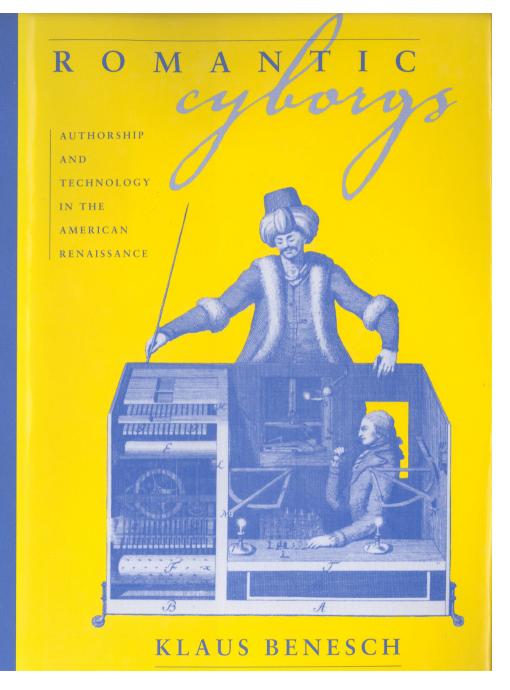
"BENESCH'S reading of the canonical authors uncovers a dimension of these writers—and this period—that is strikingly original. One finishes this study feeling that cyborgian imagery is central to any consideration of the new nineteenth-century culture of technology. His scholarship is most impressive."

—Miles Orvell, author of After the Machine: Visual Arts and the Erasing of Cultural Boundaries Cyborgs

Massachusetts





LITERARY critics have long regarded the rejection of technology as a distinguishing feature of American Romanticism. Yet as Klaus Benesch shows in this insightful study, the attitude of antebellum writers toward the advent of the machine age was far more complicated than often supposed. Although fraught with tension, the relationship between professional authorship and evolving technology reflected a pattern of adjustment rather than opposition, as writers sought to redefine their place within a culture that increasingly valued the engineer and the scientist.

According to Benesch, major writers such as Emerson, Hawthorne, Melville, Poe, Whitman, and Rebecca Harding Davis recognized technology as a powerful engine of social change—a driving force that threatened to subordinate their creative faculties to the inexorable dictates of industrial production. In response, they conjured up "cybernetic" self-representations that attempted to preserve the autonomy of the individual author in the face of ongoing technological encroachment. These biomechanical images helped writers construct a hybrid identity that reconciled new modes of technological production with older, more organic models of professional writing.

In the end, Benesch argues, Romantic literary discourse is marked as much by admiration for the technological as by strains of resentment and cultural anxiety about its negative effects. As such, it prefigures in important and previously unacknowledged ways the modernist and postmodagainst conclusions that would follow

KLAUS BENESCH is professor of English at the University of Bayrenth, Germany.

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# ROMANTIC

AUTHORSHIP

AND

TECHNOLOGY

INTHE

AMERICAN

RENAISSANCE

## KLAUS BENESCH

UNIVERSITY

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To Andrea

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#### ACKNOWLEDGMENTS

As a study of a formative period in American literary and cultural history, Romantic Cyborgs has inevitably been influenced by the work of scholars of many different shades and disciplines. An interdisciplinary, border-crossing project examining the emergence and mutual dependency of representations of authorship and technology in antebellum America, it is indebted to sheaves of critical commentary on the writings and writers of the American Renaissance proper, as well as to insights from the history of technology and science, sociology, philosophy, anthropology, psychoanalysis, and last but not least, the motley field of cultural studies. To situate my own approach within this large scope of diverse academic discourses and, simultaneously, distinguish it from the ever-increasing number of critical studies on nineteenth-century American literature and culture is a task I take on in the introductory chapter. What remains to be acknowledged, however, are the numerous personal and institutional sources of inspiration and collaboration, without which this project could never have been accomplished in its present form.

Although the general topic of the book grew out of my interest in the history of technology and the cultural and aesthetic implications thereof, some of its assumptions are, more specifically, derived from the stimulating discussions during a graduate course I taught at the University of Massachusetts Amherst in 1996 titled "Modern American Literature and the Machine." Although the focus of that class was on the first

half of the twentieth century, the challenging, knowledgeable responses of the participants helped me to understand better the ambiguous attitudes of even the most conservative of writers when it comes to modern technology. I am especially grateful to David Ram (who wrote a wonderful paper, "The Loudspeaker in Faulkner's *Pylon*") and Tony Lacavaro (a fledgling professional poet in his own right) for their enthusiasm and encouragement. Many thanks also to my Amherst colleagues Vincent DiMarco, Jay Neugeboren, Stan Koehler (retired but never tiring teacher, poet, and critic, with whom I shared an office), and John Nelson, computer specialist and amateur historian of unheard-of inventions and inventors, whose friendship and support were essential in making Amherst an invigorating and inspiring environment that allowed me to pry deeper into the tangled history of writing and technology in America.

My first steps toward dealing with a period of American literary and cultural history that inaugurated our modern understanding of the profession of the author as well as that of the engineer and technician had been taken in the early 1990s, when I spent five months as a fellow of the German Endowment of the Arts at the Harry Ransom Humanities Research Center in Austin, Texas. Owing to the center's generous practice of supplying office space and allowing access to its comprehensive library facilities even to young, as yet unestablished scholars from overseas, I was able to complete a first draft of chapters 1 and 2, thereby laying the conceptual and structural groundwork of the present study. To the librarians and administrators of the HRC, I offer my special thanks for their warm support.

Finally, I am grateful to the staff of the Institute for North American Studies at the University of Freiburg, where I taught for the better part of a decade. Manfred Pütz, the current director of the institute, and my American colleague and friend Jon Adams deserve lavish praise for their meticulous readings of earlier stages of the manuscript. Further appreciation goes to Paul Wright, my editor at the University of Massachusetts Press, and Miles Orvell of Temple University, who provided editorial guidance and valuable suggestions. Perhaps most crucially, I am indebted to Andrea Hollmann, to whom this book is dedicated, for her general encouragement and more than usual tolerance.

introduction

AUTHORSHIP, TECHNOLOGY,
AND THE
CYBERNETIC BODY

Let us not, then, lament over the decay and oblivion into which ancient writers descend; they do but submit to the great law of nature, which declares that all sublunary shapes of matter shall be limited in their duration, but which decrees, also, that their elements shall never perish. Generation after generation, both in animal and vegetable life, passes away, but the vital principle is transmitted to posterity, and the species continue to flourish. Thus, also, do authors beget authors, and having produced a numerous progeny, in a good old age they sleep with their fathers, that is to say, with the authors who preceded them, and from whom they had stolen.

Washington Irving, "The Art of Book-Making"

Within the framework of a study on authorship in antebellum American literature, Washington Irving's tongue-in-cheek essay "The Art of Book-Making" seems an especially fitting point of departure. Let me begin with the sobering idea that there is a *vital* principle in nature as well as in literary history and that therefore bygone authors are to the writing of literature what the individual is to the survival of the species: a never-

ending source for intellectual plagiarism, priceless nourishment for succeeding writers who engage in the tedious and irksome process of rewriting or "recycling" what has already been written. If we take into account that "The Art of Book-Making" evolved against the backdrop of Romantic conceptualizations of art that stressed the strivings of solitary geniuses and the originality of their ideas, Irving's satirical description of modern writers clandestinely and shamelessly exploiting the works of their predecessors aptly highlights the myths and paradoxes inherent in the Romantic notion of authorship.

By rereading the vitalist foundation of contemporary poetics as a symbol of decay—that is, of the author's imminent descent into public oblivion—rather than an affirmation of his or her exceptional creative power, Irving scathingly challenges Coleridge's organic principle of poetry whose basic tenets reverberate throughout the major works of the American Renaissance.2 This Romantic ideal of literary work as an act of quasi-organic procreation, the notion that the making of art emulates the generative processes of nature, can be traced, to name just one prominent example, throughout Thoreau's idiosyncratic autobiography. As even a cursory reading reveals, Thoreau patterns his philosophic experiment at Walden Pond after the natural flow of the seasons, thereby synecdochically gearing the emergence of his text to that of the pond's blooming landscape in spring. Five years earlier, in the notorious failure A Week on the Concord and Merrimack Rivers (1849), Thoreau had couched the same idea in the following unambiguous terms: "As naturally as the oak bears an acorn, and the vine a gourd, man bears a poem, either spoken or done. . . . The poet sings how the blood flows in his veins. He performs his functions ... as plants put forth leaves and blossoms."3

The notorious belief in the symbolic sameness of poetic and biological creation also loomed large in many of the classic critical studies of American Romanticism and its precursor, Anglo-German Romanticism. A comprehensive account of the organic principle in Romantic writing can be found, for example, in F. O. Matthiessen's pioneering study American Renaissance: Art and Expression in the Age of Emerson and Whitman (1941); in M. H. Abrams's seminal study of Romantic critical theory, The Mirror and the Lamp: Romantic Theory and the Critical Tradition (1953); and, somewhat later, Morse Peckham's Triumph of

Romanticism (1970). More recently, in Fact and Feeling: Baconian Science and the Nineteenth-Century Literary Imagination (1994), Jonathan Smith again examines in detail the biological foundations of Romanticist poetics, arguing that Coleridge's organicist understanding of literary creation developed as a discursive act against the cultural supremacy of Baconian scientific paradigms. Regardless of its obvious import for any literary historian addressing this period, one should keep in mind that the organicist rhetoric of antebellum American writers was itself the offspring of an ongoing and more encompassing debate over the establishment of professional authorship, a debate that cut across the various spheres of political power, technology, economics, jurisdiction, and gender, and was thus closely tied to the cultural and political transformations of modern society at large.

Although I touch on all of these different factors that had an influence on the professional identity of American writers during the first half of the nineteenth century, a major theme of this study is the growing cultural importance of technology and its repercussions in literary representations of authorship. Except for James Kirke Paulding's rarely noted story "The Man Machine," the list of texts I discuss at length is a rather traditional one: stories by Hawthorne, Poe, Melville, and Rebecca Harding Davis (even the last has by now become a minor classic), as well as Emerson's essays, Thoreau's *Walden*, and a sample of both prose and poetry by Walt Whitman. Yet by restricting my focus to the ways in which these texts negotiate the establishment of technology as the dominant societal force, and, simultaneously, their authors' growing entanglement with and dependence on that force, I try to reread them from a very specific and, I hope, refreshingly new point of view.

What I offer as a new angle on the interfaces of technology and authorship in antebellum American literature has little in common with the time-honored idea that Romantic writers, while continuously probing the shifting boundaries between the animate and the inanimate, developed a concept that emphasized the former and denigrated the latter. Rather, my argument runs counter to earlier evaluations of this period that discern a strong technophobic undercurrent in American Romanticism and tend to define its major stance as ambivalent, if not antimachinist, and therefore, by extension, essentially antimodernist.<sup>5</sup> In contrast to this traditional view of Romanticism, my own discussion

centers on the belief that in antebellum literary discourse there is as much admiration for the technological as there are strains of resentment and cultural anxiety about its deplorable negative effects. As in the case of Poe, for example, the mechanist rhetoric of Jacksonian democracy which he formally espoused and, at the same time, condemned as alien to his poetic purposes informed the composition of his poems and narratives to such a degree that the resulting indeterminacy can hardly be dismissed with tautological references to the incommensurability of Romantic idealizations of nature and the emergence of modern technological society. That antebellum American authors became increasingly obsessed, as we will see, with representations of the body encroached on by technology I take as a sign of the centripetal forces that marked the encompassing technological system and that held in thrall even those writers who, according to more traditional readings, seemed strikingly free of the tainted materiality of bookmaking-or, for that matter, of modern industrial production in general.

To explore fully the implications of what it meant to write under conditions of modernity, American authors of the nineteenth century often had recourse to an imagined other or double, a hybrid figure that comprised the human as well as the machine, and thus reflected the skein of interpellated relations between authorship and technology.6 Because of their structural similarities with twentieth-century representations of the cybernetic body, which, by definition, is a body that successfully incorporates the machine into its system, I have labeled the various transgressions of the biological that readers of American Romanticism repeatedly encounter "Romantic cyborgs." The way in which I use this strikingly oxymoronic term is meant to designate a variety of meanings.

First, it refers to what we call—since Matthiessen's influential book the "American Renaissance," the literary period that comprises the works of basically all major American Romantic writers and that virtually bustles with cyborgean manifestations of technology.

Second, I mean to evoke the term's inherent connotation of "romance" as, in its colloquial usage, an emotional versus an epistemic relation. As I will argue, American authors of the nineteenth century were at once repelled by and yet added to what might be called modernity's emerging romance with the machine. Although never fully developed,

this topic has been pointed out at least fleetingly in Floyd Stovall's study of the background sources of Walt Whitman, where he holds that "there is no evidence in the poems of the 1855 edition that anything more than the romance of science had interested [Whitman] seriously." As in all romances, the relationship between Romantic writers and the machine is a rather ambivalent one, and it is marked by moments of euphoria as well as by nagging anxieties and, occasionally, manifestations of sheer terror.

Third, American authors of the early nineteenth century, and certainly not just those categorized as Romanticist, often used the formal conventions of Romance as a literary genre, thereby enabling themselves, according to Hawthorne's famous definition, "to present [the] truth under circumstances, to a great extent, of the writer's own choosing or creation."8 Few of the texts I discuss in detail are, to be sure, Romances proper. In order to create their own view of the ongoing technologizing of the modern world, however, they apply the imaginative freedom of the Romance to go beyond the restraints of purely factual representation of social reality.

Finally, by envisioning modern technology as either infused with a life of its own or as infringing on organic life, antebellum authors adumbrate the imagery of the cyborg as it populates so many narratives of our own day (fictional and otherwise). Their historic differences notwithstanding, these earlier, precocious representations of a concept that has since solidified into a full-fledged cultural industry (there is cyberpolitics, cyber-criticism, cyber-commerce, cyber-fiction, and, not to forget, the virtual lure of cyberspace) are strikingly similar to more recent probings of this uncanny space where the human body interfaces with the non-living and the technological. Even though they clearly lack the sociocultural ramifications of the electronic, postindustrial identity of the cyborg, the man-machines by which our nineteenth-century predecessors negotiated their own (often subconscious) anxieties about the technological nevertheless reveal an astoundingly complex mesh of significations. This very broad scope of differing assessments of what I call Romantic cyborgs ranges from James Kirke Paulding's man-machine as the epitome of postrevolutionary America to the hybrid organisms created by Hawthorne's scientist or mechanician-turned-artist figures, from

Poe's narrative machinery to Melville's cyborgean scrivener and Rebecca Harding Davis's lament on the vampirish forces of early capitalist production.

Of the various meanings with which nineteenth-century American literature invested this recurring theme of biomechanical hybridity, it is, however, the interstices and the overlap with the discourse on authorship that will make up much of my argument. Emerging during the second half of the eighteenth century, the debate over the modern profession of literary authorship and its implementation in capitalist society had always been closely connected with the appearance of new technologies. If we look at the invention of the rotating press, which made possible the large-scale production and distribution of handwritten texts, at the typewriter, at photomechanical printing, or, more recently, the word processor, we see that they have all influenced our notion of what it means to be a writer, and they have created considerable anxiety as to how these inventions might affect the status of literary authorship. For writers of the American Renaissance, technological change, more often than not, figured as a driving force in the process of modernization, a process that threatened to subordinate their creative faculties to the inexorable patterns of industrial production and increasingly set the material aspects of literature (the actual production and marketing of the book) against the artistic composition of the text itself. In response to their emerging professional identity, Romantic writers conjured up cybernetic mirror images that captured perfectly and, at the same time, defused the growing tensions between technology and authorship. Since the postmodern figure of the cyborg is itself but a symbolic construct, an imaginary foil onto which we project the imponderable consequences associated with our electronic future, it may help us to understand better—historical differences notwithstanding—the seemingly antimodernist self-representations and conservative rhetorical practices of American Romantic literature.

By positing spaces of biological transgression and ambiguity, authors of the American Renaissance eventually succeeded in making a connection between the new modes of technological production and their professional attachment to older models of writing as organic growth. Because of their composite character, the cybernetic images they used to accomplish this connection can be read as following closely the pattern

of the symbolic construction of identity described by the anthropologist Michael Taussig, the cultural historian Michel de Certeau, and, perhaps most important, by Lacanian psychoanalytical theory. In order to become conscious of its position within the complex framework of modern society, these critics would hold, the subject (either individual or collective) has to rely on its reflection in a projected other, a symbolic mirror image that at once combines aspects of similarity and difference in regard to the original self. If we apply this idea to the often glaringly technological representations of authorship in American Romantic writing, we are hard-pressed to interpret them just as an expression of the writer's wish to distance himself from his materialist surroundings. Rather than a withdrawal from society, technological imagery signals an attempt to incorporate into art—at least symbolically—the changing modes of textual production. In the overarching perspective of this study, then, Romantic cyborgs figure as a heuristic tool in the attempt to reach for what might be called the psychohistorical layerings of the ongoing realignment of discourses on technology and authorship in antebellum literature.

As one can easily see, my argument is grounded in the idea that the texts produced by the major representatives of antebellum literature are not to be read as documents of their authors' autonomy and detachment in regard to their sociocultural and political environment. Nor am I concerned with the notion that the classic writers of this period have earned their prominence in American literary history by either writing off or transcending the sweeping materialism and technophoria of their times. This view of the major writers of the American Renaissance as alienated rebels who held up their lofty understanding of serious literature against the rising tide of mass popular culture (which was itself determined by technical innovations such as the introduction of the cylinder press in 1847) is an integral part of the bulk of critical rationalizations of this period. For many decades, as David Reynolds perceptively observed, literary critics have argued "that the most distinctive characteristic of American literature is its rejection or transcendence of social concerns."9 Since my own interest is precisely in how the "profane" processes of modernization affected the professional identity of antebellum American authors (and the imaginative, fictional representations of that identity), I am indebted to an expanding group of studies that reach beyond

the traditional belief in the Romanticist transcendence of, and ultimately autonomy from, the sociocultural complex.

Above all, any new examination of the interfaces of technology and antebellum writing has to pay its dues to Leo Marx's groundbreaking study The Machine in the Garden (1964). 10 Although Marx's contribution to the study of technology and its impact on nineteenth-century American literature is awesome, its scope and findings differ from my own in numerous significant ways. Contrary to his view that Romantic writers believed in the redeeming power of nature to negotiate and thus finally neutralize the onslaught of the machine, a concept of nature that Marx fittingly characterized as "middle landscape," I examine the technological predominantly in terms of the growing professionalization of authorship in America. In doing so, I focus on a definition of technology that is at once broader and more elusive than the one proposed by The Machine in the Garden. While technology in Marx's portrayal is basically represented by the emergence of a single machine, namely the smoke-spurting, fiery engine of the railroad, I use a more encompassing concept of technology as both a value system and a system of variegated technical applications, or, put differently, as an ideological symbolic pattern and a network of production that involved all levels of antebellum society.11

True, the notion of what has come to be perceived as the pervasiveness and sociocultural complexity of modern technology can already be traced in some of Marx's later works. As he points out in an essay on the development of the idea of technology, sometime during the nineteenth century the public imagery of the "mechanical arts" as typical embodiments of the new power eventually gave way to the modern idea of "technological systems." Evidently contradicting his position taken in The Machine in the Garden, Marx proffers as an example precisely the steam-powered locomotive which had long served as the century's leading icon of technological progress. Since the railroad involved so much more than simply operating a "machine," the locomotive could hardly be expected to represent "the manifold character and complexity of the mechanic art of transporting persons and goods by steam-powered engines moving wagons over a far-flung network of iron rails." "To represent such complexity," Marx finally concedes, "that image of a locomotive was no more adequate than the term 'mechanic art.'"12

If Marx's more recent works seem determined by an all-encompassing view of technology as sociocultural system, in the magisterial Machine in the Garden the symbolic ramifications of this shift of critical paradigms were not yet adequately taken into account. Although antebellum authors obviously believed in the redeeming powers of pristine nature, they were well aware of the overriding effects of modern technology, especially when it came to the profession of authorship. Not all of the changes affecting the American book market of the 1830s through the 1860s were conceived, of course, as related to the invention of new technologies of production, design, and marketing of printed matter. Yet many of the major writers of the American Renaissance felt themselves embroiled in the controversy over technology, and they lamented the disenchanting results of technological progress in regard to the composition of "serious" literature: the proliferation of cheap, saleable romances and novelettes, the urge for serialization, and the increasing pressure to cut down on production time, not just for the material book itself but also for writing and editing the manuscript on which it was based. More often than not, however, these writers also followed the patterns set up by the dominant cultural-industrial complex, and they were keen to adapt—as can be witnessed especially with Poe and Whitman—to the altered conditions of the literary trade.

There is by now a host of critical studies addressing equally the changing conditions of bookmaking during the first half of the nineteenth century and the interstices between writing and other social and symbolic activities. Apart from the seminal yet purely historical examinations of antebellum publishing by William Charvat, which are still among the most reliable sources of data concerning the publication and reception of printed material prior to the Civil War, Nina Baym's survey of early American novels by and about women, as well as her later probings of readers' and reviewers' responses to fiction in antebellum America, are especially noteworthy. Since they extend the range of who should rightfully count as an antebellum author in the first place, Baym's pioneering works make us more sensitive to the interventions of extraliterary factors—such as morality, gender, and nationalist anxiety—in reading and evaluating literary texts.<sup>13</sup> Following in her footsteps, Jane Tompkins's New Historicist Sensational Designs: The Cultural Work of American Fiction, 1790-1860 (1985) also questioned the "situatedness" and

ideological character of the classic approaches to Romantic literature, arguing that the so-called deficiencies of many early American texts, such as the influence of popular culture and the predominance of stereotypical plot structures, "did not seem at all deficient to their original audiences," and were in fact the very basis not just for their widespread reception but for their cultural impact in general.<sup>14</sup>

That even the "master" writers of the American Renaissance shared in the public craze for cheap, tawdry literature, and that the products of the sensational press as well as various other popular modes and stereotypes were imported into the "literary" texts of Hawthorne, Melville, Poe, and their fellow writers, is the major thesis informing David Reynolds's Beneath the American Renaissance: The Subversive Imagination in the Age of Emerson and Melville (1988). Reynolds's book is actually the most explicit attempt to get past the idea that the American Romantics can and should be understood only in light of their preference for universal themes and their formal and structural dependence on classic English literature (hence Matthiessen's label "American Renaissance"). What Reynolds calls the "subversive mode" of antebellum literature, an ever-increasing bulk of "bizarre, nightmarish, and often politically radical" fiction that took its themes directly from the contemporary sociopolitical context, lent to the highbrow Romantic texts a large variety of cultural codes and strategies, thereby allowing them to fuse their messages into ambiguous yet compact, up-to-date images. As Reynolds rightly remarked: "The typical literary text of the American Renaissance is far from being a self-sufficient text, sealed off from its environment. It is indeed what one might call an open text, since it provides an especially democratic meeting place for numerous idioms and voices from other kinds of contemporary texts."15

Other critics, such as Michael Paul Rogin, Michael Gilmore, Walter Benn Michaels, Donald Pease, Nicholas K. Bromell, and Joel Pfister, have concentrated more on the economic conditions and the demands of the marketplace as determining factors of antebellum literary production. Although their approach implicitly substantiates the impact of technology on various levels (simply because many of the economic changes described by them were dependent on technologically advanced means of production), the machine as a powerful symbolic and ideological construct of modern society does not figure prominently in their

studies. By shifting their attention, however, to the Romantics' entanglement with the sordid aspects of the rise of capitalism in America, these scholars were in fact proposing a revaluation of Romantic writing and, of course, its criticism, a revaluation that would comprise the major works of American Romanticism as manifestations of certain ideological frameworks rather than representations of individual achievement.

This aspect of ideology, which in its broadest sense signifies the relatedness between a literary text and its cultural, political, and historical context, has forcefully been brought to the fore in Sacvan Bercovitch and Myra Jehlen's collection of essays, Ideology and Classic American Literature (1986). As Jehlen makes clear in her historical survey of the term, although "ideology"—especially through its nineteenth-century Marxist adaptation—would soon become a tag for all sorts of determinist sociopolitical paradigms, it has by now acquired a more acceptable if not positive meaning. Concurrently, the basic concept of ideology epitomizes the importance of such factors as race, class, and gender, and it seems to question further the possibility of disinterested, transcendent literary and critical statements. "From its Enlightenment origin in a vision of infinitely free ideas, ideology," according to Jehlen, "has become a term that mediates the finite entities of text and context, and also of individual author and cultural history; that is a term that demarcates the limits of individualism and the imagination." 17

Jehlen's understanding of ideology as encapsulating the epistemological limitations of the modern idea of authorship—that is, the author's ostensible cultural independence and creative originality—is informed by the Marxist philosopher and critic Pierre Macherey, among others. Macherey is convinced that the conditions that determine the production of the book also determine "the forms of its communication," which is just another way of saying that the writer's style, however inventive and original it may appear, is by necessity geared to the cultural situation from which it arises, yet by which, one should add, it cannot be completely contained. This unresolved doubleness or ambiguity of Macherey's theory of literary production is particularly suited to describe the structural and thematic entanglements of antebellum American literature and the evolving technological system.<sup>18</sup>

What I will show, therefore, is that the emerging ideology of modern authorship constantly informs the major works of the American Renaissance, not because, as we usually assume, it was the Romantics who created this ideology, but because its basic premises—the writer's originality and his exemption from the material constraints of capitalist production—were by then already out of sync with the structural and economic development of antebellum society. As Morse Peckham once noted, "Ideology is always out of phase with the situation in which it is employed, for an ideology has always emerged as a response to a preceding situation, the attributes of which are different from those of the current situation." 19 Peckham sees all of the major themes of Romanticism (its obsession with nature, the exaltation of feeling and sentiment, the picturesque, and so on) as, in fact, contained in and propagated by the Enlightenment. Hence the Romantics' idiosyncratic manner of handling these topics was meant "to provide a justification for the innovative creation of value, for finding sources of one's own value in configurations not sanctified by existing social institutions and existing ideologies." 20 In other words, the Romantic emphasis on individual creativity and the inexhaustible resources of the self indicated that the existing value systems, though based on the sovereignty of the rational subject, were no longer able to provide conduits for artistic self-ascription.

As much as Romantic writers rebelled against the encrustations of Enlightenment ideals, they also struggled to position themselves within a cultural framework that increasingly valued the technological foundations of modern society. Given the pervasiveness and, what is more, rhetorical fervor with which nineteenth-century Americans embraced technology as the new driving force of cultural development, the literary writers of this period were clearly at a loss as to how they should define their professional identity. Technology not only challenged the assumed autonomy of the modern author at the very moment of his establishment as an integral part of the social and economic infrastructure, but also offered a symbolic language that stressed the growing importance of mechanistic cultural paradigms as well as the ultimate replacement of the body by the machine.

That the writers of the American Renaissance adopted the imagery of the man-machine, which was handed on to them through the lingering influence of mechanical philosophy, and, in a second step, reworked it into a powerful metaphor of individual and cultural transition, seems to corroborate Macherey's description of the literary work as a structurally open yet, at the same time, ideologically determined mode of representation. By continuously conjuring up what I call Romantic cyborgs, antebellum literature symbolically opened up sites of indeterminacy, imaginary spaces that were to reflect the diversified and conflicted relations between the human and the technological. From this perspective, then, American Romanticism must be treated also as an attempt to negotiate the contested cultural authority of two rival ideologies: the modern notion of authorship and the evolving concept of the machine as allencompassing technological system.

# The Ideological Foundations of Modern Authorship

The artistic-project of negotiating the divergent forces of modernization involved technology on a number of different levels. In his famous lecture on authorship, Foucault insisted that an author is not simply the historical person who has produced a written text but also in a very literal sense an ideological product. As a discursive figure, he or she is authorized by various interacting ideological positions, one—and certainly the most influential—of which is the idea of the author as "genius, as perpetual surging of invention."21 If, according to Foucault, the notion of authorship must be viewed as socially constructed, it was also, to be sure, the technology of printing, with its emphasis on written (versus orally transmitted) information, that had paved the way for the author's sociocultural initiation into modern society. The close relation, for example, between the spread of Enlightenment thought, on the one hand, and the advancement of printing technology (especially the advent of the handpress) and the concomitant surge of publishing activities during the latter half of the eighteenth century, on the other, has convincingly been made apparent by scholars such as Robert Darnton and Elizabeth Eisenstein.<sup>22</sup> Yet the technology of print contributed to the development of the modern understanding of authorship in more than just the technical sense of facilitating the production and dissemination of essays, pamphlets, books, and other forms of printed matter. It also, as Marlon Ross has observed, shifted authority away from the written text to the writer, thus laying the groundwork for a new evaluation of what it means to be an author.23

According to Ross, the way in which Western societies confer author-

ity on their writers has been subject to numerous sociohistorical changes, many of which were closely related to the invention of new technologies of writing and printing. In medieval (scribal) cultures, where the dissemination of handwritten copies had always been tied up with the process of transmitting sacred truths, authority was derived first from content—the translation of the holy text—and second from the uniformity and therefore readability of the reproduction. This latter aspect, as Ross points out, "the art of making writing legible, then, is also a political act; the act of claiming or declaiming a culture's authorities."24 As one can immediately see, any irregularity regarding the form and style of the reproduction would by necessity detract from the sacredness of its content and thus call into question the authority that legitimizes and, at the same time, inspires the writer's hand. With the debut of the printing press, however, the relation between authority and uniformity is reversed. If we follow Ross's discussion of eighteenth-century print culture, to be printed now becomes the primary marker of cultural authority. It is therefore no longer the text as such that, by way of its sacrosanct mythopoetical origins, lends power and esteem. Rather it is the achievement of making public one's private mind and thoughts, thereby distinguishing the self "by virtue that [one] has written; that [one's] scribblings have been scripted, that [one's] script is made overly and overtly legible through the technology of print."25

Without such technological advances in printing and the accompanying sociocultural premium put on the products of the printing press, it would have been nearly impossible to adopt the idea of originality into literary and legal discourses on authorship. From the very moment of their inception, the improved means of printing have necessitated a separation of the authentic and original work on the one hand from the sham, mechanically reproduced copy on the other. If the increasing output of reprinted material worked to introduce a more complex view of the activity of publishing, it also worked to redefine the criteria of authenticity and originality in regard to the writing and composition of literary texts. In his famous "Conjectures on Original Composition" (1759), whose neglect by English critics sharply contrasted with its tremendous influence on the German Sturm und Drang movement, Edward Young was among the first English writers to call for the critical recognition of novelty and originality as defining categories of the work of art.

"Originals," he declared, "are, and ought to be, great favourites, for they are great benefactors; they extend the republic of letters, and add a new province to its dominion. Imitators only give us a sort of duplicates of what we had, possibly much better, before; increasing the mere drug of books, while all that makes them valuable, knowledge and genius, are at a stand." <sup>26</sup>

Young's plea for original productions deserves to be examined closely. As can be easily seen, his argument relies on the juxtaposition of two divergent meanings of growth: in the first instance, the term marks a merely material increase in the numbers of books available, while its second meaning signifies an enhancement of knowledge, a proliferation of ideas as yet unknown, and therefore of intrinsic value, to any contemporary reader. If it is true, as Martha Woodmansee puts it, that the printing press was instrumental in turning the individual writer into an author, it did so by privileging the quantity of printed books over the quality of writing itself.<sup>27</sup> By deploring the fact that "the lettered world no longer consists of singulars, [that] it is a medley, a mass; and a hundred books at bottom are but one," Young directly addresses the unrestrained dissemination of printed matter.<sup>28</sup> In order to counter the material onslaught of books that are basically "duplicates of what we had," which is among his major concerns in "Conjectures," it seemed but logical to dissociate the mechanically manufactured from the truly inspired original text. Whereas the latter, according to Young's antitechnological approach, is of a vegetable nature ("it grows, it is not made"),29 the former is fabricated in a purely technical manner.

Consequently, Young denounces the imitative artist as a sort of mechanic, a manual laborer who manipulates and pieces together material that is already there. "Imitations," says Young, "are often a sort of manufacture wrought up by those mechanics, art and labour, out of preexistent materials not their own." <sup>30</sup> We are thus confronted with the somewhat paradoxical situation that the grounding of modern authorship in the idea of originality must be treated as, first, a product of certain technological changes (among which the improvement of the means of printing is but one, if admittedly major, factor); and, second, as an agent of resistance to these changes, or rather to the advancement of technology and the mechanical worldview at large. <sup>31</sup>

Whereas Young's "Conjectures" reflected the eighteenth century's cul-

tural biases vis-à-vis the gradual establishment of print culture, by 1819—the year Irving published his Sketch Book—the anxieties associated with the large-scale production of books seem to have increased even further. Although until the 1820s literary publishing in America, according to Charvat's crucial study, remained local and decentralized, the commercialization and, concomitantly; professionalization of the book trade proceeded with great rapidity.<sup>32</sup> And so did the number of books published,—augmented by the newly invented technique of stereotyping (1813).33 Given the accelerated growth of the professional book market, it should come as no surprise that Irving began his sketch on the trials of modern authorship with the sarcastic remark, "I have often wondered at the extreme fecundity of the press, and how it comes to pass that so many heads on which Nature seemed to have inflicted the curse of barrenness, should teem with voluminous productions." 34 Like Edward Young, Irving takes aim at the waning of originality in contemporary literature, even though his critique of the modern writer's reliance on ancient authors, coming from an American and thus a representative of a fledgling nation, rings with a distinct nationalist undertone that could equally be read as an act of rebellion against the lingering cultural supremacy of the Old World.

"The Art of Book-Making," which Irving conceived during his extended visit to England, is set in the Main Reading Room of the British Library, where the narrator encounters a group of contemporary authors fully absorbed in the process of pilfering the works of their predecessors. The narrative, of course, is hyperbolic; yet the wording and metaphors that Irving uses to depict the outright eclecticism of modern art deserve our attention. In contrast to the enchanted, pseudo-medieval appearance of the library, the "predatory" work of the writers is represented in modern terms. The authors are portrayed as engaging "in the very act of manufacturing books; it looks as if they are "constructing some work of profound erudition." As for the narrator, his interest having been aroused by the strange proceedings, he sits down in a corner and observes "the process of this book manufactory." 35 By conjuring up a view of literary composition that identifies imitation—that is, the sham, eclectic book constructed in piecemeal fashion out of forgotten texts—with mechanical reproduction and the work of the hand rather than the work of the mind, Irving set the register for an extensive antebellum literary discourse on the increasing entanglements of authorship and technology.

What is more, in order to state with utmost clarity his claim as to the inferiority of many modern literary productions, Irving employs a variety of telling sexual metaphors. Thus, if modern authors repair to the works of their literary "fathers" for inspiration and replenishment, it is because they are cursed with "barrenness," an explicitly sexual term that signifies their dwindling creative resources. Priapic imagery of this kind can be found throughout "The Art of Book-Making." Its sexual troping finally culminates in the incestuous scene quoted as the epigraph to this chapter. In what readers today might rightly interpret as an intriguing example of Harold Bloom's thesis of literary influence, the passage invokes a great chain of authors who, in accord with the laws of nature, beget authors and of writers who "sleep with their fathers, that is to say, with the authors who preceded them, and from whom they had stolen."36 It is worth noting that plagiarism has its roots in the Latin plagiarus, which signified a "kidnapper" or "seducer" as well as a literary thief. To borrow intentionally from the ideas of another writer might thus be described, according to Stephen Rachman, as an act of kidnapping or assuming "false fatherhood." 37 What Irving then acknowledges here, with a candor that will determine much of the rhetoric of antebellum American literature, is that writing in Western culture is best defined by its similarities to the power of procreation, and that therefore the pen of an original writer, as Sandra Gilbert and Susan Gubar have suggested, was often considered "a metaphorical penis." 38

Although pertaining to works of art in general, sexually explicit conceptualizations of the inventive process are especially endemic in the realm of writing. Consider only the *terminus technicus* for the one who writes, the *auctor*, or, in its modern variant, the author. It is indeed striking how the cultural ascription of literary composition as an act of engendering rather than just constructing the written text coincides with the very beginning of prose writing itself. In one of the earliest discourses on the effects of literacy, Plato's *Phaidrus*, writing is already described as an act of dissemination, of "sowing immortal seed." And according to Edward Said, an author has traditionally been understood as "a person who originates or gives existence to something, a begetter, father, or ancestor, a person also who sets forth written statements."

More significantly, perhaps, than being simply a metaphor for the allegedly male forces of genius, the capacity to beget, to *father*, a text is closely imbricated with the idea of literary originality or, put differently, the proprietary economic relation between writer and text. If we follow Said's analysis, *auctoritas* or authorship literally signifies invention and production, the power of "an individual to initiate, institute, establish." Hence, the product of this power, the written text, is always something *new*, that is, again in the words of Said, an "increase over what had been there previously." <sup>41</sup>

Increase and the production of new ideas thus become key terms of modern authorship; the true author, according to these modern rationalizations, is believed to create ex nihilo, or, as Edward Young aptly put it, "the pen of an original writer . . . out of a barren waste calls a blooming spring."42 Yet the network of connections between writing and the genealogical imagery of procreation was also instrumental in implementing the idea that the writer authorizes or has legal authority over his fictional creations. "If the author/father is owner of his text and of his reader's attention," Gilbert and Gubar observe, "he is also, of course, owner/possessor of the subjects of his text, that is to say of those figures, scenes, and events-those brain children-he has both incarnated in black and white and 'bound' in cloth or leather." 43 Hence, it was mainly by foregrounding this gendered conception of ownership, of literary paternity, that the modern view of the writer as originator and, concurrently, spiritual and economic proprietor of his text was being established.

#### Technology and the Romantic Politics of Disembodiment

What are the implications of this gender-oriented definition of literary work for my discussion of technology and the emerging professional identity of the modern author? As I pointed out earlier, the establishment of literary authorship within the socioeconomic network of modern society required its differentiation from other highly specialized areas, such as, for example, the increasingly dominant sphere of the technological, and it rested on a rationalization of the inventive process as being exempted from the materialist exigencies of capitalist production. The idea of authorship, in other words, developed along the lines

of strong antimaterialist biases that emphasized the spiritual over the physical implications of writing.

Moreover, its social demarcation as being primarily engaged in the representation of lofty philosophical ideas (rather than the tedious articulation of the real) directly reflects its aloofness in regard to the body an aloofness crucial to most of the sexual metaphors that were used to delineate literary activity. Although replete with physical tropes of various sorts, the rhetoric of the writer as progenitor or father of his text never actually conflated the human body itself with the processes of textual procreation and production. For both writers and anatomists, the act of creation was primarily spiritual and only secondly depended on the materiality of the body. In his comprehensive study of attitudes toward sex, gender, and the body in Western cultural history, Thomas Laqueur points out that discourses on biological reproduction usually stressed the ethereal, non-sensory (male) over the purely corporeal (female) contributions to procreative processes. Made visible through the agency of biological tropes, fatherhood, and, by inference, the artist's paternity in regard to the ideas he engenders, was nevertheless conceived as representing basically—in Freud's later terms—a conquest of intellectuality over sensuality, of the more elevated and refined over the less refined material forces of human nature.44

If we consider the synecdochic relationship between writing and engendering as well as the emphasis placed on spiritual aspects of procreation, it is only logical that the body should be seen as an impediment to the writer's work, an obstacle that cannot be wholly eliminated and that therefore must be heeded with especial care. Echoing both the contemporary mechanist view of the body as a machine and the notion that writing is metaphorically exercised with the body's vital parts, the English poet John Armstrong advised the scholars and philosophes of his day "to stand and sit by turns / As Nature prompts," because "o'er your leaves / To lean forever, cramps the vital parts, / And robs the fine machinery of its play." 45 While the remedy prescribed to counter the weaknesses of the body engaged in writing is a simple one, the message implied here is at least equally apparent: the imagery hinges on the antagonism of mental creativity on the one hand and the demands of the body on the other, thereby suggesting a division between the unhealthy work of the mind and the physiologically more appropriate work of the hand. From the viewpoint of eighteenth-century medical discourse, the only naturally healthy people, as Carol Flynn has shown, were the poor, the laborers, and the working class, in short, anyone whose intellectual faculties were not well developed and who was thus forced to make his living by exercising the physical parts. <sup>46</sup> Ironically and somewhat paradoxically, the organicist concept of writing evolved out of the ideological framework of a dichotomy between mind and matter that conceived of the body as interfering with the spiritual work of the writer and thus helped to denigrate the very site where nature enacts the biological processes that were taken to signify artistic creativity.

