the book’s narrative about the rise of machines—or, rather, “the mechanical philosophy”—in the
sixteenth and seventeenth centuries would not feel especially new or original; it would feel like traditional intellectual history. Indeed, as anyone who has read Leo Marx’s *The Machine in the Garden* knows, Marx devotes more than fifty pages to an analysis of the central conflict of American literature as it appears, much earlier, in Shakespeare’s *The Tempest*. Thus, when Sawday claims in his concluding chapter that “[Marx’s] conceit of the ‘interrupted idyll’ surfaced” first in seventeenth-century pastoral literature, including Shakespeare’s *The Tempest*, he is not (despite what he says) overturning or even updating Marx’s argument. He is merely repeating it.

Even so, as *The Terminator* franchise makes clear, the past is always already the site of countless interferences enacted by the time-travelers—or, in this case, historians—who came before us. Today, the subtlety of Leo Marx’s thesis as well as twentieth-century scholarship on the scientific revolution is too often ignored, if not forgotten, by ecocritics and historical phenomenologists. The early modern (or “pre-Cartesian”) period has been characterized most recently as a holistic and monistic golden age, when minds were one with bodies, and bodies were one with the rest of the world. *Engines of the Imagination* is, therefore, a timely intervention in Renaissance studies and an important reminder, for anyone who has grown disenchanted with modern science and technology, not to mistake pre-industrial Europe for a pastoral paradise or a Shakespearean green world.