Not surprisingly, then, in dealing with the body as a symbolic foil rather than a biological entity, we find the same antimaterialist biases at work that were essential to differentiate the modern profession of authorship from other specialized forms of social activity. Although it has always been issues of technology, politics, and economics that have determined the range of distribution and accessibility of literary texts, the scholarly assessment of their history and development has remained, until quite recently, conspicuously silent as to these material factors of textual production.<sup>47</sup> The obvious materiality of its subject notwithstanding, traditional literary scholarship has obstinately concentrated on the allegedly "timeless" content or, in Wordsworth's famous phrase, on certain "classes of ideas" embedded in the textual product, ideas that were thought to be miraculously free of any contamination by the materiality of the medium itself.48 In leaving the investigation of the material side of book production to specialists other than literary scholars (i.e., historians of culture and economics), practitioners of academic exegesis only replicated the disregard of literary authors for the complexity of actual bookmaking, which involves, after all, textual technologies such as editing, printing, engraving, and, perhaps most important of all, the marketing of the finished product.

Concomitant with its representation as an intrinsically male act of engendering, writing was thus also conceived as a disembodied process, in other words, an effort to transcend both the bodily confines of the writer and the material constraints of the text to be produced. That the Romantic poetics of disembodiment were closely tied to contemporary discussions of technology and its impact on the cultural status of the author can be seen in Hawthorne's metafictional short story "The Artist

of the Beautiful" (1844), to pick just one telling example. The story, which had rarely been considered in terms other than as a reiteration of the major tenets of transcendentalism and, of course, Hawthorne's distrust and critique thereof, juxtaposes effectively the materialist foundations of modern technological society and the ethereal, disembodied ideals of the Romantic writer. Resonating with references to early industrial manufacturing and the premium that Jacksonian America placed on punctuality and the utilitarian ideal of the "useful" arts, "The Artist of the Beautiful" is steeped in the cultural changes concurrent with rapid technological advancement and the burgeoning of the American economy. Not only does Hawthorne apprehend the cultural conflict between the practical and the beautiful by creating a character who is both, that is, watchmaker and artist, but also he has his protagonist embark on a symbolic project that defines many of the antebellum literary representations of authorship. In search of a material form for his aesthetic ideals, Owen Warland builds a synthetic creature, a mechanical butterfly, which reflects his artistic ambitions as well as the difficulties arising from his ambivalent professional status.

In fact, this allegorical text hinges on a portrayal of the body as the antithesis of everything that is beautiful and aesthetically important. Once Owen has set his heart on the realization of an abstract concept, biological life matters only insofar as it is instrumental to the accomplishment of his task. Since the technological—and the body as its physico-material counterpart—operates in direct opposition to the artist's ethereal strivings, the story as a whole might well be taken as a Romantic attempt to amalgamate the divergent forces of modern society. The ironic and ambiguous ending, which leaves many readers puzzled as to the true relation of art and nature in the story, would thus refer to the inclusion—rather than exclusion—of technology in the realm of artistic production, and it might figure as an indication of the involvement of even the most conservative of antebellum authors with the dominant materialist forces of American society.

To investigate their own position within the cultural framework of modernity, antebellum writers frequently created imaginary zones of contact between the human and the technological—Romantic cyborgs, as it were—thus allowing for the dramatization of their repulsed flight from the body which they took as a symbolic marker of the materialist

preference for matter over ideas. By the same token, authors of the American Renaissance often conflated the mechanical processes they saw at work in both the body and contemporary society and highlighted the act of writing as a conduit for their critique of the modern downsizing of the imagination and the spiritual aspects of life in general. In many of Poe's major tales, writing figures prominently as a means of overcoming the frailty of the flesh and the restrictions that the temporality of the body imposes on the Romantic author. Obsessed with representing human physicality through frequent reenactments of death, these texts turn on the very moment when the body relapses, ultimately and relentlessly, into pure materiality. Their various poet figures are horrified by the specters of physical deterioration and the subsequent extinction of the body; yet through some agency of writing and/or reading, they repeatedly manage to conjure up mirror images, distorted doubles of the deceased biological models who survive solely in the imagination of their haunted authors. In "Ligeia," where the effect is heightened by the victim's own irrepressible desire to use writing as an antidote for the approaching terrors of death (Ligeia has the narrator recite a poem of her own throughout the deathbed scene), it is only the poet's creative faculties that conquer the threat of biological annihilation and thus ultimately provide the mind with that soothing form of remembrance (or doubling) that Poe so excessively enacts. It is important to notice, however, that the process of calling forth imaginative doubles itself follows a mechanical, automated pattern which can be viewed (as we shall see in chapter 3 on Poe's technology-centered poetics) as a reflection of his attempt to "objectify" the theoretical foundations of narrative and, thus, to gear the author's work more closely to the growing technologization of the sociocultural environment.

His narrative and structural embrace of technological paradigms not-withstanding, Poe also seems to insist on writing as a viable alternative to the ongoing progress of science and technology. Like many of his antebellum fellow writers, Poe came to conceive of technology as an irresistible force, a utilitarian juggernaut that must be balanced by the creative spirit of the true artist. As he claims in "The Colloquy of Monos and Una," the advances in modern science and the practical arts in general are but chimeras, an actual "retrogradation in true utility," and it is the poet's fate to live and perish "amid the scorn of the 'utilitarians.'" <sup>49</sup> Or

consider his treatment of the same topic in his "Sonnet—To Science": "SCIENCE! True daughter of Old Time thou art! / Who alterest all things with thy peering eyes. / Why preyest thou thus upon the poet's heart, / Vulture, whose wings are dull realities?" Here, as in many of his philosophic tales and poems, science is depicted as obstructing rather than opening up new avenues of knowledge. Its rigorous but short-sighted methodology becomes the hallmark of intellectual vandalism, a token of enormous power to be sure, yet a power that is concerned solely with "dull realities."

Invariably, Poe evokes images of the body as being defined and, simultaneously, "used up" by modern technology. In what is perhaps the first portrayal of a true cyborg figure in American literature, the prosthetic protagonist of "The Man That Was Used Up" (1839) adumbrates and pushes to its limits the postmodern vision of a technologically enhanced human body. In its satirical treatment of a character who vanishes completely behind his numerous artificial body parts—even his voice, the only guarantor of the man's actual existence, is supported by a "somewhat singular-looking machine" <sup>51</sup>—the story takes issue not only with the dominant ideological belief in the redeeming agency of technology but also with the Romantic idea that the body is of lesser import, or rather that it is possible to exist without a body at all.

Poe's strategy of metaphorically conflating the body with the technological is by no means idiosyncratic. It is informed by and reflects the influence of mechanical philosophy and the mechanistic descriptions of the human body that became popular during the latter half of the eighteenth century. That mechanical paradigms of nature as well as of human society had been strong in the early decades of the republic can be gleaned from the awe and veneration with which Americans responded to David Rittenhouse's mechanical planetarium (1770), an invention that earned him the sobriquet "the American Newton," or from Nathaniel Bodwitch's efforts to translate, in the same year of its publication in France, the four-volume classic of the mathematical astronomer Pierre Simon Marquis de Laplace, Mécanique céleste (1814-17).52 In fact, to many Americans, as John Kasson has noted, "the characteristic qualities of mechanization-regularity, uniformity, subordination, harmony, efficiency—appeared to offer a model for government and society in general." 53 Since the mechanical worldview was based on the notion of an orderly universe, it served to fulfill the need for law and order concurrent with the establishment of an egalitarian, democratic society.

As early as 1786, Dr. Benjamin Rush, founding member and first president of the United Company of Philadelphia for Promoting American Manufactures, extended the structural pattern of the machine into the realm of public politics. "I consider it possible," he wrote in a proposal for American education, "to convert men into republican machines. This must be done, if we expect them to perform their parts properly, in the great machine of the government of the state."54 Rush, who had signed the Declaration of Independence and is said to have inspired as well as bestowed the title on Thomas Paine's Common Sense, was among the many early Americans to welcome the machine as a symbol of well-regulated, controllable behavior, a role model that allowed the Puritan dream of the mind's ultimate triumph over the body to come true. As educator, reformer, and physician, Rush deemed nothing more appalling than the loss of self-control. To counter the evil influences of both the environment and the body on the moral faculty of the individual, he even designed a crude little machine, called the "Tranquilizer," with which he "treated" all kinds of aberrant behavior, including symptoms of manifest mental diseases.<sup>55</sup> Ironically, then, Rush's endeavor to apply technology—as metaphor and as actual medico-technical device—for his educational and experimental purposes betrays a convergence between the machine and contemporary cultural biases against the body.

Since technology represented the antithesis of the "natural" and organic, it was increasingly interpreted as a means to free the mind of the devastating impact of its physical confines. Given the incalculable risks and abominable temptations lurking within the body, it needed to be disciplined by the relentless work of a machinist pedagogy.<sup>56</sup> Through an interesting twist of signifiers, technology and the machine thus came to serve as allies for achieving the dominance of mind over body, of the self-regulating mental faculties over the morbid and rampant desires of the flesh.

It would be only a few decades, however, before Thoreau would expose the synecdochic conflation of machinery and state as tyrannical and therefore essentially un-American. The rhetoric as well as many of the arguments presented in his celebrated essay "Resistance to Govern-

ment" (1849) seem to respond directly to Rush's republican technotopia. Voicing his disgust about the degree to which the heirs of the great Revolution have been turned into corrupt little machines, Thoreau dismisses the "perfect" citizen as a republican golem, an artificial monster that "command(s) no more respect than men of straw or a lump of dirt." As he writes in his classic protest against the government's interference with individual liberty: "The mass of men serve the State thus, not as men mainly, but as machines with their bodies. . . . They put themselves on a level with wood and earth and stones; and wooden men can perhaps be manufactured that will serve the purpose as well.... Yet such as these even are commonly esteemed good citizens. . . . A wise man will only be useful as a man, and not submit to be 'clay." 57 What Rush took to be the ultimate manifestation of republican ideals, that is, the controlled, regular operation of citizens as machines, Thoreau identified as a token of mental tyranny and, perhaps even more telling, political inefficiency. As this latter term suggests, in his allegiance to the free and self-reliant character inherent in the American people, Thoreau himself makes ample use of a number of machinist tropes, and he invariably subscribes to the politics of disembodiment that became so prominent in Romantic discourse.

When Thoreau accuses the mass of Americans of serving the state not as men but as "machines with their bodies," his analysis does not merely rest on the Cartesian division of mind and body, or rather the lack of "conscience" which he found prevalent in most so-called good citizens; it also plays on the alleged symbolic proximity of the physical and the machine. Whereas in Rush the machine connotes the necessary suppression of bodily desire, in Thoreau his law-abiding fellow Americans are transfigured into mindless slaves to the brute machinery of an unjust power structure. Time and again Thoreau applies technological imagery to describe the operation of state institutions as well as to promulgate his own antinomian position: "If the injustice is part of the necessary friction of the machine of government, let it go, let it go; perchance it will wear smooth—certainly the machine will wear out." When the evil forces intrinsic to all governments have managed to grab hold of "a spring, or a pulley, or a rope, or a crank," then the time has arrived, Thoreau advises his sympathetic readers, to "let your life be a counter friction to stop the machine."58

In order to comprehend the tangled skein of attitudes and responses to technology in antebellum America, one must therefore be aware that the machine did not just figure as the icon of a new era, a technological future that many Americans were eagerly seeking. It also represented an important epistemological paradigm with ramifications for almost every area of human knowledge, and, what is perhaps more important, it coincided with the contemporary politics of disembodiment. As critics have repeatedly observed, there is a direct relation between the development of modern capitalist society with its technological foundations and the repression and stigmatization of the body. With the increasing use of machines to substitute mechanical for human labor, negative feelings toward the body arose as well. As the United States, in the words of the psychohistorian Ronald Takaki, "became more and more industrialized in the nineteenth century, it became more and more repressive." <sup>59</sup>

At this point we should recall that the Romantic concept of writing as a quasi-organic act of procreation was developed along the lines of strong materialist biases and that Romantic artists repeatedly construed the physical parts as adversaries of the creative process. It is precisely this negative attitude toward the body, I would suggest, that made technology intriguing even to the loftiest of antebellum writers. Since the technological encapsulates a promise eventually to replace the body altogether, it was well suited to support—at least metaphorically—the Romanticist striving for the spiritual and ethereal. What is more, it would serve to articulate the cultural anxieties arising from America's rapid transition from a pastoral garden to a full-fledged capitalist marketplace. As technology, to use David Nye's congenial phrase, became the American way of experiencing the sublime—that is, the coupling of the awe-inspiring manifestations of human technical achievement with the awesome and spectacular in nature (as in the railroad, the Erie Canal, the bridge traversing Niagara Falls, and so on)—it also became a symbol of the encroachment on, and ultimate displacement of, the body by the machine.60

## Cyborgs and the Cultural Production of Meaning

Before I continue to trace more thoroughly the correspondences between the history of authorship in America and its growing entanglement with

the new forces of technology, it is important to ask why cybernetic bodies were constantly conjured up in the emerging technological ecology of American society and how they came to represent ideal spaces for negotiating the contested ideologies of authorship and technology in antebellum literature. To position my explorations of cybernetic imagery in American Romantic writing in a contemporary theoretical framework, I turn here to several critical assessments of the cyborg as epitome of the technological deconstruction of biology and the social order. Although there was, of course, no such thing as a "cyborg" during the first half of the nineteenth century, my application of that term is valid because, as I will show in the following chapters, cybernetic images abounded in the literary culture of antebellum America.<sup>61</sup> By calling them "Romantic cyborgs," I mean to establish, however, more of a symbolic than an ontological lineage with their postmodern, posthuman relatives. 62 Their contemporary biochemical incarnations notwithstanding, cyborgs are primarily fictional constructs, products of the cultural imagination that invented them in order to try out new forms of composite identity and, at the same time, to affirm human control over the technological. Given its special import as a fictional representation of cultural stereotypes, the imagery of the man-machine may be taken, therefore, as a heuristic tool suitable for investigating the psychohistorical foundations of the ongoing realignment of discourses on technology and authorship in early nineteenth-century America.

In a seminal essay Katherine Hayles has noted that the cyborg today has definitively left the realm of the grotesque and of science fiction: "Made flesh and blood by colonizing [i.e., biogenetic] techniques that earlier ages could scarcely have imagined, it is no longer a xenophobic monster but a designer organism whose natural habitat is the laboratory cage." <sup>63</sup> Yet it is not only with reference to the artifactual bodies of the laboratory ("chimeras," as they are called in bioengineering lingo) that we can speak of the emergence of cyborgs as postmodern reality. "By the late twentieth century, our time," claimed Donna Haraway, "we are all chimeras, theorized and fabricated hybrids of machine and organism; in short we are cyborgs." <sup>64</sup>

Clearly, Haraway does not mean to say that all postmodern men and women have actually turned into the kind of *Maschinenwesen* that readers of science fiction are so well acquainted with. Rather she points to

the fact that the cyborg has finally captured much of the contemporary cultural imagination at large. Spawned by a flourishing industry of what Gabriele Schwab has dubbed "imaginary cyborgization," the cybernetic, artificially manipulated body by now "affects practically all social spheres." 65 As leading characters in blockbuster productions such as Robocop, digitalized techno-mutants in avant-garde performances (Laurie Anderson), executive cybernauts doing business on the World Wide Web of electronic marketing, or as the distorted bodies of cosmetic surgery, cyborgs simultaneously represent and interrogate the dwindling boundaries of postmodern identity. Since their existence can only be credited to technological manipulation, they make apparent in unmistakable terms the power of advanced technology to challenge the limits and definitions of the organic or natural body. On one of its various semantic levels, then, the proliferation of cyborgs in postmodern technocultures such as in the United States refers us once again to the Western epistemological tradition of construing the body as a living machine, as a biochemical entity that can easily be subjected to technological transformation.

On yet a different level, however, the preeminent place that cyborg figures occupy in contemporary culture might also be read as an indication of a more liberating development. Intrigued by its symbolic potential, radical feminists such as Haraway have adopted the imagery of the cyborg as a means of envisioning a world beyond the limitations of race, class, and gender. For Haraway, who was trained as a biologist, the innate heterogeneity of the cybernetic organism (as well as its representations in popular and commercial culture) is apt to demythologize the biological markers of what is natural and what is not. Since the cyborg is essentially a hybrid figure, a being/sign that is at the same time real and fictional, human and non-human, natural and technological, it may well be taken to represent the artificiality and constructedness of the various concepts (e.g., nature, humanity, bestiality, technology) which it incorporates. Nature, for example, can no longer be simply related to human, organic, or non-artificial species in general. As Haraway points out:

Nature for us [as humans] is *made*, as both fiction and fact. If organisms are natural objects, it is crucial to remember that organisms are

not born; they are made in world-changing technoscientific practices by particular collective actors in particular times and places. . . . If the world exists for us as "nature," this designates a kind of relationship, an achievement among many actors, not all of them human, not all of them organic, not all of them technological. In its scientific embodiments as well as in other forms, nature is made, but not entirely by humans; it is a co-construction among humans and non-humans.

By thus calling into question the myth of a genuinely "human" identity, the man-machines of contemporary discourse function in a twofold way. First, they lay bare the composite artificial structure of *naturalized* oppositions such as nature/culture, human/non-human, male/female, and they serve as utopian projections of a world in which these oppositions have been resolved into patterns of cooperation and partnership. Second, cybernetic bodies seem to provide sites of cultural indeterminacy that call forth radical ideological concepts and allow for the constant reenactment of the many fantasies and fears associated with the shaky status of the "posthuman" self.

It is this latter dimension of the cyborg as the focal point of contemporary debates over defining the self in a highly technological environment which is important here. Since cyborgs, as I have pointed out, act as synecdochic representations of technology, they fulfill above all a symbolic function. Ontologically, according to Haraway, the cyborg is "a hybrid of machine and organism, a creature of social reality as well as a creature of fiction."67 As a fictional construct, cyborgs "populate worlds ambiguously natural and crafted," and they do so as a reminder of the polymorphous nature of reality and, especially, the constructedness of what Haraway calls "border wars," that is, the ideological struggle over the differences between natural and artificial, mind and body, male and female, organism and machine.<sup>68</sup> From this perspective, then, the cyborg body, in the words of Gabriele Schwab, "becomes a text, a screen onto which cultural fantasies, desires, fears, anxieties, hopes, and utopias are projected. Cybernetic organisms inspire such projections because they are products of a technological, or artificial, manipulation of the body." 69 In order to probe the psychohistorical dynamics of the various discourses over technology (an approach that tries to go beyond the traditional dichotomy of utopian versus dystopian readings of the technological), Schwab defines the artificial body as "a field of cathexis, an imaginary screen onto which psychic energies from the most archaic to the most current may be projected."<sup>70</sup>

The way in which we approach the cyborg is thus largely independent of its "real" implications for quotidian life. Far from being judged according to what they are, namely an icon of the ongoing encroachment of the technological, cyborgs figure as actants in the increasingly complex process of defining subjectivity in the electronic, posthuman age. By the same token, cyborgs can be seen equally as symbolizing "collective fantasies" (Schwab) and as products of the individual imagination. In each case they fulfill their symbolic function through a strategy of doubling and mirroring, that is, in a very literal sense, by means of fiction. As distorted representations of both the human and the technological, cyborgs expose the ideological foundations of these concepts by transferring them onto the level of pure signification. In other words, they allow us to articulate metaphorically what cannot be articulated literally: the concept of human identity.

Since identity (personal, cultural, professional) has no essence of its own, it can only be grasped indirectly, that is, by way of projecting an other or double of the original self. If it is true, as many postmodern critics have argued, that the concept of identity and the concept of fiction are closely related in that both rely on the construction of stories (without the fictional framework of collective or individual storytelling, such as myth, history, autobiography, and so on, the concept of identity would be impossible), then we must acknowledge the symbolic universality of the cyborg as a continuing dramatization of the modern self vis-à-vis the technological system. Apart from their historic and cultural specificity, cyborgs—because of their composite nature—illuminate the limits and the ideological character of Western notions of identity, and they bring to the fore the mimetic processes that are at work in the formation of the subject. As projected mirror images of technological man, cybernetic bodies ideally encapsulate what postmodern critics and psychoanalysts have singled out as the notorious "other" of human identity.

Along the same lines, the French sociologist Jean Baudrillard writes of the difference between machines (as an example of "simulacra" of the first order) and automata (according to Baudrillard's taxonomy, simulacra of the second order):

The machine overrides all, and with the machine *equivalence* comes too. The automaton plays the part of courtier and good company; it participates in the pre-Revolutionary French theatrical and social games. The robot, on the other hand, as his name indicates, is a worker: the theater is over and done with, the reign of the mechanical man commences. The automaton is the *analogy* of man and remains his interlocutor (they play chess together!).<sup>71</sup>

If we follow Baudrillard's distinction, the cyborg figure might well be understood as the modern successor to the automaton's symbolic function as analogy and "interlocutor" of biological man. At the core of its mediating agency in modern and postmodern fiction thus lies the idea of creating an ontologically hybrid mirror image, an image that reflects and, at the same time, alleviates the growing tensions between the human and the technological. Fascination and threat, attraction and denial, difference and sameness: oscillating between these conflicting coordinates the postmodern concepts of "alterity" and "otherness" seem to capture nicely the symbolic function of the cyborg as mediator between the human and the technological.

Studying the importance of cultural mimesis and reproduction, the anthropologist Michael Taussig makes a similar claim as to the paradoxical nature of the relationship between self and other. As Taussig explains in *Mimesis and Alterity*:

Pulling you this way and that, mimesis plays this trick of dancing between the very same and the very different. An impossible but necessary, indeed an everyday affair, mimesis registers both sameness and difference, of being like, and of being Other. Creating stability from this instability is no small task, yet all identity formation is engaged in this habitually bracing activity in which the issue is not so much staying the same, but maintaining sameness through alterity.<sup>72</sup>

From yet another perspective, Jacques Lacan highlights "the startling spectacle" of the first encounter of the young child with his or her mirror image as an essential precondition for the construction of identity. In the Lacanian psychoanalytic framework, this moment of preconscious recognition of the *I* figures as a primordial form of that process of identi-

fication with an other which eventually leads to the creation of the subject. Bound up with the formation of the subject in an asymptotic relationship, this earliest image of the self is located wholly in the realm of fiction, prefiguring, as it does, not just the mental permanence of the I but also, through the agency of its asymmetrical representation in the mirror, its alienation and distortion.<sup>73</sup>

Lacan's concept of the formation of the subject hinges on the following premises. First, there is the factitiousness of the controversial discourse of the self with his or her mirror image—an image that signifies at once *similarity* and *difference* and that is apt to produce an idea of subjectivity by relating the I to a distorted representation of its own. And second, the doubling and ambiguous encounter ( $tuch\acute{e}$ ) of the self with its own image seems to be connected to what Lacan—following Freud's mechanist approach in *The Interpretation of Dreams*—calls the "automaton," that is, the coming back or return of the repressed (as in a dream).<sup>74</sup> In both instances, the formation of the self is mutually dependent on the imagery of an other, on a negative double that constantly informs our search for identity by fixing personal (or cultural, racial, sexual, etc.) differences in a containable, visible object.

It is quite striking that the similarity between Lacan's theory of the formation of identity and the fictional creature of the cyborg should as of yet have gone unnoticed. Because of their generic hybridity, cybernetic bodies function precisely along the same lines as the inverted mirror images by which the self, if we follow Lacan's analysis, continuously construes and reassures itself of its own subjectivity. As with the androgynous characters in Philip K. Dick's science fiction novel Do Androids Dream of Electric Sheep (1968), which was later made into the cult movie Blade Runner (1982), we can be wholly assured neither of the visual markers of the human nor of those that define the identity of the cyborg. On the contrary, the very essence of the imagery of the man-machine turns on the fact that it resembles as much as it is estranged from the organic body. In dealing with the cyborg, we are therefore constantly engaged in negotiating the antagonist aspects of similarity and difference, of recognition and denial, just like the Lacanian I as it looks at its reflection in the mirror. Driven by the narcissistic desire to affirm its existence, the self sets out to identify what it is not; that is, it sorts out what it finds to be incongruous with the real of its perception, and then,

in a second step, discards all of the inverted aspects of its image as foreign to its own identity, as something that belongs to a different reality.

While the mimetic process may involve embodiment, that is, the reconstruction or doubling of the body, it also involves a disembodying moment, and it is this aspect, I believe, that made the cyborg figure so appealing to writers of the American Renaissance. As Taussig has suggested, the mimetic faculty gives rise to a power relation between object and double, a symbolic manifestation of power that is often released through the subsequent destruction of the image (as in ritual burnings of likenesses, totems, and so on).75 The tendency to denigrate the corporeal grounding of human existence by turning it into a technological double that can easily be manipulated (or even destroyed) is visible in the symbolic concept of the cyborg in a variety of ways. According to Kathleen Woodward's work on the relation between man and machine, the Western approach to technology has always been marked by a paramount interest in what machines think or feel rather than in the physical likeness to their creators. "As the phrase 'artificial intelligence' implies," Woodward writes in her brilliant essay "Prosthetic Emotions," "the debate over the increasingly blurred distinctions between humans and machines has been framed primarily in terms of a complex rationality."76 To this she adds the capacity for feeling that she sees at work in many of the fictional evaluations of the machine and its technological extensions—the android, the robot, and, more recently, the microcomputer. What seems to be lacking in all of these techno-narratives, however, is the reality or presence of the body as a major ingredient of the technological other. If machines are invariably conceived as technological prostheses that are designed to amplify the physical faculties of the body, they are also built, according to this logic, to outdo, to surpass the human in the sphere of physicality altogether.

The concern, then, whether or not technology would, in the long run, nefariously dominate human life was therefore always based on the machine's "character," in other words, on its very humaneness. If the "good" machine, as in Rush's republicans-as-machines, was used to invoke the repressive utopia of disembodied, perfectly controllable men, the "bad" guy, the machine out of control or run amok, was taken to affirm, if only through its negation, the autonomy and otherness of the human self. Cyborgs, real or imagined, thus encapsulate the emergence

of a basic cultural conflict within modern society, namely, the dichotomous tendencies of accelerated technological progress, on the one hand, and the establishment of the individual as a self-reliant, autonomous subject, on the other. Since the imagery of the man-machine seemed to work both ways, as glaring metaphor for the widespread fear of technological encroachment and, simultaneously, as epitome and affirmation of actual sociocultural change, it developed into a powerful collective mirror image of modern technological man. What is more, it served to negotiate the increasing number of antimodernist stances that sprang up during the early stages of industrialization, opening up spaces for the imaginative assessment of cultural anxieties. With the advance of technology in full swing, the multifaceted concept of the cyborg, which in various guises had populated the myths and fictions of Western culture for centuries, finally became an important tool for facilitating human accommodation to the rapid progress of technology, a crucial instrument, as Woodward puts it, of "technological socialization." 77

For a critical evaluation of the paradoxes inherent in the Romantic notion of authorship, the symbolic responses to the initiation of modern technology in antebellum America appear to be of particular interest. Since Romanticist representations of technology and authorship were quite often strikingly reinforcing, the composite imagery of the cyborg figure—its anachronistic connotations notwithstanding—was used to reflect on both the general mechanization of society and its more specific consequences for the vision and work of the modern author. To examine more closely the development of the modern notion of authorship in America and the extent to which it was affected by the evolving technological environment, I bring together in the next chapter a series of examples pertaining to the diverse responses of early American authors to technology and their attempts at negotiating symbolically the threat of cultural "discontinuity" associated with the paramount presence of the machine.

chapter one

FROM FRANKLIN TO WHITMAN
CONTESTED IDEOLOGIES OF
AUTHORSHIP AND TECHNOLOGY

The inventions in mechanic arts, the discoveries in natural philosophy, navigation, and commerce, and the advancement of civilization and humanity, have occasioned changes in the condition of the world and the human character which would have astonished the most refined nations of antiquity.

John Adams to Thomas Jefferson, June 28, 1813

In American cultural history, the life and works of Benjamin Franklin stand out as a singular instance in which technological expertise and literary authorship meet with natural ease. Among historians of technology, Franklin is not merely acknowledged as the inventor of numerous household contrivances such as an improved wood-burning device, the so-called Pennsylvania Fireplace or Franklin Stove, and an apparatus for taking down objects from high shelves also known as the "longarm." He is equally remembered as the engineering spirit behind a new clock design (the precursor of the famous "Ferguson clock"), an umbrella-shaped anchor, bifocal glasses, and, perhaps his most significant contribution to technological progress, the lightning rod. As for his literary achievements, Franklin authored an autobiographical text

that was soon to become, in the words of Kenneth Dauber, "America's Iliad." Moreover, in writing and editing an enormously successful almanac, he launched the tradition of the how-to book, a genuine American genre that conjoins—in its original Franklinesque form—rationalist rhetoric, social progressivism, and the Protestant work ethic. Together with the *Autobiography*, his *Poor Richard's Almanac* (1732–57), which commonly sold about ten thousand copies per issue and was translated into more than fifteen languages, had a tremendous (if not always healthy) impact on generations of Americans to come, writers of literature included.<sup>4</sup>

The conflation of life, technology, and authorship is also encapsulated in an epitaph Franklin wrote for himself almost fifty years before he began working on the *Autobiography*, where he took up the idea again in order to depict the scope and purpose of his autobiographical venture. In the "Epitaph," Franklin envisions his life not just as a text to be read but as a text to be *printed*, thus willfully turning his body into dead, mechanically reproducible matter:

The Body of
B. Franklin,
Printer;
Like the Cover of an old Book,
Its Contents torn out,
And stript of its Lettering and Gilding,
Lies here, Food for Worms.
But the Work shall not be wholly lost:
For it will, as he believ'd, appear once more,
In a new & more perfect Edition,
Corrected and amended
By the Author.
He was born Jan. 6. 1706
Died
17—5

If one considers his professional background and learning—in 1728, the year the "Epitaph" was composed, Franklin was about to set up his own printing house—it is hardly surprising that he should conceive of his life as an outdated "edition," a worn-out book eagerly awaiting its

second printing. What is more striking, however, is the *post-factum* mode of the epitaph, that is, the underlying notion of the self transcending its biological confines by way of a mock death: even though the body deteriorates ("Its Contents torn out, And stript of its Lettering and Gilding"), the epic unity of life and work—as it is inscribed on paper—will provide the possibility of survival by way of another, a more perfect printing.

It is worth noting that the blurring of life, technology, and authorship in Franklin's "Epitaph" capitalizes on two important aspects of the eighteenth-century debate about writing and printing which I have tried to outline in my introduction: the effects and consequences of the technology of print and the development of the author as creator and proprietor of an original work of art. Franklin's metaphor of himself as a fading edition, a dated printing "resurrected" by the Author's corrections and amendments, distinctly reverberates with the myths and paradoxes of the modern concept of authorship. Casting himself as a godlike figure, the author in, as well as of, the "Epitaph" symbolically stands for the power of redemption. In an era of steadily improving means of mechanical reproduction—just note Franklin's own contribution to the improvement of the printing process—the profession of the author was thus taken, if not as a path to wealth (given the lack of genuine copyright laws, a rather unlikely prospect), then at least as a source of empowerment and authority.6 By creating a textual framework for himself, the writer, if we follow Franklin's logic, becomes the author of at once an original work of art and the evolving identity that is embedded in the process of writing and editing.

# Bios, Technology, and the Life of Writing

The autarkical, self-defining stance of the author also informs Franklin's famous autobiography. From the very beginning this astoundingly modern text highlights the opportunity, opened up by the mode of self-writing that Franklin engages in, to manipulate, rewrite, and thereby correct the course of one's life. "I should have no Objection to a Repetition of the same Life from its Beginning," he cunningly tells his readers, "only asking the Advantage Authors have in a second Edition to correct some Faults of the first." As a closer look reveals, Franklin indeed deals

with the occurrences and events of his life as if they were bits and pieces of a dated manuscript from which errata are expunged in order to make it fit for another, more nearly perfect edition. Since his vita is designed to represent a cumulative educational project, the imagery of "editorial" work serves well to convey the idea of constant revision and ongoing improvement. Analogous to the editor, whose task is to correct errors and fill in omissions, the author of the autobiography continuously reworks his past experience into strategies for future economic and social success.<sup>8</sup>

It seems important to me, however, that neither the *Autobiography* nor the "Epitaph" draws our attention to the act of writing as such. Far away yet from Romantic idealizations of authorship, which stress rather the organic, corporeal aspects of writing, Franklin's metonymic conflation of life and text hinges completely on mechanical means, or, to be more precise, on the technology of print. As Marlon Ross and other critics have shown, printing confers authority, and it is that authority—in the double sense of being authorized to manipulate the printed text and, thereby, public opinion—which is at stake equally in Franklin's "Epitaph" and his exemplary eighteenth-century autobiography.

In both cases, Franklin seems to be fully aware of the impact of printing technology and its capacity to distribute and make public the written text on a very large scale. In the Autobiography we are repeatedly confronted with the paradoxical raison d'être of self-writing in the age of print, of making accessible to a large audience the private details of an individual life. Although Franklin formally addresses his forty-year-old son as the principal reader of his text, he is equally conscious of the numbers of potential readers who, perusing his narrative, might find fault with his vanity and his self-indulgent style.9 Time and again he refers us to the act of reviewing, editing, and correcting manuscripts, a task that has gained enormous significance through the prospect of "going into print." What is really important about his text, then, as Franklin openly avers, is not that it is written but rather that, by dint of the exemplary life of its author, it has been turned into printed matter. Franklin's preoccupation with metaphors of printing and revision is even more apparent in the "Epitaph." At a cursory glance, the conflation of life, technology, and authorship manifested in the poem could well be taken as a reflection solely of the wide-ranging talents and learning of this American representative of the Enlightenment. In view of the cultural authority that the eighteenth century vested in the products of the printing press, however, it might also be read as a paean to the technology of print and its capacity to solidify the written word into an endless succession of revised editions and printings.

Prior to the Romantic period in America, as we can see in the case of Franklin, technology and authorship more often than not coexisted peacefully. The "fine" and the "useful" arts (a tellingly ideological term for the gamut of manufacturing and mechanical trades) were both informed by the same kind of creativity and inventiveness, concepts that were then mainly taken to signify the congenial imitation of nature. 10 For Franklin, it was still a matter of course that scholars should be as proficient in composing a poem or a speech as in constructing a piece of machinery. Let them be instructed in mechanics, he writes in his "Proposals Relating to the Education of Youth in Pennsylvania," and thereby be "informed of the principles of that art by which weak men perform such wonders, labor is saved, manufactures expedited, etc. etc."11 And in 1751, the influential author-inventor-scientist advised the students and faculty of the Philadelphia Academy that "the hours of each day are to be divided and disposed in such a manner as that some classes may be with the writing master, improving their hands; others with the mathematical master, learning arithmetic, accounts, geography, use of the globes, drawing, mechanics etc." 12

With mechanization increasingly leaving its imprint on everyday life, however, this mingling of the artist of the *real* and the artist of the *ideal* became a topic of heated controversy. As critics have repeatedly noted, Romantic writers were deeply irritated by the looming presence of the machine. As early as 1829, Thomas Carlyle, whose influence on American Romanticism is well documented, complained that his was no longer a religious or philosophic age but the age of outward forces, of automatic production and machinery. "Were we required to characterize this age of ours by any single epithet," he writes in his famous essay "Signs of the Times," "we should be tempted to call it, not an Heroical, Devotional, Philosophical, or Moral Age, but above all others, the Mechanical Age. It is the Age of Machinery, in every outward and inward sense of that word." Although Carlyle's aim is not to deny the compelling forces of technological progress, his criticism is centered on the refu-

tation of technology as the major paradigm of contemporary society. Unlike Benjamin Franklin, who saw the benefit of integrating the fine and the useful arts so that they might fertilize each other, the Romantic scholar bewails the abandonment of the "inward department of knowledge," the demise of intellectual and philosophic inquiry. He is afraid that from now on "what cannot be investigated and understood mechanically, cannot be investigated and understood at all." <sup>14</sup>

For Carlyle, the composite image of the machine comprises a variety of different negative referents, ranging from actual machines and the distasteful social aspects of early industrial production to the "hardening" of man's sensibilities and the excessive emphasis on outward forces as determinators of the human condition. Having thus articulated the conservative cultural biases of his times, Carlyle—in an interesting twist of argumentation—goes on to demote the modern "Deity of Mechanism." "Man is not," he declares emphatically, "the creature and product of Mechanism; but in a far truer sense, its creator and producer." By negating the myth of the machine as the new creator and its corollary, the preponderance of technological paradigms in regard to the interpretation of culture and the definition of human beings at large, Carlyle addresses not just the practical negative consequences of technology but the establishment of mechanical philosophy as the dominant worldview of his era.

What might be gleaned from Carlyle's critique of the mechanization of contemporary culture, then, is the fact that even at this early stage, technology has no clear designation; it is not a discrete entity, referring to distinct and therefore clearly distinguishable sociocultural phenomena; rather it is a site of converging discourses, a semantic construct that seems to be at once inside and outside human culture (as representation of its non-biological other). Its utilitarian etymology notwithstanding, the concept of technology, from the very moment of its initiation into modern society, signified not so much a method or a tool or a new manner of doing things as a certain mindset, a symbolic way by which men approach the complexity of nature and by which they believe they are able to master the vagaries of human existence. It is true that in the conception of Harvard professor Jacob Bigelow, whose influential *Elements of Technology* (1829) seems to have introduced the term to the

American public, "technology" means just the former: the practical application of science. Yet, if Bigelow's approach was primarily utilitarian, his encyclopedic text also communicates a sense of urgency and technological encroachment, a feeling that technology, apart from being simply the application of science to the useful arts, is something that can no longer be avoided, a new force that has already administered its own laws and is following its own logic. "The augmented means of public comfort and of individual luxury, the expense abridged and the labor superseded, have been such," Bigelow writes with an eye to the growing social pessimism about the advancement of science and technology, "that we could not return to the state of knowledge which existed even fifty or sixty years ago, without suffering both intellectual and physical degradation." <sup>16</sup>

Even Carlyle, whose now classic essay was published in the same year as Bigelow's *Elements*, ultimately joins in with the progressivist belief in the unfaltering advance of science. Having brandished the age's "mechanical" orientation for the greater part of his influential text, Carlyle concludes by outlining his hopes for the future and by explicitly approving of the current state of learning and the arts:

Doubtless this age also is advancing. . . . Knowledge, education are opening the eyes of the humblest; are increasing the number of thinking minds without limit. This is as it should be; for not in turning back, not in resisting, but only in resolutely struggling forward, does our life consist. . . . Indications we do see in other countries and in our own, signs infinitely cheering to us, that Mechanism is not always to be our hard taskmaster, but one day to be our pliant, all-ministering servant. 17

What Carlyle, Bigelow, and many other early nineteenth-century commentators on the fast-changing scene of modern life thus have in common is the feeling that, with the rapid advancement of the sciences and the increasing output of mechanical inventions, an irrevocable shift, a transition from an "organic," pretechnological state to a culture continuously producing and being shaped by technology has occurred.

#### Early Cyborgs and the Rhetoric of American Romanticism

It has long been argued that the concept of technology should be based on a complex system of interacting social and cultural factors. 18 Rather than merely being seen as marking a set of different techniques, technology ought be examined instead as a powerful way of world-making, a means of symbolically coming to terms with the modern environment.<sup>19</sup> This idea of technology as symbolic appropriation of the real is taken up again by David Channell in The Vital Machine: A Study of Technology and Organic Life (1991). Its broad, multifaceted theoretical assumptions notwithstanding, Channell sees the contemporary debate over the breakdown of the boundaries between the technical or artificial and what is still misleadingly called the natural as directly related to the much older dichotomy of mechanical versus organic worldviews. Taking the philosophy of symbolism developed by Ernst Cassirer and his disciple Susanne Langer as a point of theoretical departure, Channell focuses on how the mechanical worldview, promoted by such proto-modernist figures as Descartes, Hobbes, Boyle, and Newton, came to provide "a model for understanding organic life that differed from the model provided by the [older] organic world view." By turning a specific technology, the clockwork, into a symbol for all sorts of "natural" phenomena, mechanical philosophy, according to Channell, laid the groundwork for the ongoing technologizing of the modern world.<sup>20</sup>

As with many shifts of paradigms involving forms of sociocultural behavior, however, one must be aware that there is often no clear-cut distinction between the two worldviews, and that the established "organic" model was never replaced completely by what might be termed the symbolism of the machine. This can be seen, I would argue, not only in the continuing presence of organicist tenets in modern philosophical and literary discourses, of which Romanticism makes just one case in point, but also in the emergence of hybrid symbolic figures such as the man-machine or, in its more recent variant, the cybernetic organism.

As Channell rightly states, mechanical worldviews do not propagate a "conflict between actual machines and organic processes." 21 On the contrary, mechanical philosophers tend to project their understanding of machinery onto the organic world, thus creating "mechanical organisms." By making universal the laws of mechanics, the CartesianNewtonian philosophical legacy led to an onslaught of mechanical paradigms which can best be described as probing the vague and shifting line between the living and the non-living, between the body and the machine. By the mid-eighteenth century, it had become a popular and widespread practice of anthropological discourse to interpret the human body in machinist terms. As epitomized in Julien Offray de La Mettrie's influential treatise L'homme machine (1747), man was considered a mechanical entity that should be examined only in regard to its measurable quantities and motions. With his method of investigating the human body firmly grounded in the natural sciences, the notorious French physician and philosopher came to conclude that, like the cosmos at large, "l'homme est une machine." 22 La Mettrie's conception of man as a biological machine was basically nothing but an elaboration of Descartes's by then well-established animal-automaton theory. Because of its claim that the Cartesian model must be extended to humans as well—a daring move that not only did away with the separation of body and soul but also necessitated abolishing God as the organizing principle of bodily functions altogether—it met with angry protests from Lutherans and Catholics alike and finally forced its author to seek refuge at the court of Frederick the Great of Prussia.

There is little doubt that the eighteenth century's restructuring of the "natural" body, which culminated in La Mettrie's concept of the manmachine, ultimately issued in the rising cultural importance and discursive ubiquity of mechanical creatures or cyborgs. Yet in addition to its function as a marker of the ongoing encroachment on the organic by the technological, cybernetic imagery provided spaces for the staging of both the pervasiveness of modern technological paradigms and the nudging anxieties concurrent with the increasing dominance of the machine. Ready to represent such complexity, the cybernetic body finally developed into a powerful metaphor of technological culture—a metaphor, one should add, that literary writers must have found especially appealing when it came to defining the paradoxical status of authorship within the ideological framework of modern society.

Among the first American writers to use the cyborg as a symbol of various cultural and social deficiencies was the prominent critic and politician James Kirke Paulding. His collections of short fiction, sketches, and sardonic, Swiftean criticism of contemporary life readily attest to the preoccupation of early nineteenth-century discourse with mechanization and its dehumanizing, emasculating effects on society. While attacking all sorts of modern phenomena (from Pestalozzi's "new school" of learning to urbanization and the mechanics of socially encoded behavior), Paulding repeatedly deploys machinist imagery to ridicule the human race's "gradual advance to a state of comparative perfectibility" through "the daily discoveries in science [and] the vast improvement in the mechanical arts." Accordingly, modern man—especially when clad in the latest fashion—is described as being nothing but a walking "robot," and he appears to represent more an "improvement in the race of automatons" than a human being. 4

As with many of his literary colleagues, for Paulding, automata encapsulated the machinery of industrialized, capitalist society at large. Put in such perspective, the (technical) limitations imposed on the android's body all but equaled the psychophysical restrictions called for by the brutal regime of industrial production and, of no lesser importance, the repressive demands of bourgeois etiquette. To this early American writer, the staccato motions of the robot and the meticulously choreographed interplay of its body parts appeared at once as the model and mirror image of modern man. What is more, the android's staggering gait glaringly signified the threatening liminality of the human who has become a machine, a lifeless monster determined not so much by his or her free will as by the demands of its artificial organism.

That the cybernetic image was put to widespread use in American sociocultural criticism during the first half of the nineteenth century can also be seen in Melville's *Typee* (1844). Echoing equally Rousseau's natural philosophy and Paulding's sardonic writings in *Salmagundi*, Melville, in one of the key passages of the novel, favorably compares the gay and innocent lives of the Marquesan cannibals who had rescued him to the stiffness and artificiality of American culture. Their women in particular, he quips with an eye on his primarily female, middle-class readership, are "not filled with envyings of each other's charms, nor displaying the ridiculous affectations of gentility, nor yet moving in whalebone corsets, like so many automatons, but free, inartificially happy, and unconstrained." <sup>26</sup>

The rhetoric of mechanical metamorphosis, of humans being turned into machines, which is prevalent in many of Paulding's works, finally

culminated in an extended short story significantly titled "The Man Machine." Although Paulding was generally known to empathize with the working class, this highly allegorical text took aim at utopian reformers of the workman's plight. Designed as a commentary on Robert Owen's New View of Society (1813), and a critique especially of Owen's own utopian experiment at New Harmony, "The Man Machine" satirizes with sardonic bile the totalitarian aspects of a closed, overregulated utopia, an alternative society, according to Paulding's argument, patterned after the factory system and its technological foundation: the machine. Before he addresses the reformer's community directly, the narrator gives us an account of his experiences as a child laborer in a cotton factory, a veritable limbo to Owen's utopian New Harmony. This was the realm of "Productive Labour," the new goddess of the machine age, a voracious, stupefying power that slowly turned its victims into machinelike automata: "We became stupified in mind, and the functions of our bodies gradually obeyed the impulses of the engine, which gave life and motion to the machinery. By the time I had been there three years, I became sensible that my soul had transmigrated into a spinning jenney, and that I had actually become a piece of machinery." 27

Paulding's anxiety over a world dominated by machinery and its inflexible, rigorous regime is distinctly informed by the increasing mechanization of everyday life and its impact on the values and morals of the early republic. Since he singled out the machine as the motor behind different forms of social and cultural change—including paper money, banks, foreign fashions, and even utopian communities—Paulding comes close, as Gerald Gerber has noted, to prefiguring Carlyle's classic critique of technology as the dominant "sign" of the new century. What is more, by capitalizing on the well-established imagery of La Mettrie's mechanical man, an imagery that by then had been rid of its iconoclastic religious implications and was now taken to signify the grim and sterilizing consequences of modern industrial production, the author of "The Man Machine" paved the way for the rhetorical strategies of American Romanticism and its obsessive blurring of the organic with the mechanical.

If we follow the numerous critics of nineteenth-century cultural discourse, the impact of modern technology on the consciousness and imagination of antebellum Americans must have been tremendous. "As

the machine turned country into city, serf-like peasants into slave-like workers, distance into time, hours into minutes, land into capital, and the ideal of a primitive Arcadia into the idea of a highly industrialized utopia," writes H. Bruce Franklin, "it loomed huge in the everyday consciousness of almost everybody."29 In order to grasp the enormous cultural change that Americans experienced during the nineteenth century, one has to recall that the population of the United States had exploded from roughly 5 million in 1800 to more than 77 million in 1900. At the turn of the nineteenth century only 322,000 or a mere 6 percent of all Americans lived in cities. A hundred years later the ratio had changed to 40 percent, or a total of over 30 million people. 30 Simultaneously, the rapid invention of new technological devices dramatically altered the lifestyle of almost every American. Among the many that influenced the attitudes and perceptions of mid-nineteenth-century Americans were, just to name the most consequential ones, the power loom, the sewing machine, the steam-driven flatbed press, the locomotive, the steamboat, and the development of anesthesia. Moreover, the era was marked by new technologies of communication (telegraphy and the telephone) and, equally important, representation (photography, the spectroscope, and the phonograph).

The extent to which technological ingenuity must have been inscribed on American minds of that period can be gleaned from a late entry in Emerson's journal. "The splendors of this age outshine all other recorded ages," Emerson wrote in 1871, adding a list of recent innovations that he believed to be important driving forces of modern history: "In my lifetime, have been wrought five miracles, namely, 1. the Steamboat; 2. the railroad; 3. the Electric telegraph; 4. the application of the Spectroscope to astronomy; 5. the photograph; five miracles which have altered the relations of nations to each other." <sup>31</sup> Even if one is not prepared to conceive of these inventions as the primary agents changing the conditions of modern life, a view increasingly questioned by historians of technology, it is quite clear that for most contemporary observers, technological progress signified not just a revolution in the improvement of tools, as Thoreau sarcastically put it, but the ambivalent prospects of modernity itself. <sup>32</sup>

In his pioneering study The Machine in the Garden, Leo Marx has

perceptively revealed the ambiguous stances on technology advanced by American Romanticism. Of the various examples that Marx analyzes in detail, Thoreau's autobiographical account of his philosophic experiment at Walden Pond stands out as the most striking proof of the idiosyncratic way in which Americans negotiated the divergent forces of culture and nature, of modernization and the allegedly pristine landscapes of the New World. Having denounced the increasing intrusion of wild nature by the rapidly growing railroad system for much of his remarkable autobiography, Thoreau suddenly switches from the harsh denial of technological progress to a softer, more placating register. Seen from the undistorted perspective of the pastoral setting at Walden Pond, the railroad appears to take on a different and more complex meaning. As if he had never singled out the "fiery dragon," this "devilish iron horse . . . with a thousand men in his belly"33 as arch-signifier and representative of mechanization gone awry, Thoreau now rereads the same smokespurting monster as a token of hope and, if only by indirection, an affirmation of America's technological future. "The cars never pause to look at it," he writes, meaning the beautiful landscape of Walden Pond:

yet I fancy that the engineers, and firemen and brakemen, and those passengers who have a season ticket and see it often, are better men for the sight. The engineer does not forget at night, or his nature does not, that he has beheld this vision of serenity and purity once at least during the day. Though seen but once, it helps to wash out State Street and the engine's soot. One proposes that it be called "God's Drop." <sup>34</sup>

Although Leo Marx strangely neglected this passage, it forcefully corroborates his interpretation of Thoreau's text as well as his main thesis with regard to American Romanticism in general. When confronted with the emerging cultural authority of science and technology, Romantic writers, according to Marx, took refuge in the long-standing belief in the redeeming abundance of nature as perhaps "the most important single distinguishing characteristic of American life." <sup>35</sup> Certainly, Thoreau draws our attention to the fact that there is no world beyond the machine: even over the bucolic idyll of Walden Pond the railroad literally

casts its soot-laden shadow (which Marx takes also as a shadow upon the Emersonian reliance on nature as a sign of truth). Yet by attributing to the sublime landscape the power to redeem, to "wash out" the negative consequences associated with the onslaught of technology, Thoreau also fashions a glimmer of hope from the rather bleak spectacle, and he foresees a future in which the technological and the natural and organic would no longer be at odds.

That the ongoing mechanization of American life, as the now classic studies of Leo Marx and, more recently, Cecelia Tichi have shown, could have been fitted so well into its leading ideologies, Puritanism and the pastoral, is indeed striking.<sup>36</sup> Yet Americans not only managed to harness their utopian conception of America to that of the "middle landscape" (Marx's term for the absorption of the machine into the pastoral idea of the garden) or to an "engineered New Earth" (Tichi), but also increasingly came to view technology as the only creative force there is. Convinced of the aesthetic and moral superiority of the machine and its inventor, parochial advocates of technology professed, according to historian John Kasson, "that the distinction between technological pursuits and supposedly more lofty and refined artistic enterprises was at heart artificial, [and] that mechanical achievements evinced creative intelligence as great in its way as did poetry or painting." <sup>37</sup> Moreover, by directly affecting the conditions of the social body in toto, the artist of the real, that is, the mechanic and engineer, was called upon to replace the artist of the ideal. "A steamer," declared Thomas Ewbank, from 1849 to 1852 United States commissioner of patents, "is a mightier epic than the Iliad, and Whitney, Jacquard, and Blanchard, might laugh even Virgil, and Milton, and Tasso, to scorn."38

To this challenge antebellum writers responded by questioning the invasion of the machine and its presumed creative power. Even Emerson, who had originally embraced the technical achievements of science and the useful arts as a means to "a farther good," eventually adopted a more ambivalent tone when it came to modern technology. In his essay "Nature," Emerson observes how all parts of nature (including manmade machinery) "incessantly work into each other's hands for the profit of man." <sup>39</sup> By taking care of the drudgery of quotidian life, science and technology, as Emerson points out, will ultimately allow modern man to set himself to a more spiritual task, to follow his true calling:

The private poor man has cities, ships, canals, bridges, built for him. He goes to the post-office, and the human race run on his errands; to the book-shop, and the human race read and write of all that happens for him; to the court-house, and nations repair his wrongs. He sets his house upon the road, and the human race go forth every morning, and shovel out the snow and cut a path for him. . . . The catalogue is endless, and the examples so obvious, that I shall leave them to the reader's reflection, with the general remark, that this mercenary benefit is one which has respect to a farther good. A man is fed, not that he may be fed, but that he may work. 40

Had Emerson thus believed, as he confided to his journal in 1843, that "Machinery & Transcendentalism agree well," <sup>41</sup> after his second visit to England he cautioned his fellow citizens that exaggerated enthusiasm for the machine and its presumed powers might ultimately turn against its human creators: "A man must keep an eye on his servants, if he would not have them rule him. Man is a shrewd inventor, and is ever taking the hint of a new machine from his own structure, adapting some secret of his own anatomy in iron, wood, and leather to some required function in the work of the world. But it is found that *the machine unmans the user*. What he gains in making cloth, he loses in general power." <sup>42</sup>

At first glance, Emerson's critique seems to reiterate what Carlyle had already attacked some thirty years earlier as the age's naive and therefore fatal confidence in technology. If we inspect Emerson's comments more thoroughly, however, we find that he actually addresses the question of the modern dependence on machinery from a very different angle. Whereas Carlyle stops short of giving his readers any clue to why mechanization has taken command of the cultural and intellectual life of his times, Emerson goes further into some of the basic premises of technological man. By projecting the pattern of human anatomy onto the world of steel and steam, the modern inventor, according to Emerson's analysis, forsakes not only control over his own body but also control over the machine that he created.

To the same degree that technology usurps the principles and functions of the living body, man himself will turn into a mechanical entity, will become un-man, or rather *unmanned*, by the machine. Significantly

and somewhat paradoxically, it is thus by envisioning the engineer as emulating nature (and thereby becoming himself estranged from the natural) that Emerson articulates his critique of the contemporary obsession with the material world. His argument becomes even more puzzling if we take into account that in his essay "The Poet," Emerson explicitly designates the natural as the very force that triggers and informs all true artistic endeavors. The poet, says Emerson, "stands one step nearer to things, and sees the flowing or metamorphosis . . . and following with his eyes the life, uses the forms which express that life, and so his speech flows with the flowing of nature." 43 What, then, one has to ask, is wrong with the engineer, who, having taken his hints from nature, does not stop at these natural facts but strives to transcend them into a higher form made of lasting and more powerful materials? It seems to me that in order to answer this question we should not need recourse to the often cited antagonism between the Romantic writer and the increasingly dominating scientist and technician, but should investigate instead their essential proximity, especially when it comes to their common attempt to express, control, and expand the realm of the natural.

For all their alleged disparities, there is indeed a striking similarity between the way in which the modern view of the author as at once the inventor and proprietor of his text(s) and that of the engineer as the godlike creator of useful things has been constructed. Both groups—the masters of the word and the masters of machines and scientific techniques—were not only partaking in the increasing differentiation and specialization of their respective trades (a process that finally culminated in two distinct cultures of "experts"),<sup>44</sup> but also struggling to have the political powers establish copyright and patent laws that would procure a dependable economic basis for both professions. In each case, the foundation for the institution of protective laws and regulations was basically the same: the belief that writers and inventors alike who produce an original idea should be considered the sole proprietors and thus be guaranteed the right to market and exploit the application of that idea.<sup>45</sup>

Given the considerable overlap in regard to their professional identity, it is no wonder that, in order to determine the methods of scientific discovery, nineteenth-century scientists and inventors openly referred to the faculty of imagination, a faculty traditionally associated more with

the act of composing a poem than with the work of scientists and technicians. In his widely read challenge to the Baconian method of induction (which emphasized the mechanical operations of experimentation and observation as the basic means of scientific research), the German chemist Justus von Liebig captured poignantly the mood among many of his scientific colleagues. Echoing the growing dissatisfaction with positivist materialism, Liebig came to conclude that "the mental Faculty which constitutes the poet and the artist is the same as that whence discoveries and progress in science spring." <sup>46</sup>

On the other side of the Atlantic, the effort to span the gap between the fine and the useful arts equally dominated public discourse for much of the latter half of the nineteenth century. The fact that American artists such as the painter Charles Willson Peale and the sculptor Hiram Powers held a strong interest in machinery (and, vice versa, engineers such as Robert Fulton and Samuel F. B. Morse began their careers as painters) helped to substantiate, as John Kasson notes, "the comparisons that observers of technology frequently drew between machines and the fine arts and their contention that the two sprang from related imaginations."

Emerson also appears to acknowledge the idea of the inherent sameness of the technological and artistic imagination when he writes that "we love the poet, the inventor, who in any form, whether in an ode or in an action or in looks and behavior, has yielded us a new thought. He unlocks our chains and admits us to a new scene."48 Whenever the artist of the Real, the inventor and mechanician, is capable of mustering the strength and ingenuity that yield an original creation, he may well be counted among the Romantic geniuses of the word. As Emerson makes clear, however, it is precisely the lack of inventiveness, the waning of originality, that has become the primary marker of modernity. It then follows for this New England philosopher that "the fountains of invention and beauty in modern society are all but dried up."49 By the same token, he expatiates at length on the uninspired, because entirely economic, nature of modern life. "Is not the selfish and even cruel aspect," Emerson asks toward the end of his essay "Art," "which belongs to our great mechanical works, to mills, railways, and machinery, the effect of the mercenary impulses which these works obey?"50 It is therefore not the mechanical artifacts themselves that ought to be shunned but rather

the economic premises out of which these advancements of modern technology evolved, or, in other words, the commercialization of culture. Only when we proceed from the belief in the holy unity of nature (which transcendentalists believed to comprise the material world as well) will we "raise to a divine use the railroad, the insurance office, the joint-stock company; our law, our primary assemblies, our commerce, the galvanic battery, the electric jar, the prism, and the chemist's retort; in which we seek now only an economical use." 51

This passage makes apparent that Emerson's view of technology exceeds its restrictive definition as pertaining only to machinery, applied science, or a mere system of tools. Anticipating a more encompassing approach toward technical improvements, he perceives technology as partaking in a larger process of social and cultural change. Emerson defies the wide-ranging reification that has come to characterize modern society, and he emphasizes over and over the loss of vitality and genius that accompanies it. In so doing, he conjures up highly gendered images of the ongoing mechanization of modern life, and he pictures the tangled web of technology, culture, and society in terms of a transgression between man and machine—a transgression, I argue, that also epitomizes the liminality and cultural anxieties of modern authorship and, at the same time, functions as a mirror image for its growing entanglement with technology and the commercialization of American society.

As I pointed out earlier, Emerson calls attention to the fact that modern man, by copying the laws of nature and transferring them to the material world of steel and stone, turns himself into a machine, into a man castrated (unmanned) and thereby cut loose from his procreative energies. The priapic wording of Emerson's discourse is equally strong when he addresses the kind of beauty for which so many of his contemporaries indulged a superficial admiration as "an effeminate, prudent, sickly beauty, which is not beauty." 52 Emerson uses metaphors of sex and gender to distinguish the true from the false poet, to separate the authentic from the inauthentic, the inspired from the uninspired artist.<sup>53</sup> If he disparages the productive powers associated with modern machinery as stale, castrating, and essentially feminine, the reasons are readily evident: Emerson, like many other nineteenth-century American authors, wanted to boost his own sense of professional identity.

Within the framework of what he identifies in English Traits as the

machinery of laissez-faire capitalism, a machinery based on deception, dissimulation, and sham,54 the poet represents the forces of divine, original creation: "The poet is the sayer, the namer, and represents beauty. He is a sovereign and stands on the centre. . . . Beauty is the creator of the universe." 55 By yoking together the work of the poet and the work of nature. Emerson dissociates his profession from the fraudulent aspects of modern technological society. Unlike the products of the mechanic and engineer, whose professional values are based on the idea of imitating and thereby seeking mastery over nature, the work of art epitomizes the natural world.<sup>56</sup> It is, in fact, an expression of nature "in miniature." And, like all natural things, it eternally reproduces itself. "The beauty of nature," says Emerson, "reforms itself in the mind, and not for barren contemplation, but for new creation." 57 What is more, since in art nature works through the will and imagination of the poet to herald and fulfill her works, the artist acts as mediator between the diverging forces of modernity. For it is the task of the poet to reunite "things to nature and the Whole—re-attaching even artificial things and violation of nature [such as the factory village and the railway], to nature, by a deeper insight." 58 It is therefore not the view of the grandiose landscape as such that alleviates the negative consequences of modern technology (as Marx—following Thoreau—suggests in his idea of the "middle landscape"), but the touch of the poet, the unifying powers of true art. Only in the form of artistic representation—a representation that at the same time encapsulates and transcends its material referent—does nature negotiate the processes of modernization in a conciliatory manner.

## "What, in its very essence, is so short-lived as a modern book?"

This shift from the site of the natural to the person, from the landscape to the writer who captures its essence and thereby suspends the dwindling authority conferred on his work by the evolving technological society, possesses seminal significance for the development of the modern concept of authorship. Though mostly neglected by critics of Romanticism and nineteenth-century cultural history alike, the urgent need to establish the profession of the writer within the growing differentiation of American society had a tremendous impact on the way authors addressed the topic of technology. When analyzed with an eye to the similarities rather than the oft-cited disparities between these forms of professional specialization, the many representations of science and technology in early nineteenth-century American literature reveal to an astonishing degree the influence that technological paradigms and scientific methods wielded over the composition of literary texts. Although the vast majority of texts dealing with technology cannot be viewed as blunt refutations of the forces of modernity, neither were they simply naive adoptions of the utilitarian, mechanist worldview rampant in early capitalist America. Instead, writers chose to communicate their ambivalence toward the dominant culture of technology, as well as their professional dependence on that culture, by constantly imagining sites of transgression between the realm of the ideal and the realm of the real, between the writer and the technician.

Over the span of nearly a century, the images themselves were, of course, widely varied, as were the associations attached to them by contemporary readers. More often than not, however, literary interrogations of the divergent professional spheres of technology and authorship follow a similar symbolic pattern: in order to visualize the precarious status of the modern author, they reenact symbolic encounters between the organic and the inorganic, between the body and the machine. In so doing, nineteenth-century representations of technology continue the rhetorical tradition of mechanical philosophy and its concomitant analogy of man and machine while, at the same time, repudiating its basic ideological premises. Against the backdrop of rising capitalism, these writers were projecting their professional and cultural anxieties onto the imaginary screen of a hybrid body, a fictional construct that cuts across the realms of the human and the technological, thus representing the author's difficult struggle for identity within a highly effective culture of technical invention and production.

As the nineteenth century progressed, American writers were more constrained than ever to negotiate their growing entanglement and discontent with the new forces of technology. Within the period from the 1830s to the 1860s, a time span that marked the publication of practically all major works of the so-called American Renaissance, the reading public in the United States had grown significantly. Owing to technological innovations in both the profession of printing and American society

at large, the production and dissemination of books had virtually exploded. The introduction of the steam-driven flatbed press by Isaac Adams (1836) and the new techniques of stereotyping and, somewhat later, electrotyping (1841) almost instantly transformed the process of printing into a fully industrialized operation. The railroad also contributed to boosting the American book trade. First, it speeded up considerably the marketing and distribution of the finished product, the printed book, and second, it opened new spaces for the consumption of reading matter, a fact that prompted the publisher George Putnam to introduce in the 1850s his best-selling series of "Railroad Classics," which were advertised as being "small enough to be put into a pocket" but with "print . . . large enough to be read without damaging the eyes." 59 Together with a variety of innovations in other areas—of obvious importance, for example, was the large-scale manufacture of cheap steel spectacles which improved the eyesight of those who couldn't afford the more costly eyeglasses made of precious metals—the technological innovations of printing, as Ronald Zboray claims, provided access to the book market for many in the lower middle class-people who, until then, had been shut out of the world of print.

Despite its alluring financial prospects, however, many antebellum writers were anything but satisfied with the expansion and commodification of American reading culture. As can be gleaned from Melville's correspondence with his publishers, and especially with his friend and fellow writer Nathaniel Hawthorne, the increasing economic value of the book added considerably to the pressures on ambitious authors who—like Melville himself—struggled to make a living by the pen while adhering to the lofty ideals of originality and creative authorship. As he famously put it in a letter to Hawthorne:

In a week or so, I go to New York, to bury myself in a third-story room, and work and slave on my "Whale" while it is driving through the press. *That* is the only way I can finish it now,—I am so pulled hither and thither by circumstances. The calm, the coolness, the silent grass-growing mood in which a man *ought* always to compose,—that, I fear, can seldom be mine. Dollars damn me; and the malicious Devil is forever grinning in upon me, holding the door ajar. . . . What

I feel most moved to write, that is banned,—it will not pay. Yet, altogether, write the *other* way I cannot. So the product is a final hash, and all my books are botches.<sup>60</sup>

These lines, as critics have repeatedly pointed out, clearly articulate the bleakness of Melville's own financial straits, or, in the words of F. O. Matthiessen, the "distorting anguish involved in coining a serious book for bread."61 Yet they also point toward the technical transformation of the book market, which was now able to cater to an ever-growing number of undiscriminating readers, thereby streamlining the content of the books for sale as well as the processes of writing and composing literary texts. The technologically determined spawning of readership not only gave rise to the more marketable forms of the short story and the serialized novel respectively, but also left its mark on the changing needs of antebellum publishers, who were now eagerly looking for sizable and therefore saleable books. What is more, with the capacity to calibrate the number of new editions to the actual demands of readers (a possibility opened up by the technique of stereotyping, which allowed for the casting of a second set of type from which subsequent editions could be printed easily), the costs and time of production decreased considerably. In addition to improvements in bookbinding and the manufacture of raw paper, the advanced means of printing technology thus triggered an avalanche of both new and, to a slightly lesser degree, reprinted books, which climaxed in a total of 733 works published in 1853 alone (an increase of about 800 percent over the preceding two decades).<sup>62</sup>

If the proliferation of books in antebellum America initiated a previously unknown culture of reading, it did so at the expense of ambitious literary authors trying to elude the fate of becoming what Frank Norris would viciously term "novelists to order—while you wait." <sup>63</sup> Moreover, for many American Romantics the flourishing commerce of reading and writing was no longer apt to guarantee the unique spiritual character of the written word. The profanation and sacrilege they saw at work in the process of modern publishing is captured best in a poem by Emily Dickinson:

Publication—is the Auction
Of the Mind of Man—

Poverty—be justifying
For so foul a thing

Possibly—but We—would rather
From Our Garret go
White—Unto the White Creator—
Than invest—Our Snow—

Thought belong to Him who gave it—
Then—to Him Who bear
Its Corporeal illustration—Sell
The Royal Air—

In the Parcel—Be the Merchant
Of the Heavenly Grace—
But reduce no Human Spirit
To Disgrace of Price—64

If Emerson still acknowledged the poet's intrinsic "necessity to be published," 65 it seems that Dickinson abandoned the prospect of publication altogether. Even though her secluded life in her parents' Amherst house makes her something of an exception among American writers of the mid-nineteenth century, Dickinson's poem conveys well the abhorrence with which many Romantic authors confronted the increasing commodification and marketing of literary texts. 66 "Sell The Royal Air," "Merchant Of the Heavenly Grace," "Disgrace of Price": with these and other biblically infused terms, Dickinson decries the commodification of the printed text and expounds the "holiness," the exceptional standing of the writer, who—as mediator between God and man—is called upon to bear the "Corporeal illustration" of heavenly ideas.

Of all antebellum authors, however, it is Melville who betrayed the keenest awareness of the fast-changing commercial nature of the American book market. Thus, in his "Dollars damn me" letter to Hawthorne, he expresses his ambiguity about writing his momentous and most ambitious work, *Moby-Dick* (1851), by claiming that there is probably "no use in elaborating what, in its very essence, is so short-lived as a modern book." <sup>67</sup> Time and again Melville denounces in his correspondence with

his editors and publishers the dwindling influence that serious writers are able to bring to bear upon issues of copyright and publishing policies, and he deplores the growing output of serialized, fast-written books that are geared solely to the lucrative excerpt process in literary magazines. "This country and nearly all its affairs," he once complained to his English publisher Richard Bentley, "are governed by sturdy backwoodsmen—noble fellows enough, but not at all literary, & who care not a fig for any authors except those who write those most saleable of all books nowadays—ie—the newspaper, & magazines." 68

In his apprehension about the modern book market and the constraints it put on the work and identity of the literary author, Melville was by no means breaking new ground. As Kathryn McKee has shown, many of the letters and notebook entries of Melville's neighbor and literary ally Nathaniel Hawthorne bespeak his misgivings and, what is more, his artistic self-consciousness about the limitations of the popular short story form, a genre on which Hawthorne depended financially for much of his early career and by which he felt increasingly trapped as it became his only means of economic survival.<sup>69</sup> In a notebook entry of June 1843, he attests to the anguish and dissatisfaction associated with this fast and demanding mode of literary production: "The necessity of keeping my brain at work eats into my comfort. . . . I keep myself uneasy, and produce little, and almost nothing that is worth producing."70 Magazine work, according to Nina Baym, required Hawthorne to write quickly and steadily, which left "no time for fantasizing, for waiting until an idea ripened, for picking, choosing, and discarding."71 As Baym contends, had Hawthorne wanted to embark on a novel-length project at this point, he would have been doomed to fail simply because the magazine work demanded too much time and stamina.

Although Hawthorne finally managed to overcome the obstacles set up by the technological changes in the publishing business, many of the texts dating from this flagging stage of his career attest to his acute sense of the growing cultural importance of technology, as well as its detrimental effects on the individual author.<sup>72</sup> Whereas stories such as "The Old Apple Dealer" and "The Celestial Railroad" take issue with the naive technological optimism promulgated by many of Hawthorne's contemporaries, his self-reflexive metafictional discourses in "The Artist of the Beautiful," "Drowne's Wooden Image," and "The Birth-mark"

deal more specifically with the ideological foundations of Romantic writing, and they use cybernetic imagery in order to articulate the complex and paradoxical status of authorship in antebellum America. Like most of his fellow Romantic writers, Hawthorne was never a staunch technophobe, nor did he coldly turn his back on a young nation that welcomed technological progress as a means to further economic and political independence. Although his idealist aesthetic and the lingering influence of his austere Puritan background made him suspicious, to say the least, of antebellum progressivism, Hawthorne was by no means merely a Romantic reactionary or antimodernist. Neither, certainly, was his the Whitmanesque stance of the poet hailing the nation's rapid modernization and mechanical ingenuity. Rather, as Henry Fairbanks has argued, "Hawthorne had relatively little to say of the mechanical inventions which were just beginning to change the face of civilization,"73 Given the personal circumstances under which he labored to establish himself as a professional writer, it was only natural, however, that he became increasingly aware of the wide-ranging social and psychological effects of technology and, what was even more galling to him, the writer's growing entanglement with this influential force of modern life.

Among the major writers of the American Renaissance, only Walt Whitman seems to have embraced fervently the marvelous inventions of a rising technological society, thereby emerging as the nation's most influential and steadfast singer of modernity. Whitman's achievement, as Miles Orvell has pointed out, was precisely to have rooted his art in the most characteristic features of his time: the new forces of science and technology. 74 Nowhere is Whitman's enthusiasm for technology more apparent than in his preface to the 1855 edition of *Leaves of Grass*. "The American poets are to enclose old and new," he writes in an idiosyncratic prose style that perfectly mirrors the verve and stamina of his poems, "to him enter the essences of the real things and past and present events . . . the noble character of the young mechanics and of all free American workmen and workwomen . . . the factories and mercantile life and laborsaving machinery. . . . For such the expression of the American poet is to be transcendant and new."

As he continues to enumerate the marvels and technical achievements that garnered the attention of antebellum Americans, Whitman becomes even more explicit about the leading role that science and technology assume in regard to modern poetry. They not only act as encouragement and support for the poet who sets out to capture the spirit of contemporary America but also provide the formal means—that is, the structure and language—for this prodigious task. It is true, says Whitman, that "the anatomist, chemist, astronomer, geologist, phrenologist, spiritualist, mathematician, historian and lexicographer are not poets, but they are the lawgivers of poets and their construction underlies the structure of every perfect poem." <sup>76</sup>

If we consider his emphatic adoption of science and the new forms of industrial production, it is not surprising that Whitman also hailed the technically enhanced dissemination and marketing of his art. "Of the twenty-four modern mammoth two-double, three-double, and four-double cylinder presses now in the world, printing by steam," he boasts in a letter to Emerson, "twenty-one of them are in These States." What is more, while for writers such as Hawthorne and Melville the newly invented technique of stereotyping and, as a result, the expansion of antebellum book production represented the bane of their artistic project, the multiplying of copies and new editions seemed to blend in nicely with the kind of career that Whitman, from the very start, had laid out for himself. "These thirty-two Poems I stereotype," he told Emerson, "to print several thousand copies of it. I much enjoy making poems. . . . I keep on till I make a hundred, and then several hundred—perhaps a thousand." <sup>78</sup>

Sheer numbers as well as the mass production of literary texts were certainly not to intimidate the energetic singer of the New World. On the contrary, the unhampered proliferation of data and information, be they literary or prosaic, is itself, as Whitman asserts in the same letter to Emerson, an essential ingredient of modern American culture, a token of the widening spectrum of reckless and free modes of life that were never elsewhere thought possible. Because of its unique celebratory style, his paean to the cultural importance of reading in antebellum America deserves to be quoted at length:

The twelve thousand large and small shops for dispensing books and newspapers—the same number of public libraries, any one of which has all the reading wanted to equip a man or woman for American reading—the three thousand different newspapers, the nutriment of the imperfect ones coming in just as usefully as any—the story papers, various, full of strong-flavored romances, widely circulated—the one-cent and two-cent journals—the political ones, no matter what side—the weeklies in the country—the sporting and pictorial papers—the monthly magazines, with plentiful imported feed—the sentimental novels, numberless copies of them—the low-priced flaring tales, adventures, biographies—all are prophetic, All waft rapidly on. I see that they swell wide, for reasons. I am not troubled at the movement of them, but greatly pleased. I see plying shuttles, the active ephemeral myriads of books also, faithfully weaving the garments of men. . . . What a progress popular reading and writing has made in fifty years! What a progress fifty years hence! The time is at hand when inherent literature will be a main part of These States, as general as steam power, iron, corn, beef, fish. 79

Whereas Emerson detested the economic entanglement of his art, and Thoreau, pushing the antimaterialism of his mentor even further, hoped to see the written word enshrined as "the choicest of relics," Whitman engages a different approach to the variegated modes of writing and reading that mark modern American society.80 For this protean representative of his times, the diversity and sheer amount of printed material available are already indicative of a great literary future for America. Although his attitude toward the blessings of modern technology, especially during and after the Civil War, was bound to become more and more complex, at the outset of his career Whitman was stunned by the promising potential that he saw embedded in the wave of new machinery, and he ardently believed that it was the task of every true poet to hitch his work to the tremendous resources of mechanical ingenuity. By thus wedding his artistic endeavor to contemporary technological advancement, Whitman provided a model for subsequent generations of Americans such as Hart Crane, John Dos Passos, William Carlos Williams, Wallace Stevens, Claes Oldenburg, and Andy Warhol who would continue the ongoing project of the realignment of art and technology in modern industrial society.

In one of his notorious self-reviews, Whitman called special attention to the photographic portrait on the cover page of *Leaves of Grass* which he claimed represented synecdochically the contents of the book and the

body and soul of its producer: "Its author is Walt Whitman and his book is a reproduction of the author. His name is not on the frontispiece, but his portrait, half-length, is. The contents of the book form a daguerreotype of his inner being, and the title page bears a representation of its physical tabernacle."81 The semiotic chain of substitutions that is implied here—the daguerreotype representing the book representing the man—forcibly suggests the author's affirmative, unrestrained attitude toward the modern means of technical reproduction. Insofar as Whitman conceives of both the printed text and his photographic portrait, respectively, as a repository of the living author, his review is strangely reminiscent of Franklin's "Epitaph." Similar to Franklin with his belief in the redeeming power of the technology of print (as expressed in his idea of a "second edition" of his life), Whitman appears to be unperturbed by the dynamics of modern publishing and its tendency to turn the author, to modify Foucault's famous phrase, into a pure function of the text, a dead signifier of the division between the marketable commodity, on the one hand, and its human, nontechnological originator, on the other.

What is even more remarkable, by offering his photograph as an equivalent for his "authentic," biological self, Whitman assumed the cybernetic posture, which had troubled so many of his Romantic fellow writers, with astonishing ease. More than a century after the polytechnical genius of Benjamin Franklin, here again was a poet who adopted the mimetic faculties inherent in the new modes of technical (re)production, thus making a claim for the increasing mechanical incarnation of the author as text or, in this case, as daguerreotype.

chapter two

MACHINE ART REVISITED
HAWTHORNE'S ARTIST(S) OF

THE BEAUTIFUL

Is it too wild a thought, that my fate may have assumed this image of myself, and therefore haunts me with such inevitable pertinacity, originating every act which it appears to imitate, while it deludes me by pretending to share the events, of which it is merely the emblem and the prophecy?

Nathaniel Hawthorne, "Monsieur Du Miroir"

Among antebellum writers who responded in their work to the ubiquitous presence of the machine in mid-nineteenth-century America, Nathaniel Hawthorne stands out as one of the most critical and ambiguous voices. At the time he embarked on a fledgling literary career during the early 1830s, Hawthorne had already witnessed the opening of the first textile mill in Waltham, Massachusetts (1814), the first crossing of the Atlantic by the steamship *Savannah* (1819), the opening of the Erie Canal (1825), and the beginning of the first steam locomotive service in Carbondale, Pennsylvania (1829). If Hawthorne took issue with his country's euphoric response to such technological achievements in many of his short stories, sketches, notebooks entries, and, at least peripherally, his second novel, *The House of the Seven Gables* (1851), he was

also trying to position himself within a fictional framework that would bring into conjunction his idealist notions of art and his ultimate insight into the primacy of the material world. To negotiate the paradoxical complexity of this position, Hawthorne repeatedly relied on cybernetic imagery as a form of symbolic self-representation that best captured the rapidly changing conditions of modern society and the effects thereof on the work of literary authors.

The threat of technological encroachment, of being "un-manned," as Emerson put it, by the all-encompassing machine, figures prominently in many of Hawthorne's shorter works. If we take into account that the modern form of the short story was itself an offshoot of technological innovations that speeded up the printing process and, at the same time, significantly changed the conditions of antebellum publishing, it is not hard to see why short fiction, above all other literary genres, should become the major representational mode of early nineteenth-century discourses on technology. Although utopian novels concerned with technological progress and its social consequences abound toward the end of the century, there is little doubt that for the period before the Civil War, the bulk of literary cultural criticism is primarily associated with the short story form.1 Although the formal complexity and far-reaching implications of his treatment of technology have been constantly overlooked, Hawthorne is well known for having cast his apprehensions about the ongoing mechanization of American society in a number of highly ambivalent short stories. Regardless of the range of topics and narrative tools these stories bring to bear on the issue of technology, they all seem to register the fact that the rapid initiation of new inventions and scientific techniques marked a crucial and defining moment in the course of modern history.

In his famous satire "The Celestial Railroad," Hawthorne put to the test the driving role in history that many of his contemporaries ascribed to the onrush of new inventions. Since its interest in technological issues is primarily symbolic, "The Celestial Railroad" appears to be his most critical text in regard to antebellum progressivism. What is more, Hawthorne's burlesque rewriting of Bunyan's *Pilgrim's Progress* has often served to indicate his negative stance on modern technology in general.<sup>2</sup> Certainly, machines dominate the allegorical setting of the story. Not only does the modern Christian alleviate the burdens of his pilgrimage

to the Celestial City by riding on the newly established railroad, but also he encounters various engineering achievements such as, for example, a daring bridge whose foundations have been secured by "some scientific process," a tunnel lit by a network of gas lamps, and a steam-driven ferryboat.<sup>3</sup> Hawthorne's description of these improvements is indeed steeped in the language of the technological feats of his time to such an extent that a 1992 study of structural engineering refers to "The Celestial Railroad" as a fictional representation of the moment when "engineering began to apply the scientific method to structural problems" and "its practitioners had to address the question of structural failure and structural success more explicitly."<sup>4</sup>

His many allusions to contemporary technical accomplishments not-withstanding, Hawthorne's adoption of technological metaphors in the story is closely tied to his critical stance on specific cultural practices and philosophical trends. When the narrator finally arrives at the present-day Vanity Fair, where "almost every street has its church and . . . the reverend clergy are nowhere held in higher respect" (139), he ridicules the traveling lecturers of the burgeoning libertarian sects as employing "a sort of machinery" designed to distribute knowledge without the encumbrance of true learning. Since the passage also involves the text's only reference to literary discourse, it bears being quoted in its entirety:

The labors of these eminent divines are aided by those of innumerable lecturers, who diffuse such a various profundity, in all subjects of human or celestial science, that any man may acquire an omnigenous erudition, without the trouble of even learning to read. Thus literature is etherealized by assuming for its medium the human voice; and knowledge, depositing all its heavier particles—except, doubtless, its gold—becomes exhaled into a sound, which forthwith steals into the ever-open ear of the community. These ingenious methods constitute a sort of machinery, by which thought and study are done to every person's hand, without his putting himself to the slightest inconvenience in the matter. (139)

On the surface a critique of facile latitudinarianism and the widespread fad of providing instruction through oral rather than literary discourse, this passage also betrays Hawthorne's anxiety about the ongoing

mechanization of American society. He does not, of course, conflate the actual use of machines with their effects on the cultural sphere; yet the machine metaphor he applies to the switch from written to oral educational modes is quite telling.5 The "etherealizing" of literature that seems to be at the bottom of his complaint epitomizes the difficult position of the literary author within the framework of an increasingly differentiated sphere of cultural production. Much as Hawthorne tries to defend the superior quality of the literary text (versus the sheer quantity of trivial lectures), his rhetorical strategy in "The Celestial Railroad" also lays bare the degree to which he himself appropriated the forces of modernization. Because Hawthorne thought of the shallow libertarian sects as a movement inevitably leading to moral and intellectual destruction, to use machinery—and, what is more, the most heroic machine of his times, the railroad—as an emblem of such inevitability reflects the symbolic power of modern technology, a power that held in thrall even the most conservative of antebellum writers.

Although it cannot be disputed that the mechanical ride to the godly city eventually turns into a technotopian nightmare, "The Celestial Railroad" is primarily an amusing burlesque on the liberal theology of Unitarians and transcendentalists and only secondly a representation of contemporary technological change. If we want to put Hawthorne's view of technology into perspective, therefore, a brief discussion of "The Old Apple Dealer," an often overlooked sketch that probably inspired Melville's "Bartleby the Scrivener," might be more rewarding. In this treacherously casual story Hawthorne juxtaposes the stationary posture of an old fruit seller to the enormous power and momentum identified with a train's shrieking engine. At a cursory glance, it seems as if the narrator remains caught within the popular rhetorical framework of personifying the railroad as the modern fiend, the incarnation of the "fiery dragon" or mythic monster. If we read more carefully, however, it becomes quite clear that Hawthorne sensed acutely the dramatic cultural and psychological changes concomitant with the introduction of mass transportation. Just consider his depiction of the train's arrival at the railroad station: "The travellers swarm forth from the cars. All are full of the momentum which they have caught from their mode of conveyance. It seems as if the whole world, both morally and physically, were detached from its old standfasts and set in rapid motion."6

Not only does this passage communicate a feeling of cataclysmic change, namely, that with the velocity of the railroad the world itself is spun into a relentless, ever-increasing forward motion; but also it conjures up a view of technology that is at once broader and more analytical than the popular stereotype of the "steam fiend." This proto-modernist approach to technology, I would argue, hinges on the infectious character not of the machine as such but rather of the secondary effects on the psyche of its users. The rapid progression of the rattling cars is described as transmitting its momentum onto the rushing travelers, thereby accelerating the rhythm of both individual and communal life. The influence of technology, as Hawthorne keenly observes, does not subside with the stopping of the engine or, for that matter, the disembarking of the passengers. By permanently affecting the cultural codes and behavior of those exposed to it, technological progress becomes indelibly inscribed in the very structure of modern society.7

Although the narrator registers a physical and symbolic antagonism between the old apple dealer and the smoke-spurting machine, the rest of mankind appears to have adapted well to the altered conditions of historical progress: "He [the apple dealer] and the steam fiend are each other's antipodes; the latter's the type of all that go ahead, and the old man the representative of that melancholy class who, by some sad witchcraft, are doomed never to share in the world's exulting progress. Thus the contrast between mankind and this desolate brother becomes picturesque, and even sublime" (445-46). As a representative of the rearguard forces in history, the old man suddenly turns into a pitiful anachronism, a solitary, desolate sight amid the bustle of arriving cars and swarming travelers. In order to make his retrograde, antiquated appearance even more convincing, Hawthorne introduces a rival merchant of candies and cakes who likewise frequents the railroad depot, "a very smart and welldressed boy of ten years old or thereabouts, who skips briskly hither and thither, addressing the passengers in a pert voice, yet with somewhat of good breeding in his tone and pronunciation" (444-45). The difference in age and agility that sets the two men apart is worth noting. Although both are operating on the same small-scale level of business, the younger peddler seems to encapsulate perfectly the inexorable rhythm of the machine. His entire attitude, the swiftness of his movements as well as the aggressive yet always clearly enunciated overtures to his potential clients, mirrors the commercial spirit and technological selfconfidence of antebellum America.

For the old man, by contrast, there is no place within the fastchanging framework of modern society; his static way of life and the train's emblematic velocity are "each other's antipodes." To be sure, by no means does Hawthorne condemn the onward course of history and its tragic implications for the old apple dealer. Rather, he makes him the fleeting object of his professional interest, thus positioning the artist as mediator between the waning forces of the past and the rising power of America's technological future.8 While his stagnant existence is avowedly anachronistic, for the poet the old man's sunken face retains "a volume of deeper and more comprehensive import than all that the wisest mortals have given to the world" (446). As a consequence, however, the now "sublime" product of poetic imagination is marginalized to an even greater degree. Since sublimity, according to Burke's famous definition, presupposes a physical and emotional distance between the sublime event and the observer, the apple dealer seems to be as far removed from the poet as from actual society.9 If this pathetic character is alienated from contemporary technological progress, his literary transformation into a token of sublimity is thus bound to reinforce rather than to undermine his precarious social status.

The Romantic notion of the writer's capacity to transform the material confines of ordinary men into everlasting works of art looms large in "The Old Apple Dealer." Toward the end of his tale, the narrator invokes the "spiritual essence" of the main character, an essence that shall be redeemed in a region far removed from his present one. Since this remark is directly preceded by a self-reflexive reference to the heightened sensibility of literary authors, we must infer that in this concluding passage the narrator is talking about his own text, or, in broader terms, the realm of all literary discourse. His portrait of the old apple dealer is neither "cast in iron" nor "hewn in everlasting adamant" (446), yet its spiritual essence is sure to survive. Much like "the vapours that vanish away while the essence flits upward to the Infinite" (446), the written text ultimately slips the shackles of its physical-textual embodiment, thereby entering the "Hall of Fantasy," that lofty dome, as Hawthorne calls it elsewhere, "likely to endure longer than the most substantial structure that ever cumbered the earth." 10 This Neoplatonic bifurcation

of values—the ethereal but lasting products of the imagination, on the one hand, and their material manifestations, the physical markers of reality such as buildings, manufactures, the railroad, the printing press (and its final product, the marketable book), on the other—is typical of Hawthorne's assessment of the contested relations between literary authorship and modern technology. What is more, it determined to a great extent his choice of mirror images and cybernetic doubles as modes of representation that enabled him to articulate and, at least temporarily, suspend the tension between the material conditions of writing and the writer's lofty aspiration to create eternal ideas.

The disparity between the poetical imagination and what Hawthorne came to consider the blunt, mathematical accuracy of the technocrat informed his literary career from the very beginning. In "Old Ticonderoga-A Picture of the Past," an early travel sketch originally conceived as part of a group of experimental narratives known as "The Story Teller," Hawthorne expounds at length on the differences and respective values of these faculties. 11 During the first of several visits to Fort Ticonderoga, a colonial battle site eliciting memories of fierce encounters and heroic warfare, Oberon, the presumed narrator of the story, is guided by a young graduate in military engineering. It is hardly surprising that Oberon immediately registers their diverging responses to the historical site. Where the traveling poet sees nothing but a confusion of battered masonry and turf-covered hills of stone, his military guide detects the straight outlines of strategic architecture. Where the narrator's unscientific glance can discern no regularity, the young engineer is perfectly at home: "He fathomed the meaning of every ditch, and formed an entire plan of the fortress from its half-obliterated lines. His description of Ticonderoga would be as accurate as a geometrical theorem, and as barren of the poetry that has clustered round its decay." 12

In contrast with the scientist and his detached, straightforward analysis, Oberon is interested more in the poetic dimension embedded in the labyrinth of moldy walls and abandoned ramparts:

> I viewed Ticonderoga as a place of ancient strength, in ruins for half a century; where flags of three nations had successively waved, and none waved now; where armies had struggled, so long ago that the bones of the slain were mouldered; where Peace had found a heritage

in the forsaken haunts of War. Now the young West Pointer, with his lectures on ravelins, counterscarps, angles, and covered ways, made it an affair of brick and mortar and hewn stone, arranged on certain regular principles, having a good deal to do with mathematics but nothing at all with poetry. (187)

Accuracy versus confusion, mathematics versus poetry, the brick-andmortar approach of the engineer versus the imaginative associations of the poet: these are the key oppositions on which Hawthorne rests his conception of creative writing.<sup>13</sup> In doing so, he fervently rejects the Franklinesque ideal of a cross-fertilization between the useful and the fine arts, between technology and literature. Rather than merely putting historical fragments back into geometrical order, the poet conjures up a "new" past, recreates the human drama of bygone conflict according to his own view. He thus resembles the hoary veteran who, barely remembering the details of his former military engagement, reinvigorates the deserted scene with the colorful concoctions of his myth-laden war stories. When it comes to interpreting the material markers of history, "next to such a companion," as Oberon muses in conclusion, "the best is one's own fancy" (188). It is important to note, however, that Hawthorne's emphasis on poetic idealization—vis-à-vis the profane perception of the young engineer—was never meant just to cover up the squalid aspects of his material surroundings. What he sought from the very beginning of his literary career, and what he would eventually find in the cyborg figure, was a form of representation of the real that enabled him to rise symbolically above the treacherous simplicity of mere appearances.

That Franklin actually figures as a forerunner and emblem of the technological worldview represented by the young engineer in the story can be further supported. While indulging in the dreamlike dramatization of a heroic past, the narrator of "Old Ticonderoga" is suddenly called back to the present by the shrill signal of a steamboat, conspicuously named *Franklin*. Because of the numerous ferries, freighters, and lumber boats that frequent nearby Lake Champlain, the whole country now strikes him as but "a cultivated farm." With his poetic visions of a glorious past vanishing among the dull "realities," Oberon's tale thus ends on a melancholic if somewhat ambivalent note. Like Irving's "Rip van

Winkle," Hawthorne's traveling storyteller registers "the lapse of time and change of circumstances," or, more precisely, America's metamorphosis from virgin land to capitalist market place. Yet he also addresses the important role of literary authors under the new economic and social conditions. As mediators between an idealist past and a materialist present, these authors are called upon to put forth visions of the nation's historical roots that reach beyond the brick-and-mortar philosophy of contemporary technocrats.

### The Writer's View of the Laboratory

It should not go unnoticed that Hawthorne ultimately revised his rigid distinction between the two professions. In his famous triad of stories dealing with his vocation as a writer, "The Birth-mark," "Drowne's Wooden Image," and "The Artist of the Beautiful," Hawthorne deliberately blurred the lines between the representatives of science and technology and the representatives of artistic imagination. Of these autoreferential narratives, published in relatively rapid succession from March 1843 to July, 1844, "The Birth-mark" seems to have been his earliest attempt to resolve the inherent tensions of modern authorship by adopting cybernetic imagery. In order to make visible the material constraints on the labor of writing, or, for that matter, of artistic endeavor in general, Hawthorne involves all three characters of this seminal text in a series of border-crossing gestures and disjunctive representations. Not only are the scientist Aylmer and his assistant Aminadab, as Liz Rosenberg has pointed out, "alter egos, mirror images," but also Hawthorne calls attention, according to Cindy Weinstein, to the "radical nature" of Aylmer's wife, Georgiana's, "transition from the domestic space to Aylmer's laboratory." 14 By the same token, the text is just as indeterminate when it comes to its most decisive feature, Aylmer's profession: the ambitious scientist also figures as a male artist trying to compete, in the words of Nicholas Bromell, with "the power of women's labor." 15 On the surface a tale of oppression, gender, and the costs of contemporary progressivism (scientific and otherwise), "The Birthmark" thus appears to be equally concerned with issues of representation, the definition of labor in antebellum America, and, finally, the role of the artist in an increasingly differentiated market economy.<sup>16</sup>

Because of its allegorical technique, the story relies heavily on the configuration of its major characters and their representational value. Its theme is misleadingly simple. Aylmer, an idealistic scientist, pursues with his wife's consent the fatal project of erasing a crimson birthmark from her otherwise perfect face. In preparation for the alchemical process necessary to remove this "visible mark of earthly imperfection," Georgiana takes up residence in Aylmer's laboratory.<sup>17</sup> This is an ambiguous move that makes her a passive object of her husband's scientific experiments and, at the same time, an accomplice in their mutual scheme of transcending the biological confines of the body. 18 With the help of Aminadab, the lab assistant in charge of the practical details of his employer's experiments, Aylmer eventually succeeds in eradicating the birthmark, only to realize that his now "perfect" wife is slowly dying from the unforeseen consequences of his interference with nature. Aminadab, who has opposed his master's quest for perfection all along, literally gets the final laugh. Representing sheer physicality and the material conditions of life—Aylmer at one point addresses him as "thou human machine" (51)—Aminadab utters only "a hoarse, chuckling laugh" to mark their tragic defeat. Having dared to improve on nature's eternal scheme, the Promethean scientist figure, in what seems to be the quintessence of this intriguing allegory, is left with nothing but the physical remains of a perfect woman, while "her soul, lingering a moment near her husband, took its heavenward flight" (56).

If most critics were eager to identify the allegorical characters of Aylmer and his assistant as opposed to Hawthorne's authorial position, many of those who recognized the poetic aspects of Aylmer's perfectionism likewise denied that he represents any concerns other than the author's general anxiety about professional excess. <sup>19</sup> Certainly Aylmer is not a fully developed author figure, yet he is equipped with more than just the peripheral markers of poetic talent. In this context it is important to consider that Aylmer is the author not just of daring scientific experiments but of an autobiographical text as well, a scientific account of his professional career in which "every man of genius, in whatever sphere, might recognize the image of his own experience" (49). Long before the fatal incident, Aylmer's text connects its author to the spiritual strivings of art and makes explicit his continual effort to transcend the material grounding of his profession. As readers are informed, "the

book, in truth, was both the history and emblem of his ardent, ambitious, imaginative, yet practical and laborious, life. He handled physical details, as if there were nothing beyond them; yet spiritualized them all, and redeemed himself from materialism, by his strong and eager aspiration towards the infinite. In his grasp, the veriest clod of earth assumed a soul" (49). Aylmer's long-standing desire to "redeem" himself from materialism is reflected by the rigid differentiation of labor within his professional domain. By delegating the tedious chores of the laboratory to Aminadab, Aylmer tries to cleanse his experiments of the contagion of earthly matters the same way he tries to eliminate the incriminating stigma from Georgiana's cheek. Just as he discards everything but the spiritual aspects of his profession, he wants the birthmark excised from the personification of his scientific ideals.

That Georgiana functions as mirror image and screen onto which Aylmer projects his idealized notions about his work is further supported by his claim that she "had led [him] deeper than ever into the heart of science" and that "even Pygmalion, when his sculptured woman assumed life" (41), could have felt no greater ecstasy than he himself will once her imperfect nature is corrected. The fact that he explicitly compares his scientific efforts to those of the Greek sculptor Pygmalion once again calls attention to Aylmer's self-representation as artist in disguise. 20 What it also shows, however, is the symbolic tension between artistic labor, the feminine, and the practical demands of authorship in antebellum America. For Aylmer, Georgiana figures primarily as a paradigm of his ongoing entanglement with the material foundations of art, an entanglement he wishes to overcome symbolically, first, by conflating it with the Victorian anxiety about female sexuality, and second, by his attempt to improve and thereby ultimately regain control over Georgiana's body. Since the scientific means by which he hopes to achieve the separation of impure physis, on the one hand, and spiritual perfection, on the other, are themselves dependent on the execution of material processes, Aylmer's position is somewhat ambiguous. His efforts cannot but lead to structural failure, not because he dares to improve on nature's flawed design, but because he underestimates the practical implications of his work altogether.

As Weinstein notes, Hawthorne's story might also be read as a critical commentary on contemporary assessments of fiction, especially the idea

that the best works of fiction successfully conceal the techniques by which they are composed. "The figure of the author's hand," Weinstein writes, "provided critics with a short-handed way of criticizing a text.... Authorial labor had to remain invisible in order for literature to remain outside the fray." 21 Although I doubt that the concealment of an author's tools was, as a form of critical caveat, endemic only among antebellum reviewers, Weinstein's point may well illustrate the inherent paradoxes of modern authorship. Although books had become as profitable a product as any other commodity in mid-nineteenth-century America, their authors, according to the Romantic ideology of literary work, must not be affected by the laws of the marketplace. If we replace Weinstein's structural term "writing techniques" with the machinery (technical, economic, and political) implicated in the process of bookmaking at large, we are much closer to the roots of Hawthorne's expressed authorial anxiety in stories such as "The Birth-mark." If the written text, as Thoreau euphorically put it, "is the choicest of relics [and] the work of art nearest to life itself," its mode of production and subsequent marketing are surely a different matter.<sup>22</sup> The strenuous dichotomy of Romantic notions about art and its material manifestations in modern capitalist society has a continuous presence in Hawthorne's works. In "The Birth-mark," and even more explicitly in his autoreferential, programmatic story "The Artist of the Beautiful," he seems to be articulating this dichotomy in terms of a play of allegorical images whose composite, cybernetic nature betrays his constant awareness of the tangled relations of writing and technology.

Cybernetic imagery is indeed the most important structural device in "The Birth-mark." It tends to undermine the stiff, allegorical configuration of the story's main characters, and it functions as a structural mediator for the impeding forces of technology. Hawthorne's use of the cyborg ranges from an actual man-machine (Aminadab) to Aylmer's dream of enhancing the human body by scientific means. Obviously, Aminadab comes closest to our contemporary understanding of the cyborg. His composite nature as "human machine" makes him the antitype of both Georgiana's biologically deficient body and the emaciated, intellectual figure of Aylmer.<sup>23</sup> Given his special placement in Hawthorne's allegorical scheme, Aminadab appears to be a sign of the body's resistance to artificial improvement (he openly opposes his master's wish to remove

the birthmark) and, simultaneously, the incarnation of the body as machine, as ultimate functional and controllable entity. With his "great mechanical readiness" (43), this Romantic cyborg is perfectly fitted for the menial work of the laboratory, a task that demands the minutest execution of the experiments without any understanding of a single scientific principle. While Georgiana's body refuses to be rid of the tiny mark of its biological determinacy, Aminadab represents that determinacy to such a degree that he is transfigured into a soulless machine, a slave to nature as much as to his cerebral master.

The machinist metaphor is of utmost significance here. If eighteenth-century mechanical philosophy had recourse to the machine as explanatory model of body functions (as in La Mettrie's *L'homme machine*), Romantic literary discourse tended to conjoin the human and the machine for disciplinary reasons. Since Romantics took the body, especially its female, reproductive version, to represent synecdochically the material forces of nature, the imagery of mechanical regularity and perfection appeared equally adequate to hold in check and, ultimately, wield control over both women and technology.

The relations between the body, technology, and Romantic writing are complex if not paradoxical. To claim that antebellum authors were interested only in defying the negative influence of modern technology would thus be as problematic as overlooking their obvious aesthetic biases. The question of technology in regard to the major representatives of the American Renaissance must rather be treated as dialectical. Since antebellum authors were surrounded by an increasingly technological culture, it is only logical that they absorbed to varying degrees the language and metaphors of their fellow citizens. My intention here is thus to substantiate the contradictory Romantic adoption of mechanical paradigms by referring to other discursive fields in mid-nineteenth-century America. A good example of how the apparent order and regularity of the machine had come to pass as a model of social education and moral restraint is the famous Lowell textile mills in Massachusetts. Beginning operation in 1815, the Lowell mills soon developed into an important industrial site whose basic processes of cloth manufacturing were nearly all made possible by newly invented machines. The history of the mills as well as their rigid operating schedule and social regime are well documented.24 Yet what makes this factory town especially interesting for

my argument is not its often cited role in preparing Americans for industrialization on a large scale but the fact that its mechanized work processes provided metaphors of containment and control in regard to the body.

Lowell's work force was made up primarily of young, unmarried women who were hired on a temporary basis and, after having operated the power looms for some four to five years, went back home to country. Because of the moral corruption and depravity traditionally associated with factory life, mill owners, local supporters, and progressive politicians joined in defending the mills as a form of republican "moral institution," an industrial school where the female worker's "intellect is strengthened, her moral sense quickened, her manners refined, her whole character elevated and improved, by the privileges and discipline of her factory life." In addition to the orderly institutional setup of the factory itself, the relentless regime of the machines, proponents of Lowell's social ideology believed, would surely have a positive, restraining influence on the operatives.

The belief in the disciplinary power of machinery was even shared by the mill girls themselves. As Lucy Larcom, one of the principal contributors to the Lowell Offering who had worked at the mills during the late 1830s and early 1840s, tells us in her autobiography: "Even the long hours, the early rising, and the regularity enforced by the clangor of the bell were good discipline for one who was naturally inclined to dally and to dream, and who loved her own personal liberty with a willful rebellion against control. Perhaps I could have brought myself into the limitations of order and method in no other way." 26 If the female workers had thus internalized the "rigid code of morality under which they lived,"27 the moral lesson of the machine was rarely lost on the mill's many visitors either. Elated by what he perceived as the quintessential manifestation of law and order, the Unitarian minister Henry Colman noted that "the moral spectacle here presented is in itself beautiful and sublime." Taking the automated mills as a model for society at large, Colman wanted Americans to function just like a machine, in which "each part retain[ed] its place, perform[ed] its duty," but which would come to a halt if the operator ever relaxed his or her attention and went morally astray.28

Such uplifting comments on the moral impact of machinery were typi-

cal of antebellum social discourse. What is more, they also reflected the dominant scientific approach to mechanized labor. One of the most prominent commentators on the new modes of industrial production was the British inventor and professor of mathematics at Cambridge, Charles Babbage. Babbage is now famous for having designed one of the first crude computers, a calculating engine that could be programmed with a stack of punch cards, yet he is also known as the author of an important socioeconomic treatise later titled The Economy of Machinery and Manufactures (1832). For Babbage, as much as for other contemporary observers, one of the major functions and advantages of machinery was to discipline the human work force. Once the workers became attuned to the machine, their vices and weaknesses would be held in check, and the regularity, and thus controllability, of mechanized labor would ultimately be transferred, according to Babbage's technology-centered economy, to its human counterpart. "One great advantage which we may derive from machinery is from the check which it affords against the inattention, the idleness, or the dishonesty of human agents," he wrote.29 Rather than being just a means of enhancing the production of goods, in this mathematician's view of the modern factory system machines figure as both control mechanism and overarching economic paradigm, thereby allowing Babbage to envision the workers as pacified automata and the work process as a series of calculable, automated interactions between man and machine.

The cyborgean underworker in "The Birth-mark" clearly represents this widespread authoritarian understanding of technology. Because of his synecdochic connection with the mechanical chores of the laboratory, Aminadab has turned into a human machine, an enslaved cyborg whose ignorance of any scientific principles makes him completely dependent on Aylmer's "mental" work. Semantically, his "great mechanical readiness" suggests not just practical skills but also absolute reliability, including the willingness to act only according to a superior's instruction. From this perspective, then, Hawthorne's laboratory perfectly embodies the power structure and division of labor within modern society. His critique of Aylmer's aesthetic perfectionism notwithstanding, the lab assistant never actually interferes with any of the experiments as such. Because of the restrictive character of mechanical labor, Aminadab's protest remains purely rhetorical, a melodramatic gesture

that falls short of effectively challenging the dubious authority of both science and art.

It is quite striking how Hawthorne advocates contemporary beliefs in the disciplinary potential of technology and, at the same time, blows the whistle on the artist's presumptuous enterprise. While his general distrust of the onrush of machinery has often been taken for granted, this barely camouflaged allegory of modern working conditions tells a different story. In "The Birth-mark," Hawthorne questions neither the application of technology as such nor its practical results, that is, the transmutation of workers into consenting, calculable machines. Far from embracing so-called Romantic rationalizations of the marketplace, he cautiously navigates the tensions and paradoxes inherent in modern authorship. By symbolically conjoining—rather than separating—the spheres of brawn and brain, of physical and mental work, Hawthorne strays from the beaten path of contemporary socioeconomic and aesthetic discourses in many decisive ways.

## Visual Technology and the Politics of Self-Representation

In order to appreciate fully Hawthorne's ideologically loaded representation of creative work, one must keep in mind that the first half of the nineteenth century, when the bulk of what is now considered "classic" American literature was being produced, had also given birth to the middle class in America, an event that had widespread ramifications for the identity and social status of professional writers. Reflecting the growing specialization of the marketplace, which in turn opened up avenues for non-manual, "white-collar" occupations, the new social category covered not just the emerging class of businessmen, clerks, salesmen, and supervisors but the modern artist as well, who had just managed to dissociate himself from the eighteenth-century stigma of artisanal, that is, manual, labor. 30 For Hawthorne and his fellow writers. manual labor thus became the dividing line that set off their own work from that of the rest of society. Stories such as "The Birth-mark" are therefore, according to Joel Pfister, "not merely symptomatic literary responses to the experience of social change and contradiction; they reveal aspects of the formation of the subjectivity of a middle class that rose

to economic and cultural hegemony within the whirlpool of rapid social transformations."<sup>31</sup>

If many of Hawthorne's earlier works must be read within this wider context of the formation of new forms of subjectivity, they are equally indicative, I would argue, of his effort to import into his fiction aspects of contemporary technology on a scale yet to be acknowledged. True, Hawthorne often bemoaned, as Pfister reminds us, the drabness of manual occupations, especially when personally involved in them (as during his time at the Boston Custom House). Yet he also expressed considerable admiration for the shrewdness of human invention and the heroic relations that connect man to the machine. Just consider the following entry in his notebooks on March 6, 1856, written shortly after he visited the newly established Mersey Iron Foundry in England, then one of the major gun manufacturers in the world:

After inspecting the gun, we went through other portions of the establishment, and saw iron in various stages of manufacture. I am not usually interested in manufacturing processes, being quite unable to understand them, at least in cotton-machinery, or the like; but here there were such exhibitions of mighty strength, both of men and machines, that I had a satisfaction in looking on. . . . Trip-hammers are very pleasant objects to look at, working so massively as they do, and yet so accurately, chewing up, as it were, the hot iron, and fashioning it into shape, with a sort of mighty and gigantic gentleness in their mode of action. What great things man has contrived, and is continually performing! What a noble brute he is! . . . I had a respect for these stalwart workmen, who seemed to be near kindred of the machines amid which they wrought—mighty men sure enough, smiting stoutly, and looking at the fierce eyes of the furnace fearlessly, and handling the iron when it would have taken the skin off from ordinary fingers. They looked strong, indeed, but pale; for the hot atmosphere, in which they live, cannot but be deleterious, and I suppose their very strength wears them quickly out. But I would rather live ten years as an iron-smith than fifty as a tailor.<sup>33</sup>

Not only do these remarks glaringly contradict the negative connotations of technology-determined characters such as Aminadab and Rob-

ert Danforth, the brawny, gigantic blacksmith of "The Artist of the Beautiful," but also they reveal Hawthorne's indecision in the face of the diverging patterns of antebellum conceptualizations of work. Wary of distinguishing his own artistic project from the rampant materialism of modern society, Hawthorne was nonetheless attracted by the cultural authority of technical inventions and the symbolic dimension unfolding from the psychological and physical adjustment of men to machines.

Many of Hawthorne's major tales of the period between 1846, when he published Mosses from an Old Manse, and 1850, the year he finished his first novel, The Scarlet Letter, I see therefore as a continuous reenactment of his battle for symbolic coherence, a battle in which Hawthorne frequently enlists cybernetic imagery to provide a unifying vision of Romantic spiritual epistemology, on the one hand, and the demands of the marketplace, on the other. This is also why the mechanical underworker in "The Birth-mark" cannot merely be taken as an antitype to either the scientist/artist figure or his wife. Since Aylmer himself is marked as a "composite man" whose "spirit [is] burthened with clay and working in matter" (49), the lab assistant more likely represents the material dependency of even the most ethereal of artistic endeavors, a dependency that his master keeps struggling to deny. By the same token, Aminadab does not share the pathological reading of the birthmark as a sign of earthly imperfection. His final laugh thus reveals a more adequate understanding of the nature of Aylmer's work. That the brutish and supposedly insensate cyborg has to act twice as mouthpiece for the author's self-reflexive stance offers further evidence of Hawthorne's desire to overcome the increasingly inflexible specialization of labor in antebellum society and, perhaps even more important, of his insight into the material grounding of all production, including the creation of works of art.34

The point to be established here, then, is that Hawthorne's use of mechanical paradigms was by no means a one-directional enterprise inevitably leading to the apotheosis of Romantic spirituality. If, as in "The Procession of Life," Hawthorne speaks of the "demon of machinery" who is about to annihilate the soul, in stories such as "The Old Apple Dealer," "The Birth-mark," and, finally, the programmatic "Drowne's Wooden Image" and "The Artist of the Beautiful" he is equally aware of the pitfalls of an idealist aesthetic severed from its cultural, economic,

and technological context.<sup>35</sup> To shore up my argument that the cyborg figure must have appeared to him as a perfect model to account for the ambiguity of his authorial position, it is important to note that Hawthorne had long been obsessed with self-representation, especially in regard to mirror images and visual forms of discourse at large.

The trapdoors of representation, of seeing one's self transformed into an other that resembles and, at the same time, is an oblique distortion of the original self, are clearly the center of attention in his early sketch "Monsieur Du Miroir." In this ingenious text the narrator explores the deconstructive effects of doubling and mirroring in a manner that instantaneously calls to mind Lacan's emphasis on the formative influence of the mirror stage. If Lacan emphasizes the factitiousness of human identity by correlating the construction of the self with the imaginative responses to its distorted reflection in the mirror, so does the narrator of "Monsieur Du Miroir." Here is how he rationalizes the perpetual presence of his mirror image, this intimate double who, by some mysterious scheme, has intermingled with the fated course of his life: "Is it too wild a thought, that my fate may have assumed this image of myself, and therefore haunts me with such inevitable pertinacity, originating every act which it appears to imitate, while it deludes me by pretending to share the events, of which it is merely the emblem and the prophecy?"36

The implications of this reversal of causality between the reflected image and its material source are quite striking. Since the former possesses the power of originating (rather than merely reflecting) events, the latter appears determined entirely by the doings of its ethereal, symbolic double. Steering cautiously around the epistemological snares of this insight into the significance of representation, Hawthorne's narrator is still full of doubt "which of [them] is the visionary form, or whether each be not the other's mystery, and both twin brethren of one fate, in mutually reflected spheres" (171). Although Hawthorne goes to great lengths to emphasize the mutual dependency of the "authentic" self and its reflection in the mirror, in "Monsieur Du Miroir" this does not lead to a revision of puritanical assessments of the human interest in selfrepresentation as treacherous and basically blasphemous. Given his relentless probings of the shaky foundations of human identity, his concluding remarks in fact reveal an absurd, self-censoring attitude: "Thus do mortals deify, as it were, a mere shadow of themselves, a spectre of human reason, and ask of that to unveil the mysteries, which Divine Intelligence has revealed so far needful to our guidance, and hid the rest" (171).

If "Monsieur Du Miroir" ends on a rather conventional note, it does inaugurate, however, Hawthorne's rewriting of Romantic conceptions of representation. According to M. H. Abrams's classic study on this topic, the Romantic account of poetic invention differed from its eighteenth-century predecessors in that it replaced the mechanical theory of association with an organicist essentialism, or, to put it differently, the analogy of art as an assemblage of ready-made material with that of art as an original, creative process comparable only to growing a plant. While Coleridge used the latter analogy strictly in connection with the superior faculty of the imagination, he retained the former (mechanical) analogy to describe the imitative mode associated with fancy. The passivity and mechanical character of fancy he saw embodied in the root metaphor of the mirror, a metaphor that contrasts blatantly with the alleged vitality of imagination capable of generating and producing a form of its own. Fancy, for Coleridge, is a "mirrorment," repeating simply what is already there, its aggregative and associative power acting only by a sort of juxtaposition.<sup>37</sup> Significantly, and somewhat paradoxically, Hawthorne's adoption of the mirror image in "Monsieur Du Miroir" exceeds its figurative meaning in Romantic poetic theory and, simultaneously, reenforces it on the level of morality. Far from conceiving "mirrorment" as merely a mechanical reflection, Hawthorne shied away at first from the consequences of his radical reconceptualization of representation. Once he had thus pondered the role of the reflected image as an important factor in the formation of subjectivity, it was only a matter of time before he would exploit fully its epistemological ramifications.

Considerable critical attention has been drawn to the fact that in The House of the Seven Gables, Hawthorne adopted the newly invented technique of the daguerreotype to establish what might be called his personal hermeneutics of visual representation.<sup>38</sup> This text, as Alan Trachtenberg has cogently noted, incorporates to a considerable degree contemporary discourses on photographic representation, and it seems as if by 1851, when the novel was originally published, that the blasphemous notion of "mirrorment" has turned into a publicly accepted prac-

tice. 39 Just recall Hepzibah's anxiety about the glamorous world of commerce in antebellum cities that, by sheer contrast, made the prospects of setting up a provincial "cent-shop" of her own look utterly discouraging: "Groceries, toy-shops, dry-goods stores, with their immense panes of plate-glass, their gorgeous fixtures, their vast and complete assortments of merchandize, in which fortunes have been invested; and those noble mirrors at the farther end of each establishment, doubling all this wealth by a brightly burnished vista of unrealities!"40

Yet this is far from the only instance in which mirror images figure prominently in The House of the Seven Gables. Since one of its major characters is a professional daguerreotypist whose photographic reproductions are directly implicated in the unraveling of the complex plot, it is appropriate to say that technical modes of visual representation are among the core issues of Hawthorne's second novel. While the popular imagination wanted the daguerreotype to be a transparent copy of the original, Hawthorne's daguerreotypist embodies instead the ambiguities and reversed power relations of visual discourse. In this "humble line of art," neither the subject nor the photographer is in a position to control the chemically reproduced image. On the contrary, in the crucial picture of Judge Pyncheon, which the "Daguerreotypist" has "taken, over and over again, and still with no better result" (91), the differences between the appearance of the original person and the stern expression of the reproduced figure remain utterly striking. Pyncheon's skillful efforts at concealment notwithstanding, the photographic process—or so it seems to be Hawthorne's astonishing plea for this modern means of visual reproduction—relentlessly brings to the fore the secret connection between the contemporary judge and his devious, puritanical ancestor.<sup>41</sup>

While using the daguerreotype to expose the hypocrisy of Judge Pyncheon, Hawthorne also positions mechanical reproductions within a particular system of meaning. In The House of the Seven Gables, it is very clear that the camera, as Trachtenberg suggests, "serves the discursive needs of its practitioners and clients." 42 Since it does not have an independent ideology, its deconstructive momentum, the tendency to subvert the mere surface view of reality, is therefore not inherent in the specific technique by which the picture was produced; rather it reflects the discursive context (narrative and otherwise) in which the "modern engine of visibility," to quote Trachtenberg again, is applied. In Hawthorne's case, this context, I would argue, was related to the difficult task of accounting for the ongoing technologizing of antebellum society and the impact thereof on the identity and work of the modern author. While the invention of photography had triggered an outpouring of mechanical mirror images in its own right, the need for a master image, a visual narrative that would reflect the changing conditions of creative work and, simultaneously, mesh with the cultural landscape of midnineteenth-century America, was of paramount importance. This is perhaps what Walter Benn Michaels had in mind when he called the daguerreotype a means of seeing "through to the fixed truth behind the fluctuating movements of the 'public character.'" <sup>43</sup> To compress the fleeting signs of transition and change into a single image, to arrest symbolically the moment when the old social order is superseded by the unforgiving laws of the marketplace, had thus become a primary function of Hawthorne's hermeneutics of visual representation.

In "The Birth-mark," a story obsessed with mirror images and all forms of aesthetic replications, Hawthorne had already put the daguerreotype to such epistemic use. 44 The mechanical reproduction of Georgiana's face, however, reveals not so much the hidden features of the original as the nagging anxiety of the daguerreotypist:

[Aylmer] proposed to take her portrait by a scientific process of his own invention. It was to be effected by rays of light striking upon a polished plate of metal. Georgiana assented—but, on looking at the result, was affrighted to find the features of the portrait blurred and indefinable; while the minute figure of a hand appeared where the cheek should have been. Aylmer snatched the metallic plate, and threw it into a jar of corrosive acid. (45)

Georgiana's mechanical portrait mirrors once more the artist's vain attempt to overcome the material confinement of his work.

Above all else, the hand figures for Aylmer as a persistent marker of "earthly imperfection." Read in the larger social, economic, and political context, however, it also reflects contemporary concerns about the growing division of manual and mental labor as well as the conflicted search of the modern author for his or her professional identity. Because of its innate ambiguity, the daguerreotype seems to provide a fitting met-

aphor for the social and technological changes that determined antebellum America. Based on a mechanical process of reproduction, it would of necessity link its subject to the material foundations of reality. Much like the picture of Georgiana, which automatically zooms in on the birthmark, visual representations such as the daguerreotype or, somewhat later, the photograph are wont to foreground the mechanism of production.

It is interesting to note that the human body did not lend itself easily at first to being photographed. As if resisting the highly symbolic transmutation into chemical matter (the fixing of one's image on plate or paper), humans did not come out well in early photography. This was due to the fact that, with limited light sources and only rudimentary photographic chemicals available, moving objects were either blurred or grotesquely distorted from the long period of exposure. Early critics of the daguerreotype often complained about this major fault. As one commentator scathingly described a group of plates, "Masses of greenery appeared only as silhouettes, and nowhere were any people to be seen; in a word color and life, the two parents of poetry, were lacking." 45 Yet the fixing of living images on a chemically coated plate proved to be a problematic venture not just in terms of practical photography. It also launched questions as to the ontology of the representation itself. Arrested in time, space, and motion, were the reproduced subjects still to be counted among the living, or were they, as Michaels suggests, in some sense already dead?46 Purporting to transcend the confines of biology by way of a chemical-mechanical process, photographic reproductions of the human body could well be considered as cutting across the human and the technological, the living and the non-living. Early photography thus offers another example of Hawthorne's interest in cybernetic imagery, an interest spawned by the desire to realign the divided discourses on authorship and technology in mid-nineteenth-century America.

#### The Mechanician Turns Artist

Nowhere does this need for reconciliation with the leading role of technology in the literal and figurative construction of modern American society emerge more plainly than in "Drowne's Wooden Image" and "The Artist of the Beautiful." Read often as allegorical representations

of Hawthorne's Romantic view of art, both stories expressly combine issues of technology and the stratification of labor with aesthetic discourse. Although they do not abstain from exposing the author's discontent with the machine age, these auto-referential texts also direct our attention to the contested status of authorship in a cultural sphere where technology was increasingly conceived as a force of original production and authenticity. Adopting many of the arguments launched in favor of photography's alleged realism (as opposed to the inferior mode of "artistic" representation), an article in the Christian Examiner in 1869 reflects the extent to which Hawthorne's contemporaries had become biased against the mimetic strategies of the fine arts.<sup>47</sup> According to its author, John C. Kimball, "it is not passion and power, beauty and sublimity, themselves, which [the fine arts] set before us but their appearance. Their mission, or at least their means, is to deceive." Machinery, by contrast, is said to bear "something of the same relation to art that real life does to the stage, that the hero who performs a deed does to the actor who shows it forth."48

To this accusation Hawthorne would of course respond by insisting that literary representation is not just a treacherous reflection of the real world but an idealization, a transformation of the real into an image of pure spirituality which must then be viewed as the representation of an original artistic idea. <sup>49</sup> Yet he was also convinced that the products of the mind cannot (and should not) be cut off completely from their material underpinnings. Artistic creations—and here Hawthorne appears to deviate from both Romantic antimodernism and New England transcendentalism—are tied up inextricably with the physical medium through which they are conveyed to the public.

To acknowledge the material grounding of creative work—that is, the mutual dependency of the text (as tangible, commercial item) and the ideas it represents—is among the primary objectives of "Drowne's Wooden Image." Given just a cursory glance, the story seems to advocate conventional Romantic topics such as the distinction between purely mechanical and artistic forms of representation, aesthetic spirituality, and the figure of the artist as creator of an original work of art. Traditionally it has thus been taken as a linear translation of Hawthorne's Romantic conception of art into fiction. <sup>50</sup> Yet such reductive readings only perpetuate the dominant evaluation of Romanticism as

an escapist and essentially self-serving ideology. What is more, they tend to suppress the recurrent textual allusions to the interfaces of art and the material, economic, and political conditions under which it is produced.

"Drowne's Wooden Image" once more brings to the fore one of Hawthorne's favorite topics: the transformation of a representative of the working class into an artist. Drowne is a young woodcarver whose reproductions of human figures, though wrought with outstanding talent, as yet lack the final stroke of genius. When Copley, a celebrated painter and member of the Boston cultural elite, comes to visit Drowne's humble workshop, he calls him a "Yankee mechanic," a manual laborer in thrall to the production of cheap imitations of nature. But Drowne works hard to overcome the inherent restrictions of his "mechanical" occupation. That the aspiring craftsman finally succeeds in infusing into one of his wooden likenesses the "ethereal essence of humanity" would appear to connect him to Hawthorne's most famous mechanician-turned-artist figure, Owen Warland in "The Artist of the Beautiful." 51 What many readers have missed, however, is not just that each story accentuates different aspects of the creative process at hand, but also that in both cases artistic inspiration is shown to be highly controversial, publicly unacknowledged, and ostensibly short-lived. Thus, Drowne creates but once, and even for this finest piece of art, the wooden image of an exotic female figure, he seems not to have chosen the right material. "If this work were in marble," as the patronizing Bostonian tells him, "it would make you famous at once; nay, I would almost affirm that it would make an era in the art" (313).

The outward appearance of Drowne's achievement becomes even more of an issue when the painter insinuates that, for artistic purposes, the statue must remain unpainted. The appeal to functional simplicity contradicts the practical requirements of the commissioned work (she is designed to be used as a ship's figurehead and elicits a fervent response from Drowne, who, behaving like a "true" artist, brushes aside any aesthetic laws outside his own universe of production: "I know nothing of marble statuary, and nothing of a sculptor's rules of art. . . . Let others do what they may with marble, and adopt what rules they choose. If I can produce my desired effect by painted wood, those rules are not for me, and I have a right to disregard them" (313).

Given the economic circumstances under which he labors, Drowne's

rebellious gesture reveals itself as an act of sheer irony. While eschewing the aesthetics of the cultural establishment on the one hand, he tacitly complies on the other with the expectations of his client, Captain Hunnewell, who had ordered a conventional—that is, fully painted—figurehead. That Drowne's image is going to embellish a vessel significantly named the *Cynosure* might thus be read as an indication that the ambitious woodcarver has sold himself to the devil of commerce. Yet it might also be taken as a sign of Hawthorne's disillusionment with Romantic conceptions of creative work in general.

Such a nonconformist reading could be further corroborated by a textual reference that has as yet escaped critical attention altogether. It has long been a staple of Romantic theory that true artists should be able to create ex nihilo, that their work should add to the mass of things already in existence. "In one sense, and in great measure, to be peculiar is to be original," writes Poe in his review of Hawthorne's tales, "and than the true originality there is no higher literary virtue."53 Innovativeness and authenticity are also major factors in separating Drowne's finest product from the heap of decorative carvings he has manufactured earlier. If his figureheads, his cheap busts, and grotesque urns were all designed after popular allegorical models, this latest statue embodies the spirit of a woman who has no match either in real life or in mythology. It is "as if, not being actually human, yet so like humanity, she must therefore be something preternatural" (314). Because of its composite ontology, the female figure wields a lasting influence on the public's imagination. Among Drowne's Puritan peers there are not a few who would swear having seen her transmogrify into an actual human being as she and Hunnewell were entering the vessel for its next voyage. Within the framework of Romanticism, the constant commingling of matter and spirit, of the real and the represented body, assumes major significance. To transform dead matter into the ethereal yet lasting mode of artistic discourse was, after all, one of the uppermost concerns of Romantic aesthetics.

If the Romantic artist is called upon to exceed—rather than simply reproduce—the material limitations imposed on his work, this does not, however, apply to Drowne's wooden image. As I pointed out earlier, even his most artistic carving is marked by the stigma of commercial production, of being designed according to the express wishes and specifica-

tions of his client. What is more, Hawthorne makes it very clear that the awe-inspiring image is itself essentially a reproduction of a living person, a young Portuguese lady who had fled her country because of political rebellion and who is now sheltered by Captain Hunnewell. Significantly placed at the very end of the story, this information cannot but expose the exaggerated encomiums to Drowne's artistic achievement for what they are: a strained effort at artistic exceptionalism and a naive attempt to secure social renown for the artist outside the overpowering influence of American capitalism. By introducing the authentic model of the figurehead, Hawthorne demotes its claim to both aesthetic originality and professional idealism. Neither the general concept nor the physical details of the statue have sprung from Drowne's imagination. As a stunningly faithful reproduction of the original, the figure stands out primarily for its superior technical execution. And as a commissioned, trueto-life rendering of his client's secret lover, it tacitly participates in the commercialization and marketing of art which Hawthorne, especially during these early stages of his career, experienced as an unavoidable yet extremely stressful struggle for survival.

Two years before the story originally appeared in *Godey's Magazine* and Lady's Book, he had confided in his notebook: "The fight with the world—the struggle of a man among men—the agony of the universal effort to wrench the means of life from a host of greedy competitors—all this seems like a dream to me." <sup>54</sup> Although the dreamlike suspension of professional competition refers, above all else, to the private respite Hawthorne found in his recent marriage to Sophia Peabody, it was autoreferential texts such as "The Birth-mark," "Drowne's Wooden Image," and "The Artist of the Beautiful" that allowed him to articulate allegorically the sociocultural implications of authorship in antebellum America.

Of these stories, "The Artist of the Beautiful" clearly marks the culmination of Hawthorne's critique of Romantic ideology. By stressing the practical consequences of the artist's search for complete autonomy, the text explicitly questions the Romantic idea of art as an autochthonous, independent mode of production. Moreover, in "The Artist of the Beautiful," Hawthorne brings to bear with even greater force the image of the cyborg on his representation of contemporary technology and its impact on the writer's profession. Had Emerson ever written a short

story, as a contemporary British reviewer poignantly remarked, he would have written "The Artist of the Beautiful." 55 According to the sheaves of critical comment, a majority of which would readily subscribe to that perception, the story's most prominent feature is its narrativization of artistic production from the perspective of American transcendentalism. True, the story of Owen Warland and his search for the ultimate aesthetic ideal reverberates with a variety of transcendentalist tenets: the polarities of reason and understanding, imagination and fancy, materialism and idealism, to name just a few. Very few commentators, however, have noticed that these topics are introduced in terms of a far-reaching crisis of modernization and cultural conflict.<sup>56</sup> Only if we read "The Artist of the Beautiful" as a parable of artistic work under the shifting social conditions of modernity are we able to account for its widespread allusions to machines (such as steam engines or the cotton gin), to automata (the Man of Brass by Albert Magnus, Bacon's Brazen Head, and a few other mechanical apparitions), to reproduction or, as the only woman in the text has it, "the notion of putting spirit into machinery," and last but not least, to authorship and the fledgling identity of the professional writer.<sup>57</sup>

It is certainly not by accident that the main character, Owen Warland, is above all a gifted if somewhat distracted mechanic and only secondly the hapless artist of the beautiful. Although the two vocations are obviously at odds, a fact that accounts for much of the plot, it is quite remarkable how snugly the discourse on aesthetics is incorporated into a discourse on mechanics. After all, it is not a painting, sculpture, or poem that Owen Warland aspires to create but a mechanical butterfly, that is, a living machine or, in the terms of this study, a Romantic cyborg. Hawthorne's choice of a replicated animal as the symbolic embodiment of the artist's aesthetic dream is by no means arbitrary. It reflects the widespread practice of imitating the biological by technical means, a practice that has long marked the Western attitude toward technology.

As a result of the heightened interest in mechanical paradigms (of which La Mettrie's physiological reworking of the Cartesian *bête-machine* is just one case in point), the late eighteenth and early nineteenth centuries became especially obsessed with the construction of animated machines or automata.<sup>58</sup> The historian of technology Derek De Solla Price has suggested that "some strong innate urge toward mechanical paradigms (of which is paradigms).

nistic explanation led to the making of automata, and that from automata has evolved much of our technology, particularly the part embracing fine mechanism and scientific instrumentation." <sup>59</sup> To put it another way, the numerous toys and automated gadgets that populated the drawing rooms of the affluent classes were not just instrumental in furthering technological progress; they were also taken as explanatory models of widespread natural and cultural phenomena, including the increasing mechanization of capitalist societies.

A prominent name in the annals of inventors of automata is Wolfgang Ritter von Kempelen (1703–1804). Although he is best known for his successful diplomatic career at the court of Empress Maria Theresa, von Kempelen was also engaged in constructing two of the most famous machines of his time: the so-called Chess Turk of 1769 and the Talking Machine (1778), which, although it could not really talk, was able to utter various well-distinguished mechanical sounds. The Chess Turk, by contrast, had only the appearance of a machine. The marvelous contrivance looked like a mechanized replica of a Turk that would play chess, accompanied by the obtrusive cranking and whirring of machinery. Yet it was fraudulent. The midget hiding inside and operating its elaborate mechanism was so ingeniously concealed that the Chess Turk fooled most of its admiring spectators, including Frederick the Great, Napoleon I, and, later on, the American public. When, in 1826; the mechanician and entrepreneur Johann Nepomuk Maelzel brought the Turk to the United States, where it was continuously on exhibition until destroyed by a fire in Peale's museum in Philadelphia in 1854, it drew considerable public as well as literary attention. The mystery enclosed in this sham automaton prompted Poe to provide a criminalist solution in an essay titled "Maelzel's Chess Player" (1836), and it is thought to have inspired Ambrose Bierce's ingenious story "Moxon's Master" (1893), in which a chess-playing robot attacks his inventor when it loses to him.

Beyond this unmediated influence on American literature, the Chess Turk as well as the many other automata that were built during the late eighteenth century and throughout the nineteenth are important because of their role as symbolic representations of the shift from agricultural to fully industrialized production and its concomitant cultural and behavioral changes. Above all else, automata were intricate, cunning little machines in their own right. More often than not, the interior,

which was regularly exposed to the public after the show, revealed a complex design of mechanical parts mysteriously set in motion by the experienced hand of the craftsman; hence, these animated machines ideally epitomized the technical knowhow and ingenuity of early modern manufacturing. Yet, in a way no less obvious than their being taken as icons of the latest advances in technology, automata also represented the social machinery of industrialized society. When seen in action, their staccato moves and the meticulously choreographed interplay of "body" parts might be read as at once the model and mirror image of modern man. Put in such perspective, the technical limitations imposed on the android's body all but equaled the psycho-physical restrictions called for by the brutal regime of industrial production and the repressive demands of mechanical labor. Moreover, owing to the transparency of their working principle, automata were the target of all sorts of materialist fictions of control and domination. They were read as "living" proof of the idea of a well-regulated cosmos, of a natural world that could no longer withhold its secrets from rational man and would in due time yield to his conquering spirit.

While the animated toys devised by the leading mechanicians of the late eighteenth century corresponded nicely with the rhetoric and economic practice of early capitalist societies, their literary counterparts, the man-machines (and woman-machines, to be sure) of Romantic literature and nineteenth-century fiction in general betrayed a different attitude toward the promises of modern science and technology. Here the staggering gait of the android often signified the threatening liminality of the human who has become a machine, a lifeless monster determined not so much by his or her free will as by the demands of its artificial organism. It is important to note here that many of the dystopian projections of technology in nineteenth-century literature are centered on this idea of the encroachment on the body by the machine. Unlike the popular mechanical android, which was but an elaborate mechanism openly imitating the human, the fictional automaton was more like a modern cyborg, an imaginary concept comprising at once material and visceral components. By centering "The Artist of the Beautiful" on the production of a mechanical butterfly, Hawthorne draws on all of these different attitudes toward animated machines. From its awe-inspiring "naturalness" to the sensibility with which it responds to the unwitting observer,

this living machine obviously served a wide range of contemporary associations with technology.

Among the far-reaching implications of the initiation of machinery into modern society, the notion of evading organic reproduction by way of mechanical inventions, symbolically made visible in the construction of robots or automata, is instrumental for an understanding of "The Artist of the Beautiful." 60 As one can readily see, Hawthorne's parable of the technician-turned-artist abounds with allusions to technology, reproduction, and gender. Thus, Owen Warland is introduced as a tinkerer with ladies' watches, a person of childlike sensibilities and a delicate, effeminate stature. "If any human spirit could have sufficiently reverenced the processes so sacred in his eyes," the narrator tells us, "it must have been a woman's" (460). Accordingly, it is the visible shape of Annie, the reluctant object of Owen's sexual desire, in which "the spiritual power that he worshipped, and on whose altar he hoped to lay a not unworthy offering, was made manifest to him" (464). His struggle to produce a spiritualized automaton likewise is cast in terms of a procreative sexual act or, what is perhaps more to the point, an exercise in artistic parthenogenesis. As the disbelief of his peers leads him to remark, the mechanical creature "may well be said to possess life, for it had absorbed [his] own being into itself" (324). It is therefore not the marvelous contrivance as such that distinguishes the artist from the technician but the act of instilling life into matter.

In the end, however, the Promethean deed proves to be ephemeral and transitory. While the artist has painfully been delivering the offspring of his spirit, "organic nature," as one critic puts it, "has passed him by." <sup>61</sup> Annie, who is now married to the town's blacksmith (a striking incarnation of Hawthorne's idea of the working class), has become a matron and mother. It is certainly ironic that the tiny mechanism is finally crushed by the clumsy hands of Annie's child. What was meant as a bridal gift for his former love eventually becomes a sacrifice to the forces of biological reproduction, a highly ambiguous offering on the altar of femininity. By juxtaposing in this manner organic, mechanical, and artistic procreation, "The Artist of the Beautiful" unmistakably adds to established Romantic discourses on authenticity and original production. Insofar as it articulates an anxiety about both the machine and female reproductive capacities, the emphasis is shifted, however, from

merely a reflection on aesthetics to a critical assessment of the tangled relations of technology, gender, and professional writing.

How do these reflections relate to the question of authorship? As I mentioned earlier, in order to have the watchmaker become an artist, Hawthorne supplies him with the power to animate, to spiritualize machinery. His ambition is not "to be honored with the paternity of a new kind of cotton machine," as he vehemently affirms, but to produce a "new species of life and motion" (453, 466). It is thus not by imitating nature but by competing with it, by putting forth "the ideal which nature has proposed to herself in all her creatures, but has never taken pains to realize" (466), that Owen Warland assumes authorship. At this point, however, the story seems to verge on sheer paradox: If the forces of reproduction are essentially female, as the text seems to suggest, how could authorship then prevail as a predominantly male activity?

There is little doubt that Hawthorne conceives of the crude mechanical forces of the real as pure maleness, associated with the strength and generative power of paternity. "No child of yours," quips the brawny blacksmith, taking in Owen's delicate frame, "will have iron joints and sinews" (453). And as for Annie, the young woman proves to be as much "a creature of his own as the mysterious piece of mechanism" (464). Having fancied her his equal and ally, the artist is at last utterly deceived. Given their reproductive capacity, as the story persistently implies, women are inextricably bound up with the realm of matter and practical reason. It is therefore only by replacing female reproductive power with an alternative power, at once generative and spiritual, that Hawthorne is able to reconcile the forces of organic and artistic production. Insofar as he represents nature's procreative principle on a more refined and consummated level, the artist simultaneously incorporates and transcends the feminine. While negotiating the antagonistic powers of generation for his artistic purposes, the man of art, according to Hawthorne's gendered analysis, reaches for a subtler, more ethereal form of paternity. However frail and transient his imaginative child may be, as carrier and conduit of an original idea it takes on a quality more real than reality itself. "When the artist rose high enough to achieve the beautiful," as we learn in the concluding paragraph of the story, "the symbol by which he made it perceptible to mortal senses became of little

value in his eyes while his spirit possessed itself in the enjoyment of the reality" (475).

Owen Warland perfectly embodies the ambiguities of artistic production in antebellum America. Not only does the name reflect his vocational crisis, that is, the "warring" ideals of mechanical and mental labor, but also his original occupation situates him within a discursive field that was closely connected to the early industrialization of American society and its corollary republican utilitarianism (hence the manifold references to punctuality, regularity, and utilitarian values in general). Since the structuring of everyday life around dependable measurements of time was crucial in the transition from agricultural to industrial society, the watchmaker becomes an appropriate site for the narrativization of cultural change and conflict.

According to the cultural historian Lewis Mumford, "the clock not the steam-engine, is the key machine of the modern industrial age." <sup>63</sup> Like perhaps no other single mechanism, the clock at once furthers and symbolically represents the development of industrial society. The modern timepiece not only became a ubiquitous symbol of mechanical ingenuity, but also was itself an accurate automatic machine:

There had been power-machines before the clock . . . but here was a new kind of power-machine, in which the source of power and the transmission were of such a nature as to ensure the even flow of energy throughout the works and to make possible regular production and a standardized product. In its relationship to determinable quantities of energy, standardization, to automatic action, and finally to its own special product, accurate timing, the clock has been the foremost machine in modern technics.<sup>64</sup>

With its protagonist professionally rooted in the production, repairing, and operation of timekeeping instruments, "The Artist of the Beautiful" should be read, above all else, as a commentary on the process of industrialization and its concomitant reliance on the clock as a key machine of the modern age. Moreover, by focusing on the gendered dynamics of reproduction, Hawthorne touched on a contested issue of his day. At a time when many Americans were beginning to think of machinery

as an authentic generative force in its own right, Hawthorne's self-reflexive parable effectively probed the interstices of mechanical and artistic production. And it seemed to bring forth a view of the artist as far more practical-minded than most critics were willing accept.

This view hinged on the conviction that there is no way out of technology, and that therefore the artist must not merely accept the material foundations of his work but actively seek to reconcile it with the demands of modernization. As Hawthorne took pains to explain in much of his earlier work, the particular contribution of the writer to modern society is not to defy technological progress as such but to add to it a spiritual dimension, a historical perspective that contains and at the same time alleviates the frictions caused by social change. Setting the register for many of the discourses to come on technology and authorship, these strikingly up-to-date texts should no longer be excluded from the study of what some critics cogently called nineteenth-century America's "covert culture." 65

chapter three

DO MACHINES MAKE HISTORY?

EDGAR ALLAN POE AND THE

TECHNOLOGIZING OF DISCOURSE

The fable implies that the individual to possess himself, must sometimes return from his own labor to embrace all the other laborers. But unfortunately, this original unit, this fountain of power, has been so distributed to multitudes, has been so minutely subdivided and peddled out, that it is spilled into drops, and cannot be gathered. The state of society is one in which the members have suffered amputation from the trunk, and strut about so many walking monsters,—a good finger, a neck, a stomach, an elbow, but never a man.

Ralph Waldo Emerson, "The American Scholar"

Poe's literary career perfectly exhibits the politics and paradoxes of modern authorship. While various critics insisted that his eclectic, autoreferential style prefigured the death of the authorial self as an autonomous producer of art, Poe actually committed much of his nonfictional writing to establishing "literary labor," to borrow his own frequently used term, as a full-grown profession within the economic structure of antebellum America.¹ Although he would not have subscribed to the progressivist belief in the wonder-working agency of technology, he was

nevertheless in favor of the increasing technologizing of literary activity, adopting it as a tool to replace the metaphysical grounding of European Romanticism by a strictly constructivist, if not always coherent, poetical theory. And in contrast to the antimaterialism and otherworldliness on which these Romantic approaches to literature customarily depended, Poe never condemned the economic dependency of professional authorship as such (although he did complain about the meager salaries paid to literary workers).2 As a shrewd observer of the literary marketplace, he would eagerly cater to its shifting aesthetic preferences. Hence, after the economic depression of the late 1830s, he concentrated on the writing of relatively lucrative tales while at the same time dramatically reducing the production of unsaleable poetry.3 In keeping with his market-oriented writing policies, Poe himself was deeply involved in the publishing industry, by then one of the most important economic sectors in the United States.4 As editor of several leading literary magazines, which were all located in the nation's financial and economic centers (notably, Philadelphia and New York), he was fully aware of the material influences on the modern writer. Since social conditions permeated not only his production of literature proper but also his work as literary critic, theoretical essayist, and magazine editor, Poe appears to be an ideal figure for exploring the professionalization of creative writing and its connection to the larger economic and technological system.

Poe's primary concern in life, as one critic rightly put it, was "being an author or engaging in authorship." Consequently, the philosophy and techniques of writing figure prominently in both his fictional and his theoretical texts. If his enthusiastic evaluation of creative work occasionally came close to Emersonian essentialism, Poe did not share the transcendentalists' notion of art as a metaphysical enterprise. Rather he emphasized the material reality of the literary text itself, that is, the physical medium by which an original idea is communicated (its textual representation) and, of no less importance, its physical-psychic effects on the audience. If, in the latter case, it is the writer who applies certain textual technologies in order to control the reader's emotional responses, in the former the author himself appears determined by the technological conditions of his writing. Since Poe's interest in manipulating the reader through the meticulous execution of literary technique has already been sufficiently-documented, I will focus in what follows on the

complex relationship between writer and text or, more specifically, the technology of literary production and its impact on the practices of modern authorship.<sup>6</sup>

The technological determinacy of writing is a major issue in two of Poe's nonfictional prose pieces in particular, both of which were either neglected or persistently underrated by literary critics: first, the speculative article "Anastatic Printing" (1845) and, second, his early essay "Maelzel's Chess-Player" (1836), his piece about a famous chess-playing automaton that was on exhibit in many major American cities during the 1830s and 1840s.7 Although the latter text does not touch directly on the topic of writing, the skillful deconstruction of Maelzel's claim that his artificial chess player consisted only of "pure machinery" can be easily linked to Poe's own poetological project. What is more, it brings to the fore once again the imagery of the cyborg. While questioning the existence of a logically reasoning automaton, "Maelzel's Chess-Player" conjures up a clearly cyborgean vision: a human being controlling and operating the mechanism from inside the machine. By thus illustrating the conflation of mind and matter, the physical wedding of the human to the machine, the essay provides us with a perfect blueprint for Poe's technology-dominated poetics.

Yet "Maelzel's Chess-Player" is not the only text in which Poe explores the cyborg's widespread symbolic ramifications. Looking at his tales, one cannot fail to note that Poe was obsessed with the uncanny sphere where the living blurs with the non-living. Along these lines one encounters everywhere in his fiction protagonists who either are suspended between life and death ("Loss of Breath," "A Tale of the Ragged Mountains," "The Man That Was Used Up"), appear to have conquered death symbolically ("Ligeia," "The Oval Portrait," "Eleonora"), or experience the horrors of living entombment ("The Fall of the House of Usher," "The Premature Burial," The Narrative of Arthur Gordon Pym) and extended, metaphorical death scenes ("The Pit and the Pendulum," "The Facts in the Case of M. Valdemar," "A Descent into the Maelström").9

Although many of these texts implicate technology to varying degrees, it is in the political satire "The Man That Was Used Up" that Poe grounds his argument entirely on cyborgean imagery. The story, on which I center my discussion here, powerfully underwrites the relations

between authorship and technology. As a quasi-authentic historical figure, its cyborg protagonist epitomizes not just the linguistic constructedness of literary texts and their fictional characters, but the technologization of all discourse, including the representation of past events. By thus extending the relevance of textual technology to fields of discourse other than pure literature, specifically the emerging area of historical study, Poe envisions the literary author as both a professional perfectly adapted to modern technological society and a member of an intellectual vanguard whose technical expertise is essential in deciphering the tropological character of our understanding of reality in general. In blazing contrast with the Romantic search for transcendent truth, for a "world elsewhere," to borrow Richard Poirier's famous phrase, Poe situated his conception of the real solely within the realm of literary discourse.<sup>10</sup> That his deconstructive endeavor often relies on the structural heterogeneity of the cyborg figure could be taken, then, as a further indication of his antagonism to Romantic literary politics as well as his efforts to place the professional writer within a cultural framework that became increasingly infused with technological paradigms.

As the German critic Max Bense has pointed out, technology takes the place of ideology in Poe's work. It Insofar as he repudiates the Romantic belief in the imaginative and aesthetic transparency of the world, Poe shifts the emphasis from metaphysics to methodology, or, in different terms, from ideological assumptions about the content and production of art to a technological, constructivist explanation of how and why art works. "Most writers," says Poe in "The Philosophy of Composition"—

poets in especial—prefer having it understood that they compose by a species of fine frenzy—an ecstatic intuition—and would positively shudder at letting the public take a peep behind the scenes, at the elaborate and vacillating crudities of thought—at the true purposes seized only at the last moment—at the innumerable glimpses of idea that arrived not at the maturity of full view—at the fully matured fancies discarded in despair as unmanageable—at the cautious selections and rejections—at the painful erasures and interpolations—in a word, at the wheels and pinions—the tackle for scene-shifting—the step-ladders and demon-traps—the cock's feathers, the red paint and

the black patches, which, in ninety-nine cases out of the hundred, constitute the properties of the literary histrio. 12

Not so Poe himself. In "The Philosophy of Composition," "The Poetic Principle," "The Rationale of Verse," and many of his literary reviews, he invites the reader precisely to glimpse the "wheels and pinions" that operate the machinery of poetry and fiction. The adoption of technical terminology in this passage can hardly be overlooked. Wheels, pinions, tackles, step-ladders, demon-traps: such phrasing clearly invokes Poe's technological conception of literary texts. While the writer is free to select specific modes of composition, the text itself appears as a complex mechanical aggregate of interchangeable parts. Artistic creation, according to this view, is a painstaking, cumulative process. It is based not so much on the originality of ideas, as Poe maintains in his response to an alleged plagiarism in "The Raven," as on novel combinations of what is already known, in other words, on the novelty of the writer's style. 13 By thus treating creative writing as a form of textual technology whose ordering principles could be laid bare and whose achievements could be reproduced over and over again, Poe transferred the technology-laden, utilitarian rhetoric of Jacksonian America to the level of poetical theory.

With its emphasis on reworking previously written material, Poe's technological poetics comes dangerously close to advocating literary theft. In fact, Poe's remarks on this subject are far from being consistent. On the one hand, he publicly admonished major writers such as Henry Wadsworth Longfellow for stealing from well-known English texts, and, on the other, he tried to dispel allegations of plagiarism in regard to his own work by stating that one could not expect a writer to invent new forms and ideas from scratch. Likewise, in his introduction to Pinakidia, he repeatedly draws attention to the secondhand nature of the classic compilations of brevities and aphorisms ("audacious pilferings from those vast storehouses of brief facts, memoranda, and opinions in general literature"),14 only to claim later on that his own example of the genre consisted mostly of "original" material. In "Marginalia 35" Poe is perhaps at his most outspoken on the issue of plagiarism. After a quotation from Boileau's Satire, he insists that there are "fellows who really have no right—some individuals have—to purloin the property of their predecessors." That some authors must not exploit older sources

is directly related, according to Poe's discriminatory logic, to their lack of technical skills, the fact that their "clumsily stolen bulls never fail of leaving behind them ample evidence of having been dragged into the chief-den by the tail." <sup>15</sup>

The juxtaposition of writers who are entitled to creative recycling and those who are not assumes major significance in regard to Poe's technocratic definition of professional authorship. What distinguishes these two groups is not so much the opaque notion of the "true" poet and his eminent place in the culture of learning—this would have been Emerson's line of argument—as the command of literary technique. As Poe implies in his prefatory remarks to "Marginalia," a genre that is in itself a perfect example of his notion of recontextualization, it is of utmost importance that the pasting together of isolated, fragmented texts remains "imperceptible." Because it illustrates metaphorically the encroachment of technology on Poe's theory of composition, the opening paragraph of "Marginalia" bears being quoted in full:

In getting my books, I have been always solicitous of an ample margin; this is not so much through any love of the thing in itself, however agreeable, as for the facility it affords me of pencilling suggested thoughts, agreements and differences of opinion, or brief critical comments in general. Where what I have to note is too much to be included within the narrow limits of a margin, I commit it to a slip of paper, and deposit it between the leaves; taking care to secure it by an imperceptible portion of gum tragacanth paste. (107)

The textual process implied here is actually threefold. First, there is the merging of one's own (marginal) text with that of another writer; in a second step, then, the original text is severed from the commentary it has engendered in the reader; and third, the now autonomous fragments of derivative text are recontextualized, that is, made "original," through their compilation as marginalia. The means by which Poe purports to connect physically the more voluminous separate notes to the original book are particularly interesting. Gum tragacanth, after all, is not just any ordinary glue but a paste used for the preparation of scientific specimens, a use Poe must have been aware of through his collaboration with Thomas Wyatt in preparing *The Conchologist's First Book* in 1839. <sup>16</sup> If

the paste originally serves biologists in disguising the act of "reconstituting" a dead animal to its former shape, it is equally fitting for a description of how to make the blending of original and derivative text "imperceptible."

The list of texts in which Poe comments on the uses and abuses of copying literary property is long and covers much of his divergent fictional and critical output. The recycling of texts written by other authors, however, constituted more than a recurring theme in Poe's oeuvre; it was actually at the very basis of his understanding of literary work. As Stephen Rachman has argued, Poe redesigned the concept of plagiarism to suit his own poetological needs, that is, to support the establishment of a theory of creation "where texts are lifted but put to different ends, ends that are paradoxically creative and 'original,' which call into question our concepts of literary property and proprietorship." 17 Moreover, to vindicate his rewriting of the Romantic idea of originality in accordance with the changing definitions of modern authorship, Poe introduced scientific techniques as a metaphorical point of reference for the composition of literary texts, thereby highlighting simultaneously the intimate relations between writing and technology and the growing impact of technological discourse on areas of work other than the purely technological.

# Technology and Originality

It is worth noting that Poe did not give up on artistic originality altogether. Insofar as he replaced original ideas with the praxis-centered concept of literary technique, he seems to have avoided the ideological pitfalls of hard-core Romanticist essentialism. Yet in one of his later works, "The Power of Words" (1845), he also argued for the "physical" capacity of discourse to engender, to "speak into birth," the "passions of the most turbulent and unhallowed hearts." In doing so, Poe once again opened the door to ideological assessments of authorship. If the poet's profession—like any other modern profession—depends on a fixed set of technical skills, the physical foundation of literary work, the written text itself, is still depicted by Poe as if it were able to transcend miraculously its innate materiality. The structural incommensurability of this position has led numerous critics to dismiss Poe's theory of artistic cre-

ation as shallow and inconclusive. <sup>19</sup> From my own perspective, however, his ambiguous enunciations about artistic originality reflect instead his attempt to redefine authorship under conditions of modern technology. Accepting the influence of technological paradigms on the writer's profession, Poe seems to suggest that he must adapt to these new conditions and not, as European Romanticism had it, resist them. By the same token, he was trying to offer a description of poetic imagination that would have no difficulty responding to America's belief in the progressive power of technology and that thus would strengthen the writer's position within the professional stratifications of modern society.

An intriguing example of how technical inventions might influence the formal modes of translating ideas into written texts is Poe's article "Anastatic Printing," an early piece on writing and technology which he published in The Broadway Journal in 1845. Although the technical procedure described here was by no means fictional, the way in which Poe extrapolates from the widespread social and literary ramifications of this particular mode of printing is not simply "original"—in Poe's sense of putting existing ideas to new poetic purposes—but stunningly farsighted, especially read today by readers accustomed to computerized forms of writing and publishing. Anastatic printing, which is also known as "relief etching," can scarcely be regarded as a "new" invention. It refers to a process of printing already in use at the turn of the eighteenth century, in which a design is transferred to a zinc plate by etching out the rest of the surface. The result is that the design is slightly raised in relief and the plate, when washed with a solution of gum, yields a facsimile impression of the original. The whole process, which obviously resembles lithography, had been used mainly for the reproduction of elaborately illustrated texts such as, for example, William Blake's illuminated edition of The Songs of Innocence and Experience (1794). Why, then, would Poe hail this well-known printing technique as a new technology that was destined to "revolutionize the world?"20

Despite its great advantages for professional writers, as Poe complains, anastatic printing had never excited the universal attention and the amount of critical commentary associated with inventions far less important than this revolutionary technique. Consequently, he sees the public negligence of the process as the result of an overabundance of strange and unfamiliar things, an inflation of novelty owing to the stag-

gering achievements of modern science and technology. Because nineteenth-century Americans have become "so habituated to new inventions," Poe deftly explains, they "no longer get from newness the vivid interest which should appertain to the new." In other words, modern man "receives the impression of novelty so continuously that it is at length no novelty to receive it" (84). If it has become increasingly difficult to acknowledge the truly *novel* among the continuous onrush of *novelties*, to establish the newness of anastatic printing appears to be even more challenging. Being essentially a modification of previously existing technologies (namely, etching, electography, and lithography), it does not signal the discovery of an "original" process or method. Rather it combines and improves on techniques already inaugurated, thus allowing their latent technological potential to materialize in new ways.

Yet what makes anastatic printing so appealing to Poe is not just the structural overlap with his theory of composition, which likewise emphasizes novel combinations of established ideas, but its long-term effects on the work of the writer. From the outset, Poe insists that the new technique will ultimately do away with conventional modes of reproduction. For example, by speeding up the preparation of stereotype plates, from which large numbers of identical copies might be printed, it could help to increase the production and dissemination of printed matter considerably. More important, however, it could also revolutionize the process of stereotyping as such. Instead of printing from plates set in type, anastatic printing would allow texts to be reproduced as facsimile versions of the original manuscript.<sup>21</sup> Since publishers were frequently "forced to re-set works which they have neglected to stereotype, thinking them unworthy of the expense," with the new method such economic considerations would become superfluous because, as Poe takes pains to point out, "a publisher has only to print as many copies as are immediately demanded. He need print no more than a dozen, indeed, unless he feels perfectly confident of success. Preserving one copy, he can from this, at no other cost than that of the zinc, produce with any desirable rapidity, as many impressions as he may think proper" (85).

The tendency to reduce production costs, especially in those cases in which saleability determines the publication, or rather non-publication, of texts that are highly worthy yet presumably low in circulation value, must thus be counted as one of the prime advantages of anastatic print-

ing. Not only could it help to make it cheap and easy "to diffuse knowledge and amusement" (85) among the public, but also it would do so on a very large scale. Since it would evade the time-consuming process of setting type, "a hundred thousand impressions per hour, or even infinitely more, can be taken of any newspaper, or similar publication" (85).

There is little doubt that in "Anastatic Printing" Poe is far from opposing technological progress. In an interesting twist of argument, he uses technology as leverage to overcome the material determinacy of modern society by turning it into a place where information is superabundant and where written texts—regardless of their economic value—have become the most important and accessible of all commodities. Reading Poe's enthusiastic appraisal of this new printing procedure, one is therefore tempted to question the view that Romantic writers saw technology as a surrogate enemy which they attacked in order to preserve an elitist literary culture against the reign of the emerging masses. What we encounter here is, on the contrary, a stance perfectly at ease not just with the laws of the marketplace and its corollary, the mass production of literary texts, but also with the prospects of technology acting as mediator between the individual writer and the larger society.

If the economical benefits of anastatic printing are already tremendous, the ways in which it affects the working conditions of literary authors are at least equally promising. To begin with, the new technique will have a disciplinary impact on the composition of and the ideas presented by a certain text. Since there is an "easily intelligible reciprocal influence between the thing written and the manner of writing" (86), it follows that an improvement in style will inevitably be noted as an improvement in terms of content. Insofar as the former is concerned, this will be achieved, according to Poe, by the increased accuracy, concision, and distinctness of presentation expected from a manuscript that will go into print without the guidance of editors or publishers.

In addition to streamlining the form of the manuscript, anastatic printing will also dramatically increase the writer's authority over his text. As Poe repeatedly mentions, it allows the printer to reproduce new copies directly from the original manuscript, thereby eliminating the tedious and expensive process of typesetting. Traditionally, the manuscript was considered to be a transitory stage, a necessary yet provisional form of text that served as an intermediary between the writer, on the one

hand, and the product of the printing press, the material book, on the other. From the writer's perspective, however, the final book itself seldom surpassed the manuscript "either in accuracy or in beauty." Thus, conventional reproduction often made the original text susceptible to the "ruinous intervention of the publisher" (85). Not so with anastatic printing. If he chooses to have his text printed according to the new procedure, "all that a man of letters need do, will be to pay some attention to legibility of MS. arrange his pages to suit himself, and stereotype them instantaneously, as arranged. He may intersperse them with his own drawings, or with anything to please his own fancy, in the certainty of being fairly brought before his readers, with all *the freshness of his original conception* about him" (85; my emphasis).

The ability to preserve and, simultaneously, convey to the reader the "aura" of the original manuscript appears to be the most important factor associated with anastatic printing. Put another way, what Poe is advocating here is in fact the replacement of an established technology by a new one that is more sophisticated than the former and would serve better to alleviate the alienating conditions of modern book production. If Walter Benjamin is correct in assuming that works of art, when turned into mass-produced commodities, will lose the "aura" of uniqueness and authenticity, then Poe had already devised a way out of this modern dilemma.<sup>23</sup> By promulgating anastatic printing as a more fitting technique with respect to the project of bookmaking, he managed to turn technology itself into an essential palliative for the writer's estrangement from his privately written, soon-to-be published text.

Apart from the rather oblique, highly biased inferences as to anastatic printing's purported potential for providing occupation for women writers, the most astounding insight presented by Poe is related to his assessment of literary works as determined equally by literary and mechanical labor.<sup>24</sup> "The value of every book," as seems to be the bottom line of Poe's professional commitment to this new technology, "is a compound of its literary value and its physical or mechanical value as the product of physical labor applied to the physical material" (86). At present, he believes, the latter value (that is, the material, economic foundations of the book market) greatly dominates even the most esteemed of literary texts.

Yet if anastatic printing could be instituted as the general mode of

reproduction, the proportion between the literary and the physical value of a book thus produced would immediately be reversed: "The new condition will at once give the ascendancy to the literary value, and thus by their literary values will books come to be estimated among men. The wealthy gentleman of elegant leisure will lose the vantage ground now afforded him, and will be forced to tilt on terms of equality with the poor devil author" (86). Paradoxically, Poe seems to be convinced that the literary value of the modern book could be enhanced not by evading technology but by gearing it more closely to the needs of "poor devil" authors. His is therefore an utterly utilitarian view of technology, a view that comes strikingly close to Jefferson's ideal of a "democratic" technology.<sup>25</sup> Imitating the revolutionary rhetoric of the founding fathers, Poe condemns the present state of the literary world as an "anomalous congress, in which the majority of the members are constrained to listen in silence while all the eloquence proceeds from a privileged few" (86). What is more, he conjures up a counter-state, a "new régime" where publication is based on literary rather than social values, and in which "the humblest will speak as often and as freely as the most exalted, and will be sure of receiving just that amount of attention which the intrinsic merit of their speeches may deserve" (86).

Poe concludes by reminding the reader that the implementation of an ostensibly democratic printing technology would by no means make legal protection of individual authors superfluous. His final caveat once more underwrites the degree to which his discussion is indebted to contemporary discourses on the status of authorship. If the discovery of anastatic printing led to a more adequate evaluation of books, an evaluation that prefers their literary value to their physical appeal as cultural commodity, this would then render the issue of copyright laws even more pressing. "It has been shown," he claims in the concluding paragraph of the essay, "that in depressing the value of the *physique* of a book, the invention will proportionally elevate the value of its *morale*, and since it is the latter value alone which the copy-right laws are needed to protect, the necessity of the protection will be only the more urgent and more obvious than ever" (86).

As one can readily see, the overriding agenda of "Anastatic Printing" is to strengthen the writer's professional position within American society. To control more effectively the dissemination and economic exploi-

tation of one's own text (either by making the printing process more transparent or by giving authors the legal rights to their intellectual property) is one important incentive for Poe's endeavor. Yet there is also the notion that the literary profession will prevail even under conditions of modern technology. Moreover, Poe perceives writing and technology as two mutually dependent, intersecting activities. Since the former has failed to recognize the advantages of the latter, anastatic printing cannot yet be established as a major means of reproduction. Once the new technique is applied on a more regular basis, however, its positive impact on the work and style of literary authors will instantly become apparent.

## Playing Chess

Before we move on to a discussion of the cyborg figure in "The Man That Was Used Up," it might be rewarding to turn briefly to another of Poe's miscellaneous essays, "Maelzel's Chess-Player," a text that reveals in unique terms the author's interest in charting the link between humans and machines in modern society. "Maelzel's Chess-Player" was first published in the Southern Literary Messenger in 1836, shortly after Poe attended a public exhibition of Maelzel's famous chess-playing automaton in Richmond. The device featured the body of an exotic figure, supposedly a Turkish sultan, which sat, with its legs crossed, atop a wooden box that housed the intricate machinery Maelzel repeatedly exposed to his audiences during the show. One could clearly hear the cranking of the wheels, pinions, and levers that drove the Turk's left arm across the board on top of the box and, even more impressive, enabled him to decide on the correct moves to be made against his volunteer contestant. Because of its marvelous performance, the "Chess-Turk" attracted considerable public attention, most of which focused on the question whether the automaton was in fact only a machine.26 There had already been a number of attempts to solve the riddle of its modus operandi, and it is in response to these often bizarre explanations that Poe offers his own solution—a solution derived entirely from inductive reasoning.

Given only a cursory glance, the essay presents itself primarily as a forerunner of the three Dupin stories, in which Poe developed his idea of "ratiocination" as a scientific strategy marked by intuitive insight.<sup>27</sup>

Yet it equally prefigures Poe's composite image of modern authorship and the technological conditions that made it possible. Although "Maelzel's Chess-Player" clearly precedes the ratiocinative method by being creative as well as logical, the text ultimately transfers the blending of scientific and imaginative methodology onto a level of much wider sociopolitical import.

From the start, Poe situates his deconstruction of the operating principle of the mechanical chess player within the larger framework of machines imitating the human. It is also worth noting that by no means does he deny the miraculous achievements of human engineering. On the contrary, Poe places the chess player in the long tradition of "wonderful automata," precisely because he believes it *not* to be a pure machine. What may sound quite paradoxical on the surface is only logical once we consider the exceptional performance of Maelzel's apparatus. Since it purports to excel in a game in which no move, no step can be predetermined, a chess-playing automaton inevitably cuts across discourses on artificial intelligence, that is, the issue of whether machines are capable of executing the same kind of intellectual reasoning as human beings.

In order to make his point as convincing as possible, Poe compares the chess player to the most advanced mechanical invention of his time, Charles Babbage's famous calculating machine.<sup>28</sup> "What shall we think of an engine of wood and metal," asks Poe, "which cannot only compute astronomical and navigation tables to any given extent, but render the exactitude of its operations mathematically certain through its power of correcting its possible errors? What shall we think of a machine which cannot only accomplish all this, but actually print off its elaborate results, when obtained, without the slightest intervention of the intellect of man?"<sup>29</sup> Even the remarkable performance of this powerful computational device, as Poe takes care to explain, does not in the least compare with the ingenuity required by the game of chess. However complex the calculations of Babbage's machine might be, they can all be deduced from data, that is, a pool of information that, by its very nature, is fixed and determined.

Not so the operations of Maelzel's chess player. Here, there is no possibility to predict what moves will be made at any particular stage of the game, and, in contrast to the calculating process, the data on which its

operations are founded are inherently variable. Yet if there is "no analogy whatever between the operations of the Chess-Player and those of the calculating machine of Mr. Babbage," it follows either that the Chess-Turk is the "most wonderful of the inventions of mankind" (II) or that it is operated by more than just mechanical agency.

It should have become sufficiently clear by now that Poe believes the latter alternative to be more promising and thus continues to investigate the possible solutions that could explain the operations of the Chess-Turk. This is not the place to go into the sundry details of Poe's captivating analysis, yet a general outline of his argument might help to elucidate the multiple theoretical layers of this important text. After elaborating on the peculiar status of Maelzel's machine within the tradition of humanized automata and, in a second step, meticulously describing the idiosyncratic modes of its operation, Poe finally offers seventeen points of substantiation of what he considers the only "logical" solution, namely, that the moves are directed by someone who is concealed inside the box while the interior is exhibited.

Most of these points are quite convincing on their own, taken collectively; the pivot on which they all turn, however, is clearly the lack of mechanical routine in the chess player itself. Since it would have been in Maelzel's interest to make the device appear as mechanical as possible (to see a crude machine perform such astonishing moves, as Poe argues, must of necessity increase the effect on the audience), it follows that its attempt to imitate human behavior can only be part of an intricate scheme of concealing the very humanness it pretends to possess. As with many other features inessential to the operations of the machine—the rolling of eyes and shaking of the head when it ponders a complex situation—are thus performed solely "with the design of exciting in the spectator the false idea of mechanism" (30).

At this juncture it is worth commenting on the essay's topical connection with Poe's three detective stories, above all "The Purloined Letter," a text that hinges on the elaborate strategies of "concealment" adopted by each of its various protagonists. If "Maelzel's Chess-Player" prefigures the ratiocinative sleuthing of the Dupin trilogy, it does so mainly by emphasizing not the moment of detection but the act of covering up what has already been spelled out to the reader. Thus, in both instances the deed itself (the theft of a letter / the deception of the audience) as

well as the name of the perpetrator (Minister D/Maelzel) is a given. Poe, it seems, does not even want to provide a solution to the mystery of the Chess-Turk or the whereabouts of the purloined letter. While, in the first instance, there are already several theories offered by other writers, with which Poe generally agrees yet deems insufficiently documented, in the second we are confronted with the fact that there is ultimately no secret at all, that the letter was never actually "hidden" and that, therefore, it could not, or rather need not, be "found" in the literal sense of that term.

Because of its striking aloofness in regard to the crime itself, and as a consequence its emphasis on self-analysis, "The Purloined Letter" has garnered a great deal of critical attention, among which Derrida's critique of Lacan's earlier psychoanalytic reading seems especially useful for my discussion here. Both critics center their analyses on the symbolic subtext of the story, which they take as an allegorical representation of, respectively, the dialogical foundations of subjectivity (Lacan) and the "textual drift" or indeterminacy of writing and language (Derrida). Unlike Lacan, however, Derrida remains entirely committed to the status of the text as literature, thereby extrapolating a network of metafictional references that are apt to shed light not just on Poe's obsession with analyzing the conditions of literary work but also on "Maelzel's Chess-Player" as a cognate example of that obsession. Whereas Lacan is interested more in the fixed patterns of intersubjective discourse and what he terms its underlying "repetition automatism," Derrida fully concentrates on the scene of writing.30

One of the most remarkable aspects of "The Purloined Letter" is certainly its lack of disclosure in respect to the letter itself. The major participants in the displacement, the search for and final recovery of the notorious document, are by no means interested in the letter as "text," as repository of linguistic meaning. For all we know, their attention is focused solely on the effects of its momentary placement within the symbolic power structure of the royal court. As Barbara Johnson points out, "It is neither the character of the individual subjects, nor the contents of the letter, but the position of the letter within the group which decides what each person will do next." As a result, this elusive miniature text lends itself to being read as an illustration of the discursive power of the symbolic, a power that produces certain (narrative) effects without ever manifesting a meaning of its own. The continuing deferral of significa-

tion implied here is justly taken by Derrida as a marker of all written discourse, a figure of an "indeterminable drift" (198) of signifiers that is permanently engaged in transcending its material confinement as text.

Because of the centrality of writing for his analysis, Derrida also takes note of the fact that both Dupin and the Minister are characterized as amateur poets and lovers of books, and that the beginning of the story is significantly rooted in a "library":

Everything "begins," then, by obscuring this beginning in the "silence," "smoke," and "dark" of this library. . . . On this border . . . one could already read that all of this was an affair of writing, and of writing adrift, in a place of writing open without end to its grafting onto other writings, and that this affair of writing (the third of a series in which the "coincidence" with the two preceding ones already caused itself to be remarked upon) suddenly breaks into its first word. (198–99)

By thus stressing the "literary" setting of Poe's text, Derrida is able to establish an important intertextual frame of reference conjoining "The Purloined Letter" with its predecessors, "The Murders in the Rue Morgue" and "The Mystery of Marie Roget." Although the prominence of writing in these three tales can hardly be missed, Derrida's deconstructive reading of the incriminating document as a malleable, freefloating signifier is marked, by a glaring lacuna in regard to the active role of the writer/author. Nowhere in his extended essay does he account for the fact that both Minister D and, of course, Dupin himself are well aware of the letter's signifying status and the multiple symbolic exchanges that follow in the wake of its displacement. More important, the theft of the letter (representing-the-signifier-representing-the-text) is by no means gratuitous. In both instances, the original theft of the document by the Minister and Dupin's retrieval of it, the pilfering is part of an elaborate political scheme, an act of willful manipulation involving practically all the major characters of the story.

Looking at "The Purloined Letter" from this perspective, one finds that its irrefutable preoccupation with the conditions of writing is coupled with the introduction of an exemplary author figure whose intellectual versatility enables him to manipulate the symbolic value of fiction according to his own purposes. If we consider Dupin's strategic position within the triangle of symbolic exchanges (the remaining positions being taken up by the Minister and the Queen as original addressee of the letter), participation in the ongoing process of disseminating as well as concealing information appears to be a major incentive for the writer-as-detective. Since in this well-known text information is basically obtained by displacing what has already been there, we finally come full circle to Poe's idiosyncratic notion of originality.

As we have seen, Poe considered any kind of available information including texts written by earlier writers—as raw material for literary production. By the same token, he shifted the cultural demand for original works of art from the novelty of ideas to the technical skill that turns an existing text into something apparently new. Put another way, Poe redefined the conditions of writing according to the ubiquitousness and easy availability of information in modern society.<sup>32</sup> Given the information-rich environment to which he looks for inspiration, the writer can no longer be expected to produce "original" data. In order to become the autonomous producer of art propagated by Romantic ideology, he must instead turn into a literary sleuth who traces the meanderings of established public discourse and partakes in the ongoing displacement, retrieval, and modification of ideas already in existence. In a crucial way, then, "The Purloined Letter" represents at once the peculiar writing techniques of its author and the rationalization of these techniques in terms of narrative structure. By restaging the original scene of writing as the continuous reappropriation of displaced information, the tale of ratiocination eventually came to achieve a perfect balance between the poetological notions of its inventor and their embodiment as literary

If the ratiocinative method thus functions as a narrative blueprint for Poe's technology-centered poetics, his criminalistic essay "Maelzel's Chess-Player" already presaged many important aspects of this technique, combining an emphasis on concealment and self-analysis with cybernetic imagery. As a "living" paradigm of the merging of man and machine, the Chess-Turk must have had a firm grip on Poe's imagination. Here was a machinelike device pretending—much as Poe would later do in "The Philosophy of Composition"—to execute both its logical and its physical moves solely by way of mechanical agency. Since the

true "author" of its marvelous performances must not be discovered by the public, Maelzel's chess player engaged in a series of dissimulations expressly designed to conceal the manipulator inside the machinery. To reconstruct the human behind the shifting appearances of the machine would take not only a mind acquainted with the practices of false representation but also a method for bringing together mathematical logic and imaginative reasoning. As one can readily see, such an analytical technique essentially transfers the blurring of technology and imagination, which is symbolically encoded in the Chess-Turk, onto the level of auto-referential discourse.

We also find another striking similarity with Poe's nascent poetical theory. Unlike his ingenious analysis of the precise circumstances under which the machine is made to work, the final solution as outlined in the essay was in no way original. It depended heavily, as Poe himself revealed, on an article "first published in a Baltimore weekly paper, [which] was illustrated by cuts, and was entitled 'An Attempt to analyze the Automaton Chess-Player of M. Maelzel'" (20).<sup>33</sup> Poe explicitly agrees with the results of the article but raises niggling questions as to the method of its investigation and the "verbosity" of its style. Here again we encounter a latent fascination with rewriting both as a mode of correcting other texts and as a textual practice required to establish one's own ambitious project.

On a still broader scale, Maelzel's chess player figured as a perfect model for Poe's notion of the realignment of the human and the technological in modern society. To liken it to the most sophisticated contemporary technological inventions was therefore not just a smart move allowing him to question the existence of artificial intelligence. It was also a way of salvaging human agency as the irreducible foundation of scientific and technological progress. By deconstructing the simulated autonomy of Maelzel's controversial machine, Poe implicitly conjures up a division of labor along the familiar lines of the spiritual and the material. In contrast to hard-core Romantic ideology, however, the Chess-Turk makes this distinction appear mutually dependent rather than mutually exclusive. Against the cybernetic foil of a chess-playing automaton, Poe's essay projects an intellectual worker who is fitted snuggly into its elaborate mechanical bowels. As an integral part of the machinery, the human operator thus seems to capture metaphorically

what Poe, in his late philosophical treatise "Eureka," labels "the regathering of this diffused Matter and Spirit." <sup>34</sup>

Only if we read "Maelzel's Chess-Player" with an eye to Poe's ongoing attempt to close the widening gap between the realm of ideas and the realm of matter are we able to account for its often cited flaws and contradictions. What, if not its compelling symbolic potential, should have prompted Poe to tackle an issue that had already been broached in numerous contemporary magazines and journals? And why did he argue under the false assumption that the Chess-Turk must be able to accommodate a man of normal stature rather than a dwarf or an amputee, as other writers had suggested, both of which would have been more plausible solutions and, in addition, far easier to corroborate?<sup>35</sup> Regardless of the scholarly dispute about its original sources, Poe's essay clearly advocates a complementary vision of the modern union of man and machine. It is a cyborgean vision in which the machine acts as physical extension and not as a substitute for human life. Insofar as literary work depends on a combination of both technical skills and creative imagination, the modern author appears well equipped to represent and, at the same time, analyze critically the adoption of technology into modern cultural discourse.

## Do Machines Make History?

An important discursive field in which technology became an issue of paramount significance was the emerging concept of progressive linear history. As Rosalind Williams has pointed out, a correlation between historical and technological development can already be found in many of the master texts of the Enlightenment, such as Anne-Robert-Jacques Turgot's *Discours sur les progrès successifs de l'esprit humain* (1750), which posits that historical progress is determined by the creation of new systems of transportation and communication.<sup>36</sup> In early nineteenth-century America, where the railroad and the telegraph provided the basis for the geographic and economic exploitation of the country, the connection between technological improvement and national progress was almost taken for granted. In his political satire "The Man That Was Used Up," Poe takes issue with this important founding myth of the young nation, and he proposes another connection, namely, the techno-

logical constructedness of historical discourse itself. By juxtaposing contemporary discourses on history and technology through the cybernetic body of a popular political figure, he raises critical questions as to the authority of historical representation and, even more consequential, the crucial role of narrative therein. Thus, Poe's mysterious satire about a war veteran defined and, simultaneously, "used up" by technology inevitably brings to the fore the relations of myth, authorship, and the technologizing of historical discourse. It is to these relations that I now turn for the rest of this chapter.

If history, as postmodern critics have repeatedly argued, is socially constructed, then we must admit as well that one of the basic factors implicated in that process is closely related to myth or, in its modern variant, to fiction. Myths, according to Richard Slotkin, can be described as stories or narratives "that have acquired through usage over many generations a symbolizing function central to the culture of the society that produces them." Geared to a nation's political, cultural, and socio-psychological needs, these narratives produce and, at the same time, reinforce existing "archetypical patterns of growth and decay, salvation and damnation, death and rebirth." <sup>37</sup> What is more, as fictionalizations of systems of beliefs, values, and institutional power relations, they tend to historicize the ideological foundations of cultural behavior, thus providing the necessary continuity for the establishment of what we call national identity.

One of the most powerful myths pertinent to the construction of American national identity is the notion that technology represents progress and that the advancement of the sciences and their subsequent practical application equal an advance in history. As historians have noted, the coupling of technology and political idealizations of the republic is in fact almost as old as American society itself.<sup>38</sup> For the founding fathers, though they were apprehensive of the negative impact of the machine on communal life (especially in regard to urbanization and the establishment of an impoverished, morally loose proletariat), technological expertise was essential as a means to serve the needs of the individual citizen and to promote the republic's higher humanitarian goals as well. Even Jefferson, who promulgated in his *Notes on Virginia* (1785) the ideal of a pastoral America that would have no need for the corrupt practices inherent in large-scale industrial production, eventually con-

ceded the importance of technology as a major ingredient of historical progress.<sup>39</sup> To Robert Fulton, who had just invented a new steamboat, he wrote in 1810: "I am not afraid of new inventions or improvements. nor bigoted to the practices of our forefathers. It is that bigotry which keeps the Indians in a state of barbarism in the midst of the arts."40

The negative perception of Native Americans as entangled in primitive traditions and therefore out of sync with historical development is particularly revealing. The founding fathers defined themselves, in contrast to the native population, as historical executors of the Enlightenment, and they believed that the construction of the republic and the violence associated with its geographic expansion were part of what newspaper editor John L. Sullivan would later call America's "manifest destiny." 41 As a powerful form of national self-representation, "manifest destiny" embodies a progressive concept of history, a proto-Hegelian movement in time as well as space which has prompted a critic to suggest that "Hegelian thought was already present in Puritan America before if was present in Hegel's own person." 42 Given the progressivist view of history, the importance of technology thus was actually twofold: if technological advancement figured, in a very literal sense, as a means to conquer and eventually possess the whole of the continent, it was also taken to vindicate synecdochically the historical destiny of America and the accompanying extinction of its native population.<sup>43</sup>

That early nineteenth-century Americans should conflate the blessings and marvelous prospects of modern technology with historical progress in general is not at all surprising. Owing to the ongoing mechanization of almost all sectors of American society, the impact of technological improvements on the consciousness and imagination of the average citizen must have been tremendous. Poe's oeuvre clearly attests to this overwhelming presence of technology in antebellum America. As I have noted, Poe formally espoused and, at the same time, reworked contemporary scientific and mechanical paradigms to make them comply with his poetic purposes. Although he would never cease to promote the superiority of artistic imagination, many of his tales, poems, and critical essays embrace the presence of technology to such an extent that it would be difficult to position them within the context of Romantic idealizations of art and its corollary, the artist's antagonism to the emerging technological society.

To be sure, Poe repeatedly criticized the modern disparagement of the imagination and the spiritual aspects of life in general. In "The Colloquy of Monos and Una," he depicts technological progress as a utilitarian juggernaut that threatens to impair the creative spirit of the artist and that, therefore, should be taken not as an increase but rather as a "retrogradation in true utility." 44 And in "The Man That Was Used Up," he introduces a cybernetic character entirely defined and, simultaneously, "wasted" by modern technology. Still, if we investigate this text more carefully, we find that Poe's ambivalent stance toward technology did not at all blind him as to its far-reaching discursive ramifications, and especially to the impact it would have on the rhetorical practices and the construction of self in the young nation. By choosing an authentic historical figure as the model for his cybernetic hero, Poe effectively relates the construction of national history to the invention of new machines and the successive replacement of the human by the technological. Having created what was to become the first veritable cyborg figure in American literature, he uses this figure to project his critique of the contemporary belief in history as both an objective representation of past events and the fulfillment of America's special destiny. From this perspective, then, "The Man That Was Used Up" is more than just a political satire about a celebrated war hero whose mutilated body is replaced with technological "component parts"; it might also be read as a reflection of the centripetal forces created by the rising technological culture of antebellum America, and that held in thrall even those writers who seemed strikingly free from its rampant materialism and the belief in the historical agency of machinery.

As Stephen Bann has remarked, "One of the most potent causes, and one of the most widespread effects, of Romanticism was a remarkable enhancement of the consciousness of history." 45 As the rise of the historical novel set the pace for Romantic writers of the 1820s through 1850s, the "historical genre" invaded traditional forms of representation (such as painting) and created new modes designed for the performance and educational display of "history" (the diorama, popular spectacles, the historical museum). This fascination with the past seems to have been a direct result of the social revolutions of the late eighteenth century, when for the first time, according to Bann, "historical data became meaningful not only to a small band of passionately committed 'antiquarians'

but to a mass reading public." <sup>46</sup> If the increasing historical consciousness of modern society thus appears to be firmly rooted in the Romantic period, the literary critique of some of its basic premises, namely, the idealist emphasis on human agency and, perhaps even more important, the belief in gaining access to the past through pictorial and textual representations, can be traced back to Romantic writing as well. As I will show, Poe's scathing satire "The Man That Was Used Up" not only deconstructs the prominent role of an authentic antebellum political figure but also criticizes the progressivist view of history as a continuous flow, a linear forward movement driven by intrinsically related events.

"The Man That Was Used Up: A Tale of the Late Bugaboo and Kickapoo Campaign" is not a conventional story following a linear, consecutive plot line; rather it is a riddle based on a series of unrelated scenes in which the narrator tries to obtain information about the enigmatic protagonist, the so-called Brevet Brigadier General John A. B. C. Smith. The narrator's inquisitive stance is triggered equally by the colossal proportions and impressive dignity of the General's physique and by the persistent elusiveness of his unusual personal appearance. Although there was rarely a man endowed with limbs, arms, whiskers, eyes, and teeth as perfect as the ones belonging to the stately war hero, this impression is flawed by "a primness, not to say stiffness, in his carriage—a degree of measured, and . . . rectangular precision, attending his every movement." 47

From the very start, General Smith has more the attributes of a machine than of a human being, an impression that even his "conversational powers" cannot fully dissipate. Because of the aura of historical fame that surrounds Smith, the narrator, who appears to be the only one ignorant of the General's history, begins to inquire among his acquaintances about this extraordinary man and, in particular, the "tremendous events" in which he has allegedly played a decisive part. That the riddle is never completely solved and General Smith therefore remains a spurious figure even after the artificiality of his body has been exposed is an important aspect of Poe's metahistorical critique. Despite the narrator's expressed satisfaction in solving the mystery that had troubled him all along, readers are still unable to form a coherent picture of what is described as "a clear case." Having witnessed the General's reconstruction from scratch to artificial man-machine, the narrator, feigning his full

understanding of the true state of affairs, in fact discloses little more than an echo of the tale's already overdetermined title: "It was evident. It was a clear case. Brevet Brigadier General John A. B. C. Smith was the man—was the man that was used up" (389).

That technology plays a crucial role in the story can hardly be debated. When the narrator reveals the circumstances of his first encounter with John A. B. C. Smith, he immediately draws our attention to the General's obvious delight "in commenting upon the rapid march of mechanical invention:

"There is nothing at all like it," he would say; "we are wonderful people, and live in a wonderful age. Parachutes and railroads—mantraps and spring-guns! Our steam-boats are upon every sea, and the Nassau balloon packet is about to run regular trips (fare either way only twenty pounds sterling) between London and Timbuctoo. And who shall calculate the immense influence upon social life—upon arts—upon commerce—upon literature—which will be the immediate result of the great principles of electro magnetics! Nor, is this all, let me assure you! There is really no end to the march of invention. The most wonderful—the most ingenious . . . the most truly *useful* mechanical contrivances, are daily springing up like mushrooms." (381–82)

Technological progress is tied up with this character to such a degree that his very name evokes commendations of the age's inventiveness and mechanical expertise. Whenever the narrator alludes to the General, his friends and acquaintances invariably reiterate his paean to the "wonderful age" of invention. Although the General seems to be well recognized among his contemporaries as a living emblem of the marvelous prospects of modernity, the enthusiastic responses to the narrator's query about his actual identity remain strikingly evasive and tautological. With each interlocutor, the fabulous soldier becomes even more entangled in a skein of elliptic discourses that are bound to mystify rather than make lucid the facts and history of this mysterious personality. His impressive physical appearance notwithstanding, General John A. B. C. Smith remains quite literally a narrative construct, a hollow signifier of both technological ingenuity and historical myth.<sup>48</sup>

It is worth mentioning that for many antebellum readers the insinuated spuriousness of Smith's identity may have been far less puzzling. Not only did Poe situate his story within a clearly defined historical context, the campaign against the Kickapoo tribe in Florida in 1839, but also he created a protagonist who resembled the Indian fighter Richard M. Johnson of Kentucky, a well-known senator and congressman who served as vice president to Martin Van Buren from 1837 to 1841. Because of its numerous allusions to historical and contemporary figures, the story was repeatedly read as a form of political satire. As critics such as Willam Whipple, Ronald Curran, and Daniel Hoffman have noted, the tale's artificial protagonist aptly reflects Poe's disappointment with antebellum political machinery and his negative judgment of some of its shallow and pretentious representatives.<sup>49</sup> Even though it cannot be denied that the tale imbricates contemporary political culture on various levels, there are also indications that its major concern is with the construction and dynamics of historical discourse rather than the dreary business of actual party politics. More recently, Joan Tyler Mead and David Ketterer have stressed Poe's interest in (narrative) strategies of deception, or, as Poe himself has it, the "science of diddling." 50 Their arguments seem to be more to the point when, for example, Mead writes that the actual "diddle" in this story "is not so much Smith's imposture as it is the narrator's efforts to present himself as a naive yet earnestly thoughtful seeker of truth." 51 If we consider the narrator as the principal agent of deception, however, we also shift the emphasis away from the quasi-authentic figure of John A. B. C. Smith, alias Vice President Richard M. Johnson, to the ontology of historical events in general, or, in other words, to the question of how-and by whom-history is made.

In an important essay on the essentially rhetorical, "tropological" nature of historical discourse, Hayden White concluded with this provocative statement: "Events happen, facts are constituted by linguistic description." <sup>52</sup> White's analysis of the "narrativization of real events" turns on the idea that history is linguistically constructed and that therefore studies of the past must be submitted to the same kind of critical reading that we bring to bear on fictional narratives.

Whereas White's poststructuralist stance seeks to expose the literariness of historical events, one could argue that Poe's metahistorical comments in "The Man That Was Used Up" were bound to foreground the

factitious and inherently mythopoeic character not of the events as such but of the historical personae whom we take as guarantors of their authenticity. Although Poe's narrator pretends to be as "plain, positive, peremptory . . . as Tacitus or Montesquieu" (386), the text does not provide us with any information whatsoever about the actual conflict with the rebellious Indians or the circumstances involving General John A. B. C. Smith. All we ever get are cryptic allusions to his heroic bravery and, as a result thereof, his deplorable existence as a living machine, a man literally "used up" by the violent consequences of military engagement. If we consider the General's enthusiasm about "man-traps and spring-guns," destructive devices designed to keep intruders away from private property, we are rather led to infer that Poe wanted to attack the destructiveness of modern technological warfare, an inference that becomes even more compelling when we take into account that the railroad and, later, the telegraph were instrumental in the military subjugation of Native Americans. Since the destruction in this tale extends to the victorious hero himself, we cannot but read the artificial reassembling of his body as a sarcastic comment on the dubious miracles wrought by contemporary technological power.

Yet there are other ramifications as well. As I indicated earlier, the persistent allusions to the General's involvement in the momentous events of the Bugaboo and Kickapoo campaign, whose historical importance is further highlighted by a quotation from the Aeneid ("events quorum pars magna fuit," 382), are never fully explained.53 Apart from the historical background of the Florida Indian Wars, which Poe in an article in Alexander's Messenger of March 18, 1840, revealingly called the "Railroad War," the actual incidents remain as much a matter of public discourse—or, to be more precise, hearsay—as the shadowy figure of General Smith. Throughout the story, the foundations of his fame as an invincible war hero, that is, the gory entanglements that eventually led to his physical dismemberment, are stubbornly withheld from the reader's view. This conspicuous omission deserves closer attention. As Hannah Arendt once observed, the idea that the great deeds and works of mortal men are the substance of historical narrative constitutes one of the basic premises of traditional Western historiography. These single instances, deeds, or events, Arendt argues, "are not seen as parts of either an encompassing whole or a process." Rather, they interrupt "the circulated movement of daily life in the same sense that the rectilinear  $\beta$ io $\zeta$  of the mortals interrupts the circular movement of biological life. The subject matter of history is these interruptions—the extraordinary, in other words." <sup>54</sup>

Because of their biological confines, it is only by elevating particular events and heroic deeds onto the level of the extraordinary that men are capable of endowing themselves with some kind of permanent fame. If this process is inextricably tied up with the act of storytelling (according to Arendt, the function of historical narrative is to expose the extraordinary character of past events), in "The Man That Was Used Up," Poe pushes the idea one step further. Contrary to Arendt's humanist emphasis on the importance of human agency in history, this scathingly revisionist tale seems to imply that outside of the linguistic concoctions of gossip and myth there exist neither important events nor prominent actors (of whom the public imagination traditionally conceives as the driving forces of history). This is also why Poe has his famous protagonist metamorphose from human being to machine. At the end of a long series of linguistic substitutions, the General is in fact "used up" to such a degree that the seemingly authentic figure fully vanishes behind his composite mechanical double. What at first seems a mere takeoff on the age's infatuation with mechanical gadgets-that is, the story of a man assembled of prosthetic body parts—on closer scrutiny turns out to be a deconstruction of the idealist notion that it is human agency alone that drives history.

Poe's text not only insinuates the lethal role of machinery into the struggle against the native population but also uses mechanical paradigms in order to highlight the narrative construction of historical facts. "The [narrator's] analysis of General Smith's appearance," as Mead rightly remarks, "does not enhance the figure, but instead reduces it to nothingness." Not until the final scene do we actually get an inkling of the extent to which his outward appearance is artificially constructed. As Smith, with the assistance of his black servant Pompey, gradually assembles himself from an array of artificial eyes, teeth, arms, limbs, and other prosthetic parts, we are called upon to witness at the same time the reconstruction of a historical myth. Since the General is but a mechanical simulacrum of his former self, neither his incoherent rambling nor the fragmented rumors provided by his peers are able to support his

authenticity. On the contrary, it seems as if the very lack of reliable data provokes the narrator's own fictional solution to what he gathered from hearsay, thus triggering the imaginative reincarnation of his hero as both man-machine and historical personage.

From this perspective, "The Man That Was Used Up" appears to be technologically determined on at least three different levels. First, its protagonist is literally a product of the wonder-working agency of modern technology, a Romantic cyborg wholly dependent on its exquisitely manufactured replacement parts. Second, the historical events that figure as the tale's authentic backdrop are depicted as entangled in if not actually caused by the technological craze rampant in antebellum America. And third, representations of the past are treated as complex aggregates of linguistic component parts rather than as quasi-natural reflections of historical truth. The "true" General, the authentic Indian fighter, remains hopelessly out of reach of the narrator's investigative capacities. Never does the latter come any closer to the purely linguistic constructedness of this quasi-historical figure than when listening to his disembodied, metallic voice:

As I entered the chamber, I looked about, of course, for the occupant, but did not immediately perceive him. There was a large and exceedingly odd-looking bundle of something which lay close by my feet on the floor, and, as I was not in the best humor in the world, I gave it a kick out of the way. "Hem! ahem! rather civil that, I should say!" said the bundle, in one of the smallest, and altogether the funniest little voices, between a squeak and a whistle, that I ever heard in all the days of my existence. (386–87)

It is a voice cut off from its physical-material counterpart, the General's "used-up" body, thus representing at once the linguistic practices at work in the construction of historical events and the uninspired mechanical processes that relate, according to the tale's metaphoric strategy, the making of history to the making of a machine or, more to the point, a man-machine.

Obviously, Poe's discourse-oriented approach to historical representation also cuts across issues of authorship and authenticity. By disjoining the voice from the historical persona, Poe turns history into a contested

space of discursive acts, a space defined by the same mythopoeic techniques and plagiarist strategies that were essential to his modernist writing policies. If the author of the "The Man That Was Used Up," as Gerald Kennedy once suggested, was "more or less continuously after 1835 ... immersed in a warfare which involved reputations, cliques, and artistic standards," this story might well be taken as "an outrageous conceit of dismemberment from the colloquial notion of 'using up' or abusing an author in print."56 But also, in an environment of everproliferating texts, the writer's work appears to be just as "artificially" constructed—that is, constituted by the textual replacement parts of other writers—as the body and historical renown of General John A. B. C. Smith. While tackling an area supposedly foreign to the writing profession, Poe's enigmatic story, once more, only reflects the modern production of literary texts. Moreover, it turns the topical dominance of technology in antebellum discourse into its structural modus operandi. Having theorized that technology possesses explanatory power even for the aesthetic project of the writer (or historian, for that matter), Poe reveals himself to be deeply affected by contemporary technological paradigms. Far from being the nemesis of Romantic writing, the technologizing of discourse figures in Poe's fiction as a means of promoting literary authors as interpreters and mediators of the diverse cultural changes determining modern society.

In order to comprehend the tangled skein of attitudes and responses to technology in antebellum America, one must be aware that machinery did not just figure as the icon of a marvelous technological future. It also represented an important epistemological paradigm with ramifications for almost every area of human knowledge. Given his well-known interest in contemporary scientific and technological paradigms, it was only logical that Poe should adopt mechanical imagery in order to articulate his revisionist view of historical representation. His creation of a man whose biological parts have been replaced by machinery thus reflects the lingering influence of mechanical philosophy and its machinist description of the human body. If Poe's topic is not so much that machines themselves make history, "The Man That Was Used Up" nevertheless implies that the processes by which we attain a coherent vision of the past are technologically determined. There is little doubt that the prosthetic figure of General John A. B. C. Smith represents one of Poe's

finest attempts at what might be called fictional "diddling"; yet, if we follow the tale's constructionist argument, his cybernetic body also refers us to the narrative mechanics by which random names and events are transformed into historical facts. In answer to the rather provocative question posed by the title of this chapter, one is therefore tempted to suggest that for Poe, machines do after all make history, if only—that is, exclusively—literary history.

chapter four

FIGURING MODERN AUTHORSHIP
MELVILLE'S NARRATIVES OF

TECHNOLOGICAL ENCROACHMENT

I can't stop yet. If the world was entirely made up of Magians, I'll tell you what I should do. I should have a paper-mill established at one end of the house, and so have an endless riband of foolscap rolling in upon my desk; and upon that endless riband I should write a thousand—a million—billion thoughts.

Herman Melville to Nathaniel Hawthorne, November 1851

If in 1851, shortly after critics had roasted his sixth and most ambitious novel, *Moby-Dick*, Melville could imagine his writing as unstoppable, many of his forthcoming texts were marked by an equally unstoppable, highly ambiguous self-questioning of their author's literary efforts. In fact, his metaphor of his writing desk turned into an assembly line endlessly putting forth textual reproductions of a "billion thoughts" appears as a postscript to an all but desperate letter to Hawthorne in which he tries to resign himself to having, once again, his "paper allegories but ill comprehended." In weird, melodramatic terms, Melville conjures up a unique literary bond between the two writers, mostly because Hawthorne, in a previous letter, had been full of praise for the momentous *Moby-Dick*; yet he also expresses his grief about the lack of public rec-

ognition and—not to forget—remuneration for the tremendous literary hardships that lay behind him ("My peace and my supper are my reward, my dear Hawthorne," 212).

About a year earlier, torn between family obligations, financial shortages, and the demands of finishing his "Whale," Melville had written to Evert A. Duyckinck, his New York editor: "Can you send me about fifty fast-writing youth, with an easy style & not averse to polishing their labors? If you can, I wish you would, because since I have been here I have planned about that number of future works & cant find enough time to think about them separately.—But I dont know but a book in a man's brain is better off than a book bound in calf-at any rate it is safer from criticism." Apart from the foreboding undertone, these remarks are especially noteworthy because they dramatize a crucial conflict between Melville's overflow of inventive energy, on the one hand, and the obstacles he saw embedded in the process of turning his thoughts into written texts, on the other. For Melville, the tension between "a book in a man's brain" and "a book bound in calf" meant more than just the bitter prospect of public neglect. It was also related to the physical struggle his writing entailed, in the sense both of overcoming the continuous eye, back, and head trouble which made writing for him a physical ordeal rather than a pleasure, and of effacing the very materiality of the page itself.

Nowhere is this physical strain more captivatingly articulated than in his least successful novel, the embarrassingly overwritten *Pierre*, *Or the Ambiguities* (1852). Here is how Melville describes the tormented literary struggles of his writer-protagonist Pierre Glendinning:

Much oftener than before, Pierre laid back in his chair with the deadly feeling of faintness. . . . His incessant application told upon his eyes. They became so affected, that some days he wrote with the lids nearly closed, fearful of opening them wide to the light. Through the lashes he peered upon the paper, which so seemed fretted with wires. Sometimes he blindly wrote with his eyes turned away from the paper;—thus unconsciously symbolizing the hostile necessity and distaste, the former whereof made of him this most unwilling statesprisoner of letters.<sup>4</sup>

In addition to his physical ailments, Melville's relationship with the written page was a "violent one that disfigured its surface, filling up every available white space with writing as well as cross-outs, revisions, carets, circles, and other manipulations." As if to suppress the glaring materiality of the blank paper, he left no margins and wrote on both sides of each page, often further covering it with cut-and-pasted passages. Since he could not do away with the physical medium altogether, it appears almost as if he wanted to reduce its importance by hiding it under a web of proliferating, meticulously condensed text.

Yet neither the physical strains of literary work nor his antagonism to its material foundations would deter him from producing nine novels, three book-length novellas, a volume of shorter narratives, and, toward the end of his life, a substantial body of poetry, including Clarel (1876), a veritable monster of a historical poem whose 150 cantos alone cover some 800 pages in the original edition. Clearly, Melville was not at all opposed to the modern proliferation of written texts as such (although he repeatedly complained about the commercialization of antebellum reading culture). As the letter to Hawthorne suggests, he was even willing to relegate his writing to a quasi-industrial process, if it would only let him keep pace with his manifold literary projects. If he still sometimes romanticized writerly activity, it was mostly in response to his grief at being continuously misread by his critics. And in contrast to Poe, Melville was concerned not at all about the difficulty of producing original thoughts, but rather about their representation and public recognition. While constantly pondering adequate modes of translating ideas into literary texts, he rarely ever articulated an anxiety about the waning of his creative resources.

There is little doubt that Melville's literary self-representations are steeped in remarkably priapic bodily imagery. In his later poem "Art" he is at his most outspoken in regard to the physical demands of artistic composition, thereby allowing us to glimpse a possible source of his ongoing fixation with sexually loaded metaphors of writerly activity: "In placid hours well-pleased we dream / Of many a brave unbodied scheme. / But form to lend, pulsed life create, / What unlike things must meet and mate." Here the opposition between ideas and their material conduits (the "book bound in calf") is transmogrified into a conflict

between amorphous schemes and their structural embodiment as literary text. If it is the artist's task to negotiate the conflictual relations between content and form, Melville depicts this activity as a sexualized, quasi-biological process. By the same token, the bringing together of the foundational opposites associated with artistic creation becomes an act of "mating," of bodying forth the "pulsed life" of the work of art. The final lines of the poem all but corroborate such a sexual reading. To emphasize the physical toll the mating of these antagonist energies takes on the struggling artist, Melville equates him with Jacob in his mutilation by the angel of God: "Instinct and study; love and hate; / Audacity—reverence. These must mate, / And fuse with Jacob's mystic heart, / To wrestle with the angel—Art." Since Jacob is seriously wounded in the "hollow of his thigh," the threat of emasculation looms large in Melville's conception of the artistic process.<sup>7</sup>

That Melville's conception of the writing process possessed significant sexual overtones can also be seen in *Pierre*. In one of its crucial scenes, Melville depicts literary work not only as a marker of the protagonist's isolation from the rest of society but also as a means to alleviate the complexities and tensions of his sexual life. While struggling to keep pace with his publisher's schedule, Pierre appears to be increasingly freed of his sexual drives:

How bitterly did . . . Pierre feel in his heart, that to most of the great works of humanity, their authors had given, not weeks and month, not years and years, but their wholly surrendered and dedicated lives. On either hand clung to by a girl who would have laid down her life for him; Pierre, nevertheless, in his deepest, highest part, was utterly without sympathy from anything divine, human, brute, or vegetable. . . . Now he began to feel that in him, the thews of a Titan were forestallingly cut by the scissors of Fate. He felt as a moose, hamstrung. (338–39)

By using a plethora of implicitly sexual terms, Melville tries to capture the isolation and, basically, the desperate lifestyle of the artist. The writer's fate, according to this logic, is of necessity a castrating one, in the twofold sense, first, of alienating the literary worker from his environment, and second, of corrupting his lofty aspirations through the mate-

rial demands of authorship. More important, perhaps, the impact of the outer world on the creative artist could also be considered castrating because it generally defies representation. Not only does he suffer from the ongoing struggle between his artistic ideals and the practical requirements of book production, but also the greatest woe of all, if we follow the writer figure in *Pierre*, is that the author's pains can hardly be communicated, that "all these things [remain] unsuspected without, and undivulgible from within" (338).

Melville's assessment of writing as both an act of engendering and an act of emasculation apparently fits with Romantic conceptualizations of art. Yet the symbolic encodings of his notion of authorship differ from the organicism of Coleridge or Thoreau in decisive ways. To begin with, Melville knew well that the grounding of art in biology was a problematic move based on the idea that art is somehow exempt from the contagion of modern capitalist society. Far from repressing the materialism pervasive in contemporary American culture, Melville's fictional selfrepresentations serve a different purpose. While figuring the encroachment of technology on creative work, notably its implication in the networks of production and marketing, industrial narratives such as "The Bell-Tower," "The Tartarus of Maids," and "Bartleby, the Scrivener" acutely register the consequences of modernization. In doing so, these texts are constantly engaged in probing the fragile boundaries between the human and the machine, thereby producing a number of gendered cybernetic images especially designed to navigate the controversial identity of the writer in antebellum America.

To an even greater extent than Hawthorne and Poe, Melville sensed the larger cyborgean implications of what it meant to live, or, more appropriately, to write, under conditions of modernity. Insofar as his fiction often foregrounds the adversarial relations of organic conceptions of art and the mechanics of industrial production, Melville remains clearly within the ideological framework of Romanticism. Yet by overlaying this ideology with gendered images of procreation and the body, he also makes an effort at reconciling—at least metaphorically—what for many critics appeared irreconcilable: the tense relations between the Romantic writer and modern society. In what follows, I bring into conjunction two major strands of criticism regarding these allegorical texts: first, what might be called the sociopolitical approach, which posits that

Melville was primarily interested in social criticism, that is, the representation of the bleak, inhuman aspects of mechanized labor and working-class life in contemporary America; and second, various psychoanalytical readings that stress the sexual-reproductive implications of these texts, especially "The Tartarus of Maids," without contemplating the symbolic web that entangles simultaneously industrial, bodily, and textual forms of production.9

## Writing in a Different Time

Some thirty years after James Kirke Paulding's dystopian satire "The Man Machine," Melville set out to explore the technological dimensions of modern society in detail. In many of his shorter narratives, and occasionally also his novels and poetry, he took issue with antebellum utilitarian ideology and its dominance over public discourse. In ironic stories such as "The Lightning-Rod Man" (1854), Melville ridiculed the religious fervor with which his contemporaries hailed the blessings of modern technology, and he exposed the mythopoeic ramifications that sprang from the materialist emphasis on matter and technical ingenuity. Antebellum materialism is also under attack in "Cock-A-Doodle-Doo!" (1853), yet this blatant satire of industrial and social corruption has recourse to a more contemporary icon of technology. Against the authentic backdrop of a number of dreadful train and steamship accidents, the narrator denounces the age's progressive ideology in terms too exaggerated to be taken at face value:

Great improvements of the age! What! to call the facilitation of death and murder an improvement! Who wants to travel so fast? My grandfather did not, and he was no fool. Hark! here comes that old dragon again—that gigantic gad-fly of a Moloch—snort! puff! scream!—here he comes straight-bent through these vernal woods, like the Asiatic cholera cantering on a camel. . . . For two hundred and fifty miles that iron fiend goes yelling through the land, crying "More! more!" 11

Evoking the transcendentalists' critique of the reification of culture, Melville deals more with the economic underpinnings on which technology thrives than with its actual manifestations such as speedy trains and steamers. If he wishes "fifty conspiring mountains" to halt the course of the demonic engine, he wants them to fall also "atop of that smaller dunning fiend, my creditor, who frightens the life out of me more than any locomotive." While using technological innovations as a rhetorical foil, his is a criticism above all else of American commercial culture, as well as of the social myths and false rationalizations of material progress that spread in its wake.

From yet a different perspective, Melville's war poem "A Utilitarian View of the *Monitor*'s Fight" also registers the signs of modernization and the cultural changes concomitant with technological progress. This poem is especially noteworthy not only because it articulates the mechanization of modern combat but also because it addresses the consequences thereof on the work and style of the writer. Since Melville had been himself an ordinary seaman for almost twenty years, to him the inconclusive Civil War battle between the two ironclad vessels, the Union *Monitor* and the Confederate *Merrimac*, perfectly embodied the modern shift from man to machine:

Plain be the phrase, yet apt the verse, More ponderous than nimble; For since grimed War here laid aside His Orient pomp, 'twould ill befit Overmuch to ply The rhyme's barbaric cymbal.

Hail to victory without the gaud Of glory; zeal that needs no fans Of banners; plain mechanic power Plied cogently in War now placed— Where War belongs— Among the trades and artisans.

Yet this was battle, and intense— Beyond the strife of fleets heroic; Deadlier, closer, calm 'mid storm; No passion; all went on by crank, Pivot, and screw,
And calculations of caloric. . . .

War shall yet be, and to the end;
But war-paint shows the streaks of weather;
War yet shall be, but warriors
Are now but operatives; War's made
Less grand than Peace,
and a singe runs through lace and feather.<sup>13</sup>

What has formerly been a scene of heroic and glorious deeds is now turned into an industrial battlefield where mechanization, to retool a phrase from the art historian Siegfried Giedion, has taken command.<sup>14</sup> As the poem impressively suggests, war has become a confrontation between mechanical forces, a sober, passionless conflict whose participants are merely "operatives," military workers operating an encompassing machinery of destruction. Moreover, just as ironclad warships have supplanted the epic heroes of ancient lore, so must the poet also adapt to the new situation. If today's warriors win their battles by way of "calculations of caloric," this is what the writer's work must reflect as well. Melville's poem certainly tries to live up to its call for "plain phrase" and "apt verses." The rhythm appears to be directly informed by the cranking of machinery, and its vocabulary is replete with prosaic, technological terms. Since Melville was well acquainted with the history of naval warfare, he may have regretted deeply the waning of its alleged heroism; yet the general tone here is far from rueful. On the contrary, war is now placed "where War belongs-among the trades and artisans," and its literary assessment, therefore, should be as sober and matter-of-fact as the technologies used to wreak its material and human havoc.

However technical modern society might have become, it did not lack the moral dimension prominent in many of Melville's literary works. In the well-known parable "The Bell-Tower" (1855), often described as one of his most Hawthornesque narratives, both the hubris and the vested political interests associated with modern technology provide an apt target for the writer's pen. <sup>15</sup> Although the text is steeped in its Renaissance setting, the scope and impact of its social commentary are by

no means restricted to the historical frame. As one can readily see, the complicity between Bannadonna, chief engineer of a gigantic bell tower, and the representatives of the town on whose behalf the awesome structure is erected reveals more than just a fleeting reference to contemporary politics. When the ambitious engineer is publicly acquitted of killing a faltering workman, Melville' narrator has nothing but contempt for the utilitarianism and opportunistic reasoning of the local authorities. As he scathingly remarks, Bannadonna's splendid achievement, the huge, unprecedented bell that was to crown the titanic tower, is of such dimensions that "the state might not scorn to share" in its success with the public.16 What should have been treated as outright homicide is thus not simply overlooked but reinterpreted as an act of "esthetic passion" (176). Instead of holding Bannadonna responsible for the human toll demanded by his excessive professional pride, the political establishment focuses entirely on the symbolic significance of his technological venture, drowning its own "sickly conscience" in the show and pomp of public celebration.

Obviously, the incident foreshadows the tendency of modern societies either to suppress or to redefine in euphemistic terms the negative consequences of technological progress. Its historical, preindustrial setting notwithstanding, Melville's allegorical tale takes issue with antebellum utilitarian practices, and it reflects specifically the growing emphasis on technology by way of numerous anachronistic references to contemporary technical devices such as railways and modern timepieces.<sup>17</sup> That these references are by no means accidental is revealed in a footnote that appears on the last page of the story as originally published in *Putnam's Monthly Magazine* but was omitted in the 1856 *Piazza Tales* as well as in all subsequent editions of the story: "It was not deemed necessary to adhere to the peculiar notation of Italian time. Adherence to it would have impaired the familiar comprehension of the story. Kindred remarks might be offered touching an anachronism or two that occur." <sup>18</sup>

If this disclaimer is meant to make the tale's contemporaneity even more compelling, it is not, however, the representation of modern technology per se but rather its various cultural and structural ramifications that merit closer attention. One might argue that, far from simply expounding the dangers of machinery run amok, "The Bell-Tower" takes aim at secondary yet no less disturbing changes induced by the ongoing

mechanization of antebellum society. As with Hawthorne's treatment of the topic in "The Birth-mark," Melville's interest in technology is primarily focused on its cultural consequences, especially in conjunction with the work and identity of literary authors.

Bannadonna's remarks on artistic originality are a case in point here. When he insists that "there is a law in art, which bars the possibility of duplicates" (179), this statement must also be taken as undermining the uniformity associated with his own line of work. As an engineer entrusted with the erection of a gigantic public timepiece, he finds his artistic ideals and the demands of his mechanical profession clearly at odds. Fancying himself a "true artist" (185), Bannadonna is entirely absorbed with improving the ornamental design of the giant bell. While working to make its figures as unblemished and original as possible, he is crushed to death by the relentless movement of the clockwork, a significant symbolic fate that powerfully underwrites the complex relationship between the modern artist and technology. Bannadonna, one might say, successively evolves from a representative of the useful arts into an artist seeking solely aesthetic perfection. His tragic death therefore cannot be blamed on the breakdown or dysfunction of the apparatus itself; rather it must be attributed to his interference with the mechanical processes he has set in motion:

> And so, for the interval, he was oblivious of his creature; which, not oblivious of him, and true to its creation, and true to its heedful winding up, left its post precisely at the given moment; along its well-oiled route, slid noiselessly towards its mark. . . . The falling body clogged the thing's return; so there it stood, still impending over Bannadonna, as if whispering some post-mortem terror. The chisel lay dropped from the hand, but beside the hand; the oil-flask spilled across the iron track. (186)

Since I am concerned here with cybernetic imagery, the ambiguous character of the "creature" in the passage just cited should not go unremarked. Its referent, to be sure, is not the clockwork as such but a mechanical bell ringer whose mythical implications, as well as the fact that the apparatus remains veiled under a sheet of canvas throughout the events, misleadingly tinges the story with Frankensteinesque overtones.

True, Talus or Haman, as Bannadonna calls the figure, bears an uncanny resemblance to a living watchman striking the bells at appointed times. It is also said to have stirred and moaned repeatedly under its cloak, an allusion to humanness heightened further by Bannadonna's confused modes of address ("Haman . . . as I merrily call him, —him? it, I mean," 178). Even though the machine's ontological hybridity is undeniable, however, it is by no means its anthropomorphic qualities that bring about Bannadonna's destruction. Talus is not another "Prometheus unbound," taking revenge on its inventor's sacrilegious effort to compete with nature; nor does he warrant an interpretation that would make him the emblem of technology out of control, and therefore by implication of Romanticist technophobia and antimaterialism. If we concede his heterogeneous, cybernetic nature, this conspicuous man-machine is simply a mirror image of the structural conflict inherent in his creator's divided profession, that is, the conflict between Bannadonna's vocation as an artist, on the one hand, and the unredeemed grounding of his ambitious work in the material world, on the other.

Bannadonna's project, in short, is enmeshed in and, at the same time, represents a significant shift in the development of modern authorship. Although he aspires to aesthetic perfection, the daring combination of clock tower and bell tower (including the ominous mechanical bell ringer) clearly belongs to the realm of technology, a realm ruled by "caloric calculations" rather than the dated laws of artistic originality. Once they are put to work, mechanical devices proceed in a regular, predictable manner. When Talus embarks on his mechanical journey to strike the correct time, his movements are dictated by the springs and wheels of the clockwork alone. Just as the clockmaker is oblivious to his interference with mechanized processes, so the machine he created is oblivious to him. The conflict, then, symbolically embedded in Bannadonna's destruction is not that he aspired to some unattainable ideal but that he did not acknowledge the quintessentially technological nature of his work. More significantly, Bannadonna is shown to be engaged in superficial ornamental improvements. Whatever his efforts in making the sculptural representations of the hours more original, in no way did they affect the regular, inexorable movements of the underlying machinery.

That Melville's "Bell-Tower" indeed addresses the larger context of antebellum society and its growing dependence on technology can be deduced, first, from the narrator's comparison of Haman's sliding movement to the age's key technological metaphor, the railway (185). And second, the tale makes various allusions to contemporary political agendas, especially to the infamous southern institution of chattel slavery. This connection is spelled out in the famous first epigraph to the story ("Like negroes, these powers own man sullenly; mindful of their higher master; while serving, plot revenge," 174) and, additionally, by the bell ringer himself, who is described as striking the clock "with uplifted manacles" (185). It is quite possible, as some critics have surmised, that Melville wanted to expose the long-term consequences of slaveholding by juxtaposing it metaphorically to Bannadonna's destruction; yet it seems at least equally plausible to me that slavery—with its multi-level symbolic associations—functions in this text as an emblem of the writer's subordination to the modern means of textual reproduction and dissemination.<sup>19</sup>

Talus, it should be remembered, is but the result of an idealist projection of automated labor. As the narrator tells us, Bannadonna "had been without sympathy for the vainglorious irrationalities of his time" (184). His is not the aim of certain natural philosophers who hoped "to arrive at a knowledge of the source of life," nor is he one of those notorious alchemists who sought to evoke "some surprising vitality from the laboratory" (184). Rather Bannadonna is a practical man who culls his ideas from real phenomena, that is, in this particular instance, from observing a stalwart watchman in the sentry box of an ordinary bell tower. His perception of that original scene is quite instructive here: "The human figure, viewed from below, undergoes such a reduction in its apparent size, as to obliterate its intelligent features. It evinces no personality. Instead of bespeaking volition, its gestures rather resemble the automatic ones of the arms of a telegraph" (183). Apart from the striking reference to modern communications technology, this paragraph is significant because it reflects Melville's anxiety about humans being enslaved by automated work routines.

Somewhat paradoxically, Bannadonna sets out to duplicate the regular movements of the watchman with utmost precision while simultaneously trying to enliven the picture by attributing those movements to human willpower: seeing "the vital watchman on the roof, sallying from his retreat at the given periods[,] . . . Bannadonna had resolved that his

invention should likewise possess the power of locomotion, and, along with that, the appearance, at least, of intelligence and will" (183). His fatal error, then, was one intimately connected to the strategies and presuppositions of his idealizing approach. However noble his wish to attribute intelligence to the mechanical watchman, the standardized procedure of indicating time simply does not allow for such artistic manipulation. To make the iron replica in every outward and inward respect "an original production" (185) is thus basically a contradiction in terms, an anachronistic mode of representation that fails to take note of the utterly mimetic, homogenizing character of modern technological society.

Melville seems to have been well aware of the cultural and technological shift that was increasingly subverting the law of artistic originality. In "The Bell-Tower" he leaves no doubt that the material representation of a human watchman, its inventor's lofty ambitions to the contrary, always only remains a machine. By striving to endow the bell ringer with human features, Bannadonna actually betrays its mechanical nature, producing instead an anachronistic cyborg figure "manacled" to a larger machinery (the clockwork), a figure that thus only reflects his own insecure identity as both mechanic and artist. From this perspective, Bannadonna himself appears to be but a cursed descendant of Ham(an), whom Melville repeatedly associated with slavery in the United States, and together they partake in a "twinning between characters" which, beginning with Pierre, would ultimately dominate much of Melville's later fiction.20 Yet I would argue that instead of weakening the grounding of his texts in social reality, as Michael Rogin claims, the dissolving of identities and the introduction of cybernetic others acting as mirror images for the writer-author only represent a more complex stage of Melville's self-conscious fictional enactments of authorship in antebellum America.

I have indicated before that "The Bell-Tower" is full of cultural anachronisms, thereby drawing our attention to the behavioral shifts concomitant with the process of modernization. If the measuring and general awareness of time as a structural element of antebellum life constituted an important subtext of Hawthorne's "Artist of the Beautiful," in the Melville text these issues assume even greater significance. One of the most radical features of Bannadonna's tower is thus not the sheer height

to which it aspires but rather that it is both clock tower and bell tower, which "before that period . . . had commonly been built distinct" (175). Since punctuality and regularity were crucial factors in transforming agrarian societies into sites of industrial production, the erection of a monumental phallic timepiece must be read as an assessment of and commentary on this very transition. Melville goes even further than that, however. When the public finally gathers around the tower to await the unveiling and dedication of the new clockwork, we seem to witness an event more reminiscent of the dropping of the ball in Times Square on New Year's Eve than of a Renaissance community honoring its famous engineer: "Watches were held in the hands of feverish men, who stood, now scrutinizing their small dial plates. . . . The hour hands of a thousand watches now verged within a hair's breadth of the figure 1" (181).

Even though the obsession with time-measuring instruments dates back to the fifteenth century, the actual structuring of everyday life around dependable units of time is a relatively new phenomenon. And this also holds for the mass production and ownership of individual timepieces. The image of "the hour hands of a thousand watches" verging toward a given moment in time thus sets the stage for a more contemporary shift in temporal experience: the shift from premodern to modern temporality, from an individual, cosmology-based understanding of time to a historical scheme of universal progress. By stressing the blurring of individual time in a moment of collective experience, Melville once more points toward the unifying aspects of modernity, a move that coincides with his concern about the uniformity of mechanical modes of production and its corollary, the loss of originality.

It might be revealing in this context that, in a letter to Duyckinck in 1851, Melville had expressed his unwillingness to supply for publication a daguerreotype of himself, precisely because he feared a lack of distinction or, in his own words, the possibility of being "oblivionated" by the process of photographic reproduction:

As for the Daguerreotype (I spell the word right from your sheet) that's what I can not send you, because I have none. And if I had, I would not send it for such a purpose, even to you. . . . The fact is, almost everybody is having his "mug" engraved nowadays; so that this test of distinction is getting to be reversed; and therefore, to see

one's "mug" in a magazine, is presumptive evidence that *he's a no-body*. So being as vain a man as ever lived; & believing that my illustrious name is famous throughout the world—I respectfully decline being *oblivionated* by a Daguerretype (what a devel of an unspellable word!)<sup>23</sup>

In juxtaposing, in both his fiction and the correspondence, mechanical reproduction and the fading of originality, Melville prefigures to an astonishing degree an aesthetic critique of technology that has come to be almost exclusively associated with twentieth-century, high modernist discourse, a discourse epitomized in Benjamin's famous essay "The Work of Art in the Age of Mechanical Reproduction." <sup>24</sup> Throughout his industrial narratives he examines the conditions of modern writing with an eye to this connection between uniformity and technology, and he projects the conceptual tensions arising from the material grounding and technological determinacy of professional authorship onto imaginary cybernetic doubles. Put another way, a major concern of these texts is to chart the territory of writing and its relation to technology by symbolically blurring the work of the author with other important modes of social production.

# Authorship, Technology, and the Impress of Gender

When Melville wrote the 1851 letter to his publisher, the paper he used was embossed with the name "Carson's Dalton MS," the trademark of a paper factory in western Massachusetts to which he had taken his family on an expedition on January 11. Next to the ornamental relief Melville jotted the following explanation for Duyckinck: "—about 5 miles from here, North East. I went there & got a sleigh-load of this paper. A great neighborhood for authors, you see, is Pittsfield." Some six months before he would invoke the imagery of a paper mill in his appendix to the Hawthorne letter, Melville had thus taken a close look at some of the material processes on which his writing depended. Although he did not communicate his feelings upon visiting the mill, it becomes quite clear from his remark to Hawthorne, and especially from the second half of the diptych "The Paradise of Bachelors and the Tar-

tarus of Maids" (1855), that he must have thought of the paper mill as metaphorically connected with the toil of authorship.

Although references abound in "Tartarus" to both technology and writing, the latter topic remains conspicuously absent from critical discussions of this illuminating text.<sup>26</sup> Even Marvin Fisher, whose discussion of the conflict between nature and culture in the story is still one of the most substantial contributions so far, fails to detect in it anything but a concern for what he calls a "particularly American dilemma": the social, economic, and psychological dimensions of increasing industrialization and its overt denunciation by American Renaissance authors.<sup>27</sup> Fisher's insight into the cultural subtext of "Tartarus" is heavily influenced by the classic studies of Henry Nash Smith and, later, Leo Marx, who argued that nineteenth-century Americans still conceived of America as an agrarian paradise, a virgin land that served as a symbolic vindication for the nation's existence but was successively coming under attack from the onslaught of technology. From this perspective, literary cultural assessments such as "Tartarus" try to reinforce rather than to question or reject that myth, reacting "with a heightened sensitivity to the force which most emphatically contradicted this view and undermined all its assumptions—the force of the machine, which turned virgin land and potential paradise into potent hell and, for Melville, served to polarize all human experience."28

To be sure, I am far from denying the well-documented fact that Americans used an ideological concept of nature to negotiate their national identity. What I do contest, however, is the notion of American Romantic writers as being all but passive participants in the literary construction of that national ideology. As for the story at hand, I strongly agree that "Tartarus" is all about a cultural dilemma involving the practical and psychological consequences of industrialization. Even so, Melville's stance in this conflict appears to be far more complex and probably also more interesting than most reviewers were willing to admit. If "Tartarus" addresses the forces of modernization, it does so primarily by emphasizing their impact on the work of the author and only secondarily, if at all, by targeting the destructiveness of social and technological progress at large. Once we steer our attention away from the bleak aspects of industrial labor and focus instead on its relation to the labors of authorship, we find Melville not only a much more lenient

social commentator but also one who struggled to make his peace with technology by synecdochically investing it with gendered cybernetic imagery.

Authorial work is barely camouflaged in "Tartarus." To begin with, we are confronted with a narrator who recently embarked on the large-scale enterprise of distributing seeds, a business in which "the expenditure [for paper] soon amounted to a most important item in the general account." <sup>29</sup> The excessive demand for paper is caused, we are told, by the modes of distribution peculiar to this trade: after being folded in a square, the yellow sheets are filled with seeds, stamped, and superscribed with the commodity's name until finally, by the hundreds of thousands a year, they are mailed to their respective customers. The suggestive details of the narrator's profession cannot easily be dismissed. They recall as much Plato's comparison of writing to the "sowing of immortal seeds" as contemporary rationalizations of authorship based on biological processes (the poet, says Thoreau, "performs his functions . . . as plants put forth leaves and blossoms"). <sup>30</sup>

On first reading, the metaphoric representation of literary work in "Tartarus" thus appears to be snugly rooted in the staples of Romantic organicist discourse; Melville's seedsman, however, does not really substantiate such a view. Given the specific circumstances of his profession, his is less an activity patterned after natural processes than an artificial, highly specialized mode of work in which the organic ultimately becomes replaced by the technological. This crucial substitution is primarily effected through a stratification of gender: while the author figure is shown to be engaged in providing the ideas or "seeds" of his text, the process of germination as well as the material production of the paper are entirely shifted to the mill's female work force.

"Tartarus" begins with a striking self-referential gesture. After explaining the technicalities of his trade, the narrator takes us on a Dantean *tour d'enfer* to the site where the material so dear to his profession is produced: a New England paper mill. Upon our entering the ominous premises, it becomes quite clear that the production of literary texts is a composite activity, a process at once spiritual and profane. The process of producing the sheets that will contain or, rather, be inscribed with "immortal seeds" requires a complex aggregate of machines as well as a countless number of female workers who handle the cranks and belts

of the water-powered factory. Since it sets the register for Melville's sexually loaded representation of industrial labor in this text, the introduction of the mill girls deserves to be quoted at length:

At rows of blank-looking counters sat rows of blank-looking girls, with blank, white folders in their blank hands, all blankly folding blank paper. In one corner stood some huge frame of ponderous iron, with a vertical thing like a piston periodically rising and falling upon a heavy wooden block. Before it—its tame minister—stood a tall girl, feeding the iron animal with half-quires of rose-hued note-paper. . . . [N]ot a syllable was breathed. Nothing was heard but the low, steady overruling hum of the iron animals. The human voice was banished from the spot. Machinery—that vaunted slave of human-ity—here stood menially served by human beings, who served mutely and cringingly as the slave serves the Sultan. The girls did not so much seem accessory wheels to the general machinery as mere cogs to the wheels. (328)

Insofar as he consistently demonizes the machinery he knew to be essential for the production of paper, Melville gives in to familiar technophobic rhetoric. Yet his tale about a New England paper mill is noteworthy more for its unabashed phallic implications than merely for its affirmation of a cultural stereotype. What do we make, after all, of a periodically rising and falling "vertical thing" in front of which a pallid girl stands as if she were "its tame minister" or, even more pungent, a pair of "round vats . . . full of a white, wet, wooly-looking stuff, not unlike the albuminous part of an egg, soft-boiled" (331), whose spermous content is being processed by the huge machines within exactly nine minutes into sheets of paper still "moist and warm" (332) True, contemporary discourses on technology were often marked by implicitly sexual diction. As one commentator on the successful application of steam power declared in a public address in Philadelphia in 1854: "With consummate skill the marriage of water and heat was effected. The child of that marriage has grown to be a herculean aid to onward humanity." 31 Yet this playful innuendo can hardly be compared to the metaphoric thrust in "Tartarus." Not only does Melville render in coarse detail the sexual act itself, but also he suggests the mating of woman and machine,

a cyborgean liaison from which springs not the herculean child of the popular imagination but the writer's supply of foolscap.

Given the machine's violent intrusion on the female body, the story has often been read as a parable of the exploitation of nature for artificial production.<sup>32</sup> Since nineteenth-century Americans conceived of the abundance of nature as "virgin" land, a huge blank space passively awaiting the imprint of civilization, it seems plausible that Melville, while criticizing the effects of economic and technological expansionism, should retool one of the nation's most powerful cultural beliefs for his literary purposes. Admittedly compelling, such an interpretation cannot account, however, for the self-referential disguises of authorship in the text, nor does it explain why Melville's description of the mountainous landscape in the opening paragraph is as manifestly symbolic ("haggard rocks," "bleak hill," "gloomy brink," 323-24) as the artificial mill itself. Demarcating not so much an arena of conflict between culture and nature, the paper mill as well as its female operatives, it appears to me, should be read instead as a powerful fictional displacement of the material grounding of modern authorship. This displacement entails as one of its principal parameters a gendered, ideological definition of literary work. According to this definition, the male author, while assuming spiritual authority over his text, discards its material-technological implications by symbolically transferring them onto the female.

Historically, New England mills were among the earliest American manufactories to be turned into sites of modern mass production. The establishment of mills such as in the well-known factory town of Lowell, Massachusetts, marked an important juncture in America's transition from an agrarian land to a full-scale industrial society. It is worth noting that Melville's bleak depiction of a work routine dictated solely by the needs of the machine was not an idea shared by most of his fellow Americans. As I pointed out earlier, exemplary institutions such as the Lowell mills were designed on conservative ideological principles. From the outset Lowell's purpose was to integrate advanced technology with factory discipline and conservative republican ideology. In soothing public fears about the hazards of large-scale industrialization, many commentators on the mills expressly pointed to the disciplinary influence of machinery as a crucial factor in reconciling Victorian morality and industrial labor.

In her autobiography, the former factory girl Lucy Larcom gives a fine example of the kind of lesson she learned from the all-encompassing machines and, especially, their textile products. Complaining about the necessity of living on the crowded site of the Lowell mills, Larcom writes: "There is nothing more miserable than to lose the feeling of our own distinctiveness, since that is our only clue to the Purpose behind us and the End before us. But when we have discovered that human beings are not a mere 'mass,' but an orderly Whole, of which we are a part, it is all so different! This we working-girls might have learned from the webs of cloth we saw woven around us." <sup>33</sup>

Ostensibly, Melville also underscores a structural alliance between technology and human behavior. Yet for this antebellum writer, over whatever moral lesson might be gleaned from the machine becomes superimposed a tautological relation between female reproductive capacity and the procreative technological power of the industrial system.

Both mills, those in the real-life factory town of Lowell and in the fictitious "Tartarus of Maids," are operated by young, unmarried females. If Lowell hired single women on a temporary basis to prevent the establishment of a permanent working class, the blank-faced girls of the paper mill function as signifiers of an equally oppressive strategy: "Why is it, sir," the visiting seedsman asks his official guide, "that in most factories, female operatives, of whatever age, are indiscriminately called girls, never women?" (334). The reason, it turns out, reflects a widespread hiring policy. Because the relentless rhythm of the machines demands steady workers, the rule is to employ unmarried women only ("matrons," according to the proprietor of the mill, "are apt to be off-and-on too much," 334).

By thus stressing the young maidenhood of the mill's work force, Melville significantly shifts the emphasis from the harshness of industrial life to an utterly metaphoric sexual condition. In the Talmud, the word *golem*, which is a concept equivalent to an automaton or robot, also refers to a woman who has not yet conceived. The implicit connection here is, of course, that automata cannot reproduce of their own accord. Whenever they "generate," they do so only by external stimulus (as in the case of industrial robots built to produce other robots). It is thus not hard to see why the "blank-looking" girls of "Tartarus" so perfectly resemble their "barren" product. If machines always perform in compli-

ance with some predetermined engineering design, so does, according to Melville's symbolic strategy, the female body.

As with the blank pages vet to be inscribed by the writer's pen, the female mill hands incarnate the material foundation of Melville's gendered conception of authorship. Whereas the writer in his metatextual tale represents the proliferation of seeds, the female represents only the machine. When challenged about the conspicuous whiteness of their sullen faces, the narrator's guide points to precisely this connection: "Why . . . I suppose the handling of such white bits of sheets all the time makes them so sheety" (331). Because of their ontological ties with the raw material of both literary and biological reproduction, the virginal mill girls figure as ideal signifiers for the uninspired, technological stages of creative work. Rather than flatly denying the material grounding of modern authorship, Melville is at pains to negotiate a different solution. His is not so much a portrayal of human exploitation or the intrusion of the machine on the pastoral landscape as a gender-based, symbolic enactment of literary work designed to integrate the dated ideology of authorship as original production with the encompassing presence of technology. Whereas many antebellum Americans were struck by the awesome masculinity of the machine (including Emerson, who once extolled "the masculine draught" of the locomotive, 35) Melville's treatment of technology in "Tartarus" takes a different path. By linking the alleged biological determinacy of women to industrial production, Melville at once feminizes and significantly downgrades the machine's procreative power.

For the professional identity of American writers during the first half of the nineteenth century, Melville's stratification of manual and mental labor entailed a number of serious questions. Given the public privileging of the hand over the mind, how were they to represent the activity of writing as actual work? How could they negotiate the tension between these different forms of work? What kind of work should they embrace as a model of their own professional enterprise? And, even more significantly, how did antebellum writers come to terms with the toils of social-sexual predication in which writing and laboring were inextricably ensnared? If various stories in *The Piazza Tales* attempt to navigate the rigid dichotomy between literary work on the one hand and industrial modes of production on the other, in "Bartleby, the Scrivener"

this attempt eventually leads to the demise of authorship altogether. As I will argue in the following section, "Bartleby's" often cited "modernity" is connected precisely to its somber representation of an author figure that adumbrates both Kafka's self-destructive "Hunger Artist" and successive (postmodern) discourses on the death of the author.

#### Melville's Hunger Artist

In what is probably his best-known and most widely read short story. "Bartleby, the Scrivener" (1853), Melville further elaborates on the commercialization of literary work and the dehumanizing effects of the modern division of labor in general. Given the sheaves of critical commentary, it is hard to think of any particular reading that has not yet been proposed in reference to this ambiguously modernist text. Although writing has been singled out by various critics as one of the major topics of the story, this has been done either with regard to Melville's own writing career or as part of a more general analysis of capitalist America and its despotic economic practices.<sup>36</sup> In what remains of this chapter, I approach Melville's text as the first of a number of selfreflexive tales about writing in antebellum society, and I argue that Melville has Bartleby metamorphose into a machinelike creature, a sort of Romantic cyborg that tragically conjoins discourses on the democratization of culture (as called for by the contemporary political agenda), on mental versus mechanical labor, and on the ability of writing to negotiate between these two competing forms of human activity.

In contrast with characters in "The Tartarus of Maids" and "The Bell-Tower," Melville's scrivener does not yet adopt the pragmatic if gender-based insights into the writer's involvement with material society that are prevalent in these later texts. Recording metaphorically the failure of antebellum America to accord literary workers a special place within commercial-capitalist culture, Bartleby demarcates a crucial juncture in American Renaissance writing. If the scrivener, to quote Michael Paul Rogin, has "the power of negativity, "37 his increasingly antagonistic stance toward the efficiency-ruled office environment finally comes to denote a conflict between authorship and technology that critics have tended to attribute to the Romantic period in general. Yet in comparison with the bulk of texts on technology by Melville's fellow writers, as well

as some of his own reflections on this topic, "Bartleby" appears to be rather the exception than the rule. Instead of harking back to an already established tradition of American Romantic writing, this paradigmatic text actually initiated its own tradition. Since it prefigures, both thematically and structurally, some of the issues discussed in my concluding chapter on technology and disembodiment, to emphasize the importance of "Bartleby" by placing it last among Melville's literary self-representations seems entirely appropriate.

If we go by its full original title, "Bartleby, the Scrivener: A Story of Wall-Street," this is hardly a text about an obstreperous, pathological individual; it is rather about a place—a marketplace, to be more precise—a commercial space dominated, as Leo Marx points out, "by a concern with property and finance." 38 This view is further corroborated by the obvious lack of information with regard to the scrivener, a fact that has led numerous critics to focus their attention instead on the narrator, a Wall Street lawyer, and his speculative ramblings as to how he should handle his recalcitrant clerk. True, the lawyer is an important figure in the story, but only insofar as it is his point of view from which we perceive the main character, or rather non-character, and we are therefore called upon to dissociate carefully what he thinks he sees from what actually exists. Although the reader's curiosity about Bartleby's weird behavior must be distinguished from the vested interests of the lawyer, both coincide with respect to the possible roots of the scrivener's increasing passivity. On closer inspection, the most remarkable thing about the scrivener is not that he refuses to work but that he initially exceeds by far the expectations of his employer. Bartleby is described as having managed "an extraordinary quantity of writing." In fact, he was so prolific a writer that it appeared as if he were "long famishing for something to copy." The scrivener seemed to "gorge" himself on the lawyer's documents, with "no pause for digestion." Had he only done so cheerfully, his employer would have been fully satisfied. But Bartleby "wrote on silently, palely, mechanically." 39

What is striking about this description is its ambiguity, the fact that it basically hinges on a paradox: given the way the scrivener is pictured, he appears to be at once a machine—a writing machine, that is—and a famished organism feeding on written text. Even while still complying with the daily routines of the office, he is utterly subdued, lifeless, pallid.

Bartleby is shown to inscribe huge amounts of paper, but he does so with no trace of emotion or "anything ordinarily human about him" (21). Moreover, at various points in the story he is compared to dead matter: the lawyer refers to him as a "fixture," as being as stationary as the "pale plaster-of-paris bust of Cicero" (21), and noiseless as any of the old chairs in his office. Falling thus somewhere between the categories of the wholly animate and the completely inanimate, the scrivener might well be taken as a mirror image of the composite processes of literary production, a cyborgean creature that combines aspects of the living writer and the non-living office environment, which is in itself only a pale reflection of the tedious, mechanical work it houses. I believe that it is precisely with respect to this discursive function of the cyborg as mirror image, as both a fictional analogy of the writer and, simultaneously, his critical interlocutor, that Melville casts his most famous character in ambiguously cyborgean terms.

In "Bartleby," to be sure, technology is basically represented as the technology of writing. Although the bulk of writing in the lawyer's office is still executed with the pen, the Wall Street copyist of the 1850s is a far cry from the medieval auctor meticulously copying an ancient text. In fact, the lawyer's suggestion that his two "half-men," his clerks Turkey and Nippers replace each other at times of their greatest inefficiency eerily foreshadows the principles of rationalization and scientific management popularized by Frederick Winslow Taylor and the efficiency movement of the early twentieth century. 40 Both of his original clerks are conspicuously human in their dependency on biorhythmic patterns, and their respective intervals of dysfunction are repeatedly compared to the organic cycle of rise and decline. Nippers is regularly distracted from his duties by the onset of indigestion, and Turkey's performance appears to be "gaining its meridian with the sun, [seems] to set with it, to rise, culminate, and decline the following day, with the like regularity and undiminished glory" (15).

Owing to their "natural" idiosyncrasies, Turkey and Nippers continually struggle with the demands of mass-producing copies of written texts, thereby highlighting the mechanical, machinelike work habits of their fellow scrivener as well as of the modern office routine in general. This also holds true for the dreary process of verifying the accuracy of the copies, a lethargic affair that would be all but intolerable, as the narrator readily admits, to an imaginative, "mettlesome poet" (20) such as Byron. By evoking creative writing as a counter-image to the writing, or rather copying, of official texts, Melville thus steers attention away from the wearisome circumstances of nineteenth-century office work to the broader theme of the division of labor (writing) and the denial of authentic creative experiences.

In his notorious book L'homme machine (1747), the eighteenthcentury physician Julien Offray de La Mettrie described the human body as "a machine which winds its own springs. It is the living image of perpetual movement. Nourishment keeps up the movements which fever excites. Without food, the soul pines away, goes mad, and dies exhausted."41 This image of a living automaton starving, going mad, and finally dving exhausted is also evoked in Melville's prototypically modernist text. In order to comment on the precarious status of authorship in modern society, he projects onto the imaginary screen of Bartleby's cyborgean existence relics of the Romantic idea of writing as an organic process (Bartleby's organism is feeding on his written products) and, simultaneously, the buying out of this notion, that is, the increasing alienation and, ultimately, the death of the author. Bartleby's bordercrossing identity thus not only pushes to an extreme an imagery resonant throughout many of Melville's shorter narratives, but also foreshadows a recurrent topic of late nineteenth- and twentieth-century aesthetic discourse: the ongoing devaluation of authorship under conditions of mechanical reproduction.

By articulating his anxiety about the loss of authorial control in terms of an encroachment of the technological on the "natural" and organic, Melville's scrivener can be said to anticipate an essentially technophobic strain within modern representations of professional authorship. Insofar as it reneges on the promises of a structural compromise between the modern author and his technological surroundings, "Bartleby" clearly stands out, as we have seen, among most of the literary self-representations offered by American Renaissance writers. According to one of the basic premises of this study, these early manifestations of the author's search for a place of his own within modern technological society were much less reactionary than traditional critical assessments of the period would have us believe. Rather than denouncing outright the material determinacy of their literary efforts, the major representatives

of American Romanticism took a different path. While often casting their apprehensions about the ongoing technologizing of antebellum America in ambiguous cyborgean imagery, they were equally engaged in confronting the changing conditions of their work and in finding ways to establish literary authorship as a full-fledged if highly specialized modern profession.

Although Melville should by no means be wholly excluded from the latter group, his literary works occasionally display a much more pessimistic attitude toward modern technology and its debilitating influence on the work of the author. In "Bartleby," this influence is made visible through the emaciated, moribund body of the scrivener. Like Kafka's "hunger artist," Bartleby suffers from an anachronistic professional identity, a fatal resistance to the forces of modernization. In the Kafka story, the hunger artist, who performs before his audience while isolated in a cage, gives in to excessive fasting because he stubbornly believes in the importance and grandeur of his trade. As the people parading in front of his cage move on to a different attraction, the hunger artist slowly fades from their sight. When he is finally found by the overseer of the show, the artist's feeble, disembodied voice is heard to utter the following enigmatic words: "'Forgive me, everybody. . . . I always wanted you to admire my fasting,' said the hunger artist. 'We do admire it,' said the overseer, affably. 'But you shouldn't admire it,' said the hunger artist. 'Well then we don't admire it,' said the overseer, 'but why shouldn't we admire it?' 'Because I have to fast, I can't help it,' said the hunger artist."42

Signaling an obvious implosion of communication, these lines also offer the remnants of speech, the sheer self-referential sputtering of the artist, as an antidote to the declining value of his art in modern society. "Bartleby," I would argue, prefigures this paradigmatically modernist stance. In Melville's text we encounter the same breakdown of verbal interaction, accompanied by the fasting and successive disembodiment of the artist figure. What remains of the recalcitrant scrivener, after all, is but the reiteration of a single line, a self-proliferating signifier of passive resistance ("I prefer not to"), a voice severed from the body, which is left to waste away in isolation from the rest of society.

That in Melville's imagination the process of disembodiment was closely tied to scientific and technological progress can be seen in his notorious depiction of naval surgery. As a common seaman aboard the frigate *United States*, Melville had, of course, ample opportunity to witness the gory medical practices indigenous to military life. His conspicuously cyborgean take on the ship's surgeon in *White-Jacket* (1850), however, betrays more than just an autobiographical interest in representing firsthand experiences:

Cadwallader Cuticle, M.D., and Honorary Member of the most distinguished Colleges of Surgeons both in Europe and America, was our Surgeon of the Fleet. . . . In truth, the corporeal vitality of this man seemed, in a good degree, to have died out of him. He walked aboard, a curious patch-work of life and death, with a wig, one glass eye, and a set of false teeth, while his voice was husky and thick; but his mind seemed undebilitated as in youth; it shone out of his remaining eye with basilisk brilliancy.<sup>43</sup>

Not only is Cuticle's body marked by a number of artificial implants and replacement parts, but also his is a professional ethos that turns on a single procedure: surgical amputation. To satisfy his ambition, the surgeon of the fleet even operates on a feverish, half-dead sailor, whose cruelly dismembered body is immediately disposed of after the incident. Interspersed with discourses on modern science and the Enlightenment, the three chapters in *White-Jacket* dedicated to Cuticle and his ignomious operation stand as just the most blatant example of Melville's disenchantment with the undemocratic stratification of labor, responsibility, and reward aboard a modern man-of-war.

In addition, White-Jacket is organized around the synechdochic relationship between naval hierarchies and the fastidious social divisions of antebellum American society. Given Melville's bent for literary self-representation and the model character of the ship's population, it is not surprising to find among the sailors a genuine poet. This man, who goes by the name of Lemford, is "so thoroughly inspired with the divine afflatus, that not even all the tar and tumult of a man-of-war could drive it out of him" (40). Significantly, Lemford's problem is not how to write—although "the business of writing verse is a very different thing on the gun-deck of a frigate, from what the gentle and sequestered Wordsworth found it at placid Rydal Mount in Westmoreland" (40)—but how to

preserve what he has written. Lacking any private storage space of his own, he hides his stationery and verses, both of which are carefully locked up in a little wooden box which he stores in one of the frigate's massive cannons. This box, we are told, was hated by his fellow sailors "as if it had been Pandora's, crammed to the very lid with hurricanes and gales" (41–42). Eventually the hiding place is discovered by one of the quarter gunners, a fiendish, inquisitive man who used to peer into the huge muzzles of the cannon "like a dentist . . . intent upon examining their teeth" (42).

If the imagery here is somewhat less pungent than in the passages involving the surgeon, the topical connection—not to mention the cannon's phallic associations—can nevertheless hardly be missed. 44 For Melville, then, the modern division of labor and its disabling effects on the work of the writer symbolically fall into the same category as the surgical dismemberings of Cadwallader Cuticle. Although some of Melville's shorter narratives seek to displace the structural contradictions of modern authorship onto the feminine, in "Bartleby" and White-Jacket these contradictions are shown to result in the dramatic displacement of the body itself.

chapter live

THE AUTHOR IN PAIN

WALT WHITMAN

TECHNOLOGY AND FRAGMENTATION
IN REBECCA HARDING DAVIS AND

We are again confronted with one of the most vexing aspects of advanced industrial civilization: the rational character of its irrationality. Its productivity and efficiency, its capacity to increase and spread comforts, to turn waste into need, and destruction into construction, the extent to which this civilization transforms the object world into an extension of man's mind and body makes the very notion of alienation questionable.

Herbert Marcuse, One-Dimensional Man

Studying the consistently utilitarian orientation of American politics, historian Daniel Boorstin once concluded that "America has thus been the laboratory and the nemesis of romanticism." Although Boorstin's use of the term "romanticism" was rather figurative, the bifurcation of values he expressed—ringing with promises of new insights on the one hand and gloomy and apocalyptic on the other—might well be taken to underscore the complex self-representations of American Renaissance writers and their contradictory relations with antebellum society. Poe readily adopted, as we have seen, the technologizing of literary produc-

tion as a model for human discourse in general, thereby opening up new avenues for the professional writer and his text-making skills. Despite his emphasis on originality and the exceptional cognitive status of creative work, Poe's definition of authorship was utterly technological. Given the fervor with which he embraced anastatic printing as a way of experimenting with and, ultimately, increasing the representational value of written texts, he seems to be at the very beginning of a constructivist tradition within modern arts that is now mainly identified with early twentieth-century avant-garde movements. Rather than figuring as the downfall of the writer's profession, science and technology provided for Poe a "laboratory" of new ideas from which he concocted the means to promote and symbolically come to terms with his artistic project.

Nor would Hawthorne and Melville have conceived of the contemporary technological environment as the nemesis of literary creativity. Reflecting the presence of technology in antebellum America in both their full-fledged "romances" and their shorter fiction, these writers examined the changing conditions under which they labored in sometimes excruciating detail. As I have pointed out, their obsessive representations of literary work should therefore be read as stages in an imaginative search for authorial identity. Far from indicating the writer's withdrawal from society, they addressed the processes of modernization in quite a pragmatic manner. To find a place of their own within the dramatic shift of paradigms that shaped mid-nineteenth-century America (that is, from virgin land to the Tartarus of industrial labor), Hawthorne and Melville often had recourse to a symbolic mode of self-representation that would allow them to alleviate the rising tensions between the reproduced materiality of the printed text, on the one hand, and the original ideas it conveyed, on the other. Since the conflict between modern authors and their political, economic, and technological environment turned on the rival ideologies of idealism and materialism, cybernetic imagery, which may be defined as the structural blurring of the boundaries between the human and the technological, offered an ideal screen onto which the writer's struggle for social integration could be projected.

While recognizing their professional entanglement with technology, Hawthorne and Melville went on, in a second step, to shift this connection onto the female body. Inspired by contemporary beliefs in the disciplinary influence of technology, both writers reworked the older image of the man-machine into a powerful metaphoric instrument to establish a link between women and machines. If the deficient heroines of "The Birth-mark," "The Artist of the Beautiful," and "The Tartarus of Maids" served to banish the material dependency of creative work to a protected corner of femininity, they were also instrumental in securing for the author's definitive otherness a special place within the stratification of capitalist labor. Insofar as the male artist figures of these texts replace female reproductive power with an alternative practice that is at once generative and spiritual, they appear to incorporate as well as transcend the feminine. Rather than demarcating an antagonistic position outside the larger technological framework, Hawthorne and Melville were thus struggling to match the dated ideological underpinnings of their literary endeavor to the demands of modern capitalist society. By making their fictional alter egos embody the machine's productive principle on a more refined, spiritual level, the major writers of the American Renaissance finally managed to realign the forces of material and artistic production.

More often than not, the use of cybernetic imagery in antebellum literature reflects the author's attempt to avoid the ideological pitfalls inherent in his idealist self-definition, thereby narrowing the gap between authorship and other modern professions. Yet, however widespread the urge to compete with other forms of specialized labor might have been, American Renaissance writing is also marked by the somber prospect of the author's inevitable alienation from society. In "Bartleby," the isolation and estrangement of the literary worker set in, significantly, after a period of extreme productivity. Since Melville's literary reputation was already flagging when "Bartleby" first appeared in 1853, this text encapsulates, on one level, its author's doomed struggle for public recognition. On another level, however, it instances the first in a series of midnineteenth-century American texts in which authorship appears to be entirely overwhelmed by technology. As one can readily see, there is no escape for Bartleby from the prison house of Wall Street and the mass production of written texts; mired in physical deterioration and increasing muteness, the scrivener's resistance boils down to a petrifying gesture of all-encompassing passivity.

It is worth noting that there are no women in "Bartleby" onto whom

the material restrictions of writing could be transferred. The Wall Street office, as much as the *H.M.S. Bellipotent* in Melville's last prose work, *Billy Budd*, is a man's world, a world where the artist's body has itself become the target of the forces of mechanization. Whereas in contemporary social and literary discourse technology was often described as a means to contain the intractability of the body, in Melville's story of Wall Street it enacts the body's fragmentation and demise. If for Poe the technological environment presented an invigorating playground and "laboratory" for modern poetic practices, the scrivener's emblematic fate glaringly evokes its opposite: the "nemesis" and ultimate death of the author. By articulating an aesthetic position that subscribes neither to the writer's desire for integration with the larger society nor to the power of the imagination to unify the divergent projects of art and technology, "Bartleby" clearly stands apart from the bulk of American Renaissance writing.

Although marginal with regard to the large number of texts engaging technology from a more affirmative viewpoint, Melville's symbolic juxtaposition of fragmented bodies and the technologizing of modern society can be traced in the work of at least two other contemporary Americans, Rebecca Harding Davis and Walt Whitman, and it is to these I now turn for the remainder of this study. To bring into conjunction writers as structurally heterogeneous as Melville, Davis, and Whitman is by no means an easy task. If Davis's social realism already differs considerably in both its form and its setting from Melville's Romantic selfrepresentation in "Bartleby," Whitman's democratic, all-embracing pose seems to be even farther from Melville's apocalyptic view of authorship. As I argue, however, in Davis's Life in the Iron Mills (1861) and, somewhat later, in Whitman's Drum-Taps, a cluster of poems about the Civil War first published in 1865, the besieged artist is rendered as mute and paralyzed as the wasted scrivener when confronted with modern technology.

True, the cataclysmic events of civil warfare, which came to figure as a structural and atmospheric watershed in the work of Walt Whitman, can hardly account for the shift of tone in Melville's antebellum *Piazza Tales*. Since it coincided, however, with their author's increasing public alienation and authorial silencing, it might be rightfully taken as a turn-

ing point in the career of America's most sensitive chronicler of modern conditions of authorship. If the Civil War marked in all three writers the waning or loss of poetic speech, this "muteness" of the author vis-à-vis the larger society eventually found expression in Melville's final, unfinished work, *Billy Budd*, *Sailor*. Like the enigmatic "Bartleby," *Billy Budd* turns on a conflict between an outsider and society, a conflict in which the individual is first silenced and then crushed by the mechanics of (military) law. What thus began as the Romantics' self-conscious claim to a voice of their own is transformed in these later texts into painful dramatizations of speechlessness and despair.

## The Author in Pain: A Life in the Iron Mills

Since its first reprinting in 1972, well over a hundred years after its original appearance in the Atlantic Monthly, Rebecca Harding Davis's Life in the Iron Mills; Or, The Korl-Woman has attracted many critical readers who have taken pains to emphasize the story's most salient feature: its proto-naturalist topic (social determinism) and its astoundingly innovative style (thick description, investigative close-ups, and so on).3 There is no doubt that Davis's description of a northwestern Virginia mill town differs considerably from Melville's allegorical "Tartarus of Maids." To begin with, the workers no longer function merely as a foil for the author's rhetorical practices. Its protagonists, the grimy iron mill puddler Hugh Wolfe and his cousin Deborah, are characters drawn from real life who speak and behave in the manner of the Welsh immigrant workers Davis regularly encountered in the industrial boomtown where she grew up. Rather than spreading over the technological landscape a mythladen, metaphoric grid (as Melville did in "Tartarus"), Life in the Iron Mills pictures the worker's plight for its own sake.

What is more, whereas earlier sketches of industrial life often evaded the "terrible question" of social responsibility, in Davis's account it becomes both the origin and vindication of her experimental narrative. Luring her presumably female readers into the treacherous intimacy of shared gender and social status, the narrator takes them by the hand to investigate both the lower-class life of antebellum America and the egotism and ignorance of its upper-class elites:

This is what I want you to do. I want you to hide your disgust, take no heed to your clean cloth, and come right down with me,—here, into the thickest of the fog and mud and effluvia. I want you to hear this story. There is a secret down here, in this nightmare fog, that has lain dumb for centuries: I want to make it a real thing to you. You Egoist, or Pantheist, or Arminian, busy in making straight path for your feet on the hills, do not see it clearly,—this terrible question which men here have gone mad and died trying to answer.<sup>4</sup>

Yet this is not so much a text in search of answers—"this terrible dumb question," the narrator insists, "is its own reply" (14)—as a text about the narrative possibility of asking the question at all, or, put another way, of using literature to bridge the allegedly unbridgeable chasm of class distinction.

As we will see, the prospects for authorship to live up to such utopian expectations are not very bright. Still, as Jean Pfaelzer writes, by reworking the "available traditions of transcendentalism, sentimentalism, and vernacular fiction [into] a new rhetoric to portray the dependent relationship between subjectivity and social economics," Davis initiated a mode of representation at once more immediate and more powerful than the signs and metaphors on which Romanticism relied.5 Writing on the verge of a new phase in American political and literary history, she keenly felt the urge to rephrase the moral and aesthetic questions articulated in the works of Hawthorne and Melville.6 This is perhaps also what is indicated in the conspicuous epigraph to Davis's story: "Is this the end? O Life, as futile, then, as frail! What hope of answer of redress?" (11). If Melville's account of an allegorical paper mill ends on a note of mystery ("all alone with inscrutable nature, I exclaimed—Oh! Paradise of Bachelors! And oh! Tartarus of Maids!" 335), Life in the Iron Mills, Davis's first published work, begins with a rhetorical question to which the incipient tale then becomes its own "mute" reply.

While Davis's transitional historical and literary position makes it difficult for us to pin down her introductory question to a single frame of reference, the plot of *Life in the Iron Mills* can be told easily. The story turns on a marvelous female figure that the millworker Hugh Wolfe has sculpted in his spare time from "Korl," the "delicate, waxen, flesh-colored" (24) refuse of the iron-molding process. This "Korl-woman"

then triggers a discussion on art and its public recognition among a group of upper-class visitors to the mills. All of them acknowledge the puddler's artistic talents yet agree that without money and its concomitant social status, his art will be doomed to remain unrealized. Upon overhearing them, Deborah steals a purse from one of the men and, under the false assumption that she is enabling Hugh to leave the mills, hands it to her beloved cousin. They are captured almost immediately. Both are sentenced to extended terms in prison, where Hugh, struck with a severe lung decease and with no prospect of delivery, finally commits suicide. At first glance, Life in the Iron Mills thus tells the tale of Deborah's complete misconception of their social and economic situation, that is, of the insurmountable distance between the working class and the "leisure" class. In addition, her motive for the theft appears to be the futile wish to win over a reluctant, condescending lover: Deborah is a physically disabled young woman, who had been trying for years "to gain one look of real heart-kindness" (21-22) from her beloved cousin.<sup>7</sup>

There are other important issues in Davis's novelette that deserve our attention. If *Life in the Iron Mills* transcends traditional literary modes of representing social reality, it does so by reshaping a discourse by then firmly established in the works of major writers of the American Renaissance. This discourse focused on the socio-structural relays between art and the expanding technological system, and it investigated the possibility that authorship functions as an intermediary and interpreter of the complex processes of modernization. Read in light of the author's ability to make literary statements about the condition and further development of antebellum society, Davis's story continues to articulate rather than break away from earlier authorial concerns. To make the topical proximity between *Life in the Iron Mills* and its Romantic precursor texts more convincing, a brief look at how the narrator describes the mill's machinery and the inexorable routine it necessitates is in order:

Not many even of the inhabitants of a manufacturing town know the vast machinery of system by which the bodies of workmen are governed.... The hands of each mill are divided into watches that relieve each other as regularly as the sentinels of an army. By night and day the work goes on, the unsleeping engines groan and shriek, the fiery pools of metal boil and surge. Only for a day in the week, in

half-courtesy to public censure, the fires are partially veiled; but as soon as the clock strikes midnight, the great furnaces break forth with renewed fury, the clamor begins with fresh, breathless vigor, the engines sob and shriek like "gods in pain." (19)

The personification and mythological veiling of machinery (unsleeping, groaning, shrieking and sobbing like "gods in pain") is, of course, a staple of early literary responses to technology. And so is the idea of the body governed by the industrial system. In Davis's realist view of mid-nineteenth-century working conditions, the furnaces and engines instance not so much the technological means by which the mill achieves its productive ends as the overruling design of the work process in general. In this "vast machinery of system," the workers' bodies are enlisted as an "army" of tools, as the passive "hands" of the mill's untiring clockwork. What is more, they appear, according to Mark Seltzer, "as set in motion by the industrial process" itself. Davis's "account thus anticipates the double process of systematization and individualization, the making of individuals as products of the system, progressively elaborated during the course of the nineteenth century."8 Although her transitional text works hard to make the miserable life of the workers "a real thing" to us, Life in the Iron Mills leaves little doubt that there is more at stake than the vivid representation of hardworking men and noisy machines.

Its innovative social realism notwithstanding, the text is also about art and, as I shall suggest, its increasing obsolescence within the framework of industrial society. Turning on the unfulfilled ambitions of an artist-worker, *Life in the Iron Mills* is closely related to Hawthorne's self-referential "Artist of the Beautiful." Amidst the depressing factoryscape we thus encounter another artist figure, equally distanced from the workers' community by "a groping passion for whatever was beautiful and pure" (23). Like his Romantic predecessor, Hugh is a feminized character with "a meek, woman's face": "In the mill he was known as one of the girl-men: 'Molly Wolfe' was his *sobriquet*" (24).

But the hapless, worn-out furnace tender is not just a realist version of Owen Warland. Indicative of his heightened sensibility and poetic faculties, Wolfe's femininity is also a marker of the incapacity to exceed the limitations erected by the social-industrial system. Despite his fierce

thirst for beauty and creation, he is certainly no aesthetic idealist. If in Hawthorne's text the tensions between the artist and his utilitarian surrounding are detrimental to the artistic project (a fact that Hawthorne deplores, yet at the same time seeks to resolve), in Life in the Iron Mills it is the emaciated sculptor himself who is repeatedly "thrashed, pommelled to a jelly" (24) by his fellow workers. As a "coarse and vulgar laborer" (25), Wolfe remains a victim of both the encompassing machinery of the mills and his own craving for otherness, for a life outside the confined space of modern production. The Korl-woman he has secretly chipped out of the mill's debris can never come to life. Her powerful limbs, "grown coarse with labor," are expressive of only one poignant longing, one mad, half-despairing gesture of desire: "There it was in the tense, rigid muscles, the clutching hands, the wild eager face, like that of a starving wolf's" (32). In her mute outrage against human misery, the thwarted figure is but the lifeless image of an artist out of step with society, a signifier of his dramatic lack of poetic license, of "summat to make her live" (33).

In contrast with the powers of the Romantic artist, the faculty to author, to instill life into matter, is clearly beyond Hugh Wolfe. Given the oppressive character of industrial production, Davis's proto-modernist text seems to imply that the aesthetic foundations of art need to be redefined. Rather than pursuing some lofty ideal of original creation, modern art engages its own unspeakable paradox, thereby relegating its material manifestations to the realm of pure signification. Not only is the art object under conditions of modernity made of industrial leftovers from this perspective, the Korl-woman even anticipates twentiethcentury ready-made and junk art—but also it ceases to be a representation of anything other than the split, uncertain identity of its creator: the Korl-woman's face, one should keep in mind, resembles "a starving wolf's." Torn between the occupation of a furnace hand, which makes him a living extension of the mill's machinery, and that of an artist, a man with "a vivid poetic sense" (40) and "a loving poet's heart" (25), Wolfe's unresolvable hybrid status is aptly reflected by the frozen gestures of his mute, flesh-tinted figure.

"In his crossing of the natural and unnatural," as one critic aptly remarks, "Hugh Wolfe is a sort of living pun." <sup>10</sup> His border-crossing identity epitomizes the constant blurring of the living and the non-living in

nineteenth-century literary discourse as well as the instability of cultural ascriptions such as gender and class. As a "living pun" he is involved in a chain of symbolic reductions (from the machine to the girl-man to the animal to the life in the mills and back again), all of which underscore his ontological hybridity. Lacking any of the supposedly clear-cut definitions of Western identity, this early man-machine perfectly fits Donna Haraway's theoretical appropriation of the cyborg myth. "The cyborg," she claims, "appears in myth precisely where the boundary between human and animal"—or machine, for that matter—"is transgressed. Far from signaling a walling off of people from other living beings, cyborgs signal disturbingly and pleasurably tight coupling."11 What is true for many of the antebellum texts discussed in the preceding chapters is thus also true for Life in the Iron Mills: rather than a "walling off" of authorship from the modern technological environment, the use of cybernetic imagery signals the writers' insights into the material entanglements of their profession. That is, by undoing the ideological encrustations of writerly identity, the hybrid self-representations of American Renaissance writers present powerful symbolic spaces of social "coupling."

Although cyborg figures often served as a foil for the desire to integrate writing with other forms of modern labor, in Davis's pessimistic account of capitalist production this impetus is undermined by a fundamental distrust of the representational capacities of language in general. In the futile attempt to articulate the suffering and spiritual "hunger" that inspired its design, the Korl-woman only reiterates its own paradoxical ontology. As in the famous work of the expressionist painter Edvard Munch, hers is a scream that cannot be heard and, therefore, cannot be answered. Frozen in a sculptured gesture of speechlessness, the Korl-woman reproduces not only the discursive breakdown enmeshing nearly all the principal characters but also the narrator's failure to proffer a sensible answer to what she presents as the "terrible question" of her tale. All three—the artist-worker, the sculpted figure, and finally Davis's text itself—are thus marked by a glaring resistance to objectification in language.

"Whatever pain achieves," writes Elaine Scarry in a seminal study on pain and the difficulties of its representation, "it achieves in part through its unsharability, and it ensures this unsharability through its resistance to language." <sup>12</sup> If this linguistic unsharability of pain (both bodily and psychic) is what separates the workers of the iron mills from one another as well as from their social superiors, it is also a distinguishing feature of Davis's prose in general. For the fledgling woman writer Rebecca Harding Davis, embarking on a literary career at the outset of the Civil War, the project of objectifying through language the conditions of modern industrial society was laden with considerable practical and aesthetic consequences. Her work is overshadowed by the crucial question of how to transform the pain and lingering disembodiment she perceived in the social battles of her times into written texts.

In her first book-length novel, A Story of Today, later published as Margaret Howth (1862), this connection between social and military warfare is made explicit:

I write from the border of the battlefield, and I find in it no theme for shallow argument or flimsy rhymes. . . . Do not call us traitors, then, who choose to be cool and silent through the fever of the hour,—who choose to search in common things for auguries. . . . I want you to go down into this common, every-day drudgery, and consider if there might not be in it also a great warfare. Not a serfish war not altogether ignoble, though even its only end may appear to be your daily food. . . . It has its slain. Men and women, lean-jawed, crippled in the slow, silent battle, are in your alleys, sit beside you at your table. 13

Again, Davis wants the reader to "go down into this common, every-day drudgery" of industrial life (though this time her destination is a textile mill), but again, too, she is confronted with the "terrible question" to which the novel seems to be its sole mute reply. If it is true that she reworked an earlier unpublished manuscript titled "The Deaf and the Dumb" into the first chapters of *Margaret Howth*, her "story of today" may then be read as a story of both the writer's enforced muteness vis-à-vis the socio-military battles of mid-nineteenth-century America and the concomitant redefinition of authorship as a means to turn its own muteness into a voice for the dumb, disembodied veterans of these battles.<sup>14</sup>

Technology and Fragmentation in Whitman's Civil War Poetry

The degree to which Davis's redefinition of the form and content of contemporary literature actually alienated her from the transcendental branch of American Renaissance writers can be gleaned from her enraged response to Bronson Alcott's paeans to the Civil War. When meeting with Emerson and Alcott at Hawthorne's home in Concord in 1862, Davis participated in their philosophical discussions, during which Alcott referred to the military engagement as the "armed angel which was wakening the nation to a lofty life unknown before." As she later recalled, Alcott's abstract, exalted treatment of the brutal events—as well as Emerson's obvious approval of it—instilled in her an immediate dislike for these masterminds of American transcendentalism: "I had just come up from the border where I had seen the actual war . . . the malignant personal hatreds wearing patriotic masks, and glutted by burning homes and outraged women, the chances in it, well improved on both sides, for brutish men to grow more brutish, and for honorable gentlemen to degenerate into thieves and sots. War may be an armed angel with a mission, but she has the personal habits of the slums."15

Writing from the northern front of a brutal war that mirrored, according to her opening statement in *Margaret Howth*, the increasing brutality of the social system at large, Davis believed that the raging military conflicts provide no theme for "shallow argument" or "flimsy rhymes." Given her border state experience in Virginia, she keenly sensed the tragic import of the Civil War as well as the physical and emotional fragmentation of those directly involved in it. Whereas Alcott's poetic exaltation betrayed a preference for the abstract flights of the mind, Davis was more concerned with the task of communicating the pain and suffering of the body.<sup>16</sup>

This attention to the body is equally pivotal in the work of midnineteenth-century America's greatest poet, Walt Whitman. Yet in contrast with Davis's emphasis on deterioration, Whitman's poetry initially offers a much more affirmative view of the body. That for Whitman the body possessed a poetic dimension directly related to his own artistic project was indicated by the way he introduced himself to the readers of the first edition of *Leaves of Grass* (1855). Instead of identifying himself by name, Whitman attached to the anonymous, self-published work an

engraving of a daguerreotype of himself which greeted the reader, in Ed Folsom's apt phrase, "with a body in print unaccompanied by a name in print." The unconventional portrait ostensibly focused on the torso (rather than the head) of the poet, whose proletarian attire and defiant, lounging posture were meant to convey a physical impression of the author's body and, at the same time, to establish a synecdochic relationship between that photographed body and the body of poems that followed. As Whitman wrote in one of his numerous self-reviews: "Its author is Walt Whitman and his book is a reproduction of the author. His name is not on the frontispiece, but his portrait, half-length, is. The contents of the book form a daguerreotype of his inner being, and the title page bears a representation of its physical tabernacle." 18

If Whitman's daguerreotype establishes a physical analogy between the author and his book, the redundant bodily associations in Leaves of Grass extend this analogy to the level of modern American society. Clearly, Whitman's episodic "Song of Myself" does not just speak for the author; it makes an attempt to incorporate and give voice to the multitudes of American people, including those who, like the poet himself, live on the margins of acceptable society: the grimy industrial workers, the handicapped and diseased, the drunks, thieves, and prostitutes on the streets of his beloved Manahattan. "Is it you," he irreverently asks, "that thought the president greater than you? or the rich better off than you? or the educated wiser than you? . . . that you are no scholar and never saw your name in print. Do you give in that you are any less immortal?"19 "In an artistic effort analogous to social revolution," one critic has remarked, Whitman "subverts the accepted convention of poetic practice to reveal a new literature whose rhetorical strength is founded in a figural representation of bodily forces that overwhelm the rational, self-defensive tactics of conventional thinking and writing."20 In the poem, added later, which opens the 1871 edition of Leaves of Grass, the physical thrust of Whitman's art is couched in these unmistakable lines:

Of physiology from top to toe I sing, Not physiognomy alone nor brain alone is worthy for the Muse, I say the Form complete is worthier far, The Female and the Male I sing.

THE AUTHOR IN PAIN

Of Life immense in passion, pulse, and power, Cheerful, for freest action form'd under the laws divine, The Modern Man I sing.<sup>21</sup>

By trying to embody male and female characters of all walks of life (as well as their culture, their history, and even the geographic space in which they are embedded), the speaker of the poems explodes the boundaries of his poetic identity, thereby conjuring up a constructivist, cybernetic vision of the modern self.

The tendency to dissolve the poet's physical shape in order to reconstruct it successively from the multifarious representations of the outer world also permeates the crucial poem "I Sing the Body Electric":

I sing the body electric, The armies of those I love engirth me and I engirth them, They will not let me off till I go with them, respond to them, And discorrupt them, and charge them full with the charge of the soul. And if the body does not do fully as much as the soul? And if the body were not the soul, what is the soul? In him the start of populous states and rich republics, Of him countless immortal lives with countless embodiments and enjoyments. O my body! I dare not desert the likes of you in other men and women, nor the likes of the parts of you, I believe the likes of you are to stand or fall with my poems, and that they are my poems. . . . (93-101)

In the 1856 edition, the poem—now titled "Poem of the Body"—concludes on an astounding anatomical inventory, a page-long reconstruction of the poet's body from the plethora of human parts that Whitman appropriates as a sort of "connecting tissue" between himself and his fellow citizen. Another excerpt:

All attitudes, all the shapeliness, all the belongings of my or your body or of any one's body, male or female,

The lung-sponges, the stomac-sac, the bowels sweet and clean, The brain in its folds inside the skull-frame. . . .

The thin red jellies within you or within me, the bones and the marrow in the bones,

The exquisite realization of health;

O I say these are not the parts and poems of the body only, but of the soul. . . . (100–101)

If Whitman believed, as he wrote in "Crossing Brooklyn Ferry," that the modern world had become utterly physical, that its human and material manifestations—bridges, ferries, the multitudes on the bustling streets of Manhattan—could be experienced only through the body ("I too had receiv'd identity by my body," 162), this insight often intersected with his admiration for mechanical occupations and machinery. In "A Song for Occupations" he invokes not only the structural equality of mental and mechanical labor but also a spiritual unity of men and machines:

In the labor of engines and trades and the labor of fields I find
the development,
And find the eternal meanings
Workmen and Workwomen!
If you stand at work in your shop I stand as nigh as the nighest in
the same shop
1

Objects gross and the unseen soul are one. . . .

Leather-dressing, coach-making, boiler-making, rope-twisting, distilling, sign-painting, lime-burning, cotton-picking, electroplating, electro-typing, stereotyping,

Stave-machines, planing-machines, reaping-machines, ploughing-machines, thrashing-machines, steam wagons

In them realities for you and me, in them poems for you and me. . . . (216-17)

For this relentless singer of modernity, machines, especially the expanding railroad, represented a "type of the modern," an "emblem of motion and power," the "pulse of the continent." Prefiguring twentieth-century modernist stances toward technology, Whitman's allembracing verses powerfully refuse any antagonism between industry and art. Time and again he professes his willingness to participate in the mechanization of society, and thus become himself in part a (publishing) machine: "Factories, machinery, the mechanical forces, the windlass, lever, pulley, all certainties . . . all so dear to me—what you are, (whatever it is,) I putting it at random in these songs, become a part of that."

Yet there was also a stage in Whitman's career when his poems grew increasingly silent on the topic of both the body and technology. The shift from the heroic singer of modernity hailing the intimate communion of art, body, and machines to the wandering philosopher who hearkens to "myth Asiatic" and other "primitive fables" in order to search for the soul of modern society has often been associated with biographical factors, especially the moral pressure and personal guilt accompanying his awakening homosexuality.<sup>24</sup> Perhaps more consequential, however, were the historical events of the period between 1861 and 1865, a period that, stylistically as well as thematically, marked a turning point in Whitman's oeuvre, cumulating in a series of fifty-three poems about the Civil War first published in 1865 as Drum-Taps.25 Although Whitman had not participated in military combat, he was directly affected by it through his brother George. "Through George," as Wynn Thomas writes, "Whitman was led to an intimate understanding of the real, hidden nature of the war. . . . For the Whitman family the Civil War

literally began and ended with soldier George." <sup>26</sup> George's distinguished record as a soldier in the Union Army apparently encouraged Whitman to identify him with the heroic battles of the nation as a whole. In reviewing the opening stages of the war in the first three songs of *Drum-Taps*, he is full of enthusiasm for the symbol-laden action about to unfold:

To the drum-taps prompt,

The young men falling in and arming,

The mechanics arming (the trowel, the jack-plane, the black-smith's hammer, tost aside with precipitation,)

And the sturdy artillery,

The guns bright as gold, the work for giants, to serve well the guns, Unlimber them! (no more as the past forty years for salutes for courtesies merely,

Put in something now besides powder and wadding.)<sup>27</sup>

In his late prose work *Specimen Days and Collect* (1882), Whitman recalled that both the voluntary armed upheaval at the beginning of the war and the "harmonious disbanding of the armies in the summer of 1865" had struck him as "immortal proofs of democracy, unequall'd in all the history of the past." <sup>28</sup> Yet if his rhetoric in *Drum-Taps* was initially positive, that is, a rhetoric that underscores the people's reckless striving for unity and liberty, the later poems of the series are marked by a more negative register.

Whitman's euphoric call to arms, to "unlimber" the guns, would soon turn into an elegy to limbs violently detached from their bodies, a song of technologically induced dismemberment rather than a "song of engineering joys." <sup>29</sup> When Whitman went to Falmouth, Virginia, in 1862 to secure information about his brother (whom he believed to have been seriously injured in the recent fighting), his attitude toward the war began to change dramatically. Although he found George to have been only superficially wounded, his visit to the camps and the division hospitals scattered around them had a lasting impact on both his perception of the military events and the poetic style he would adopt to portray

those events. In particular, the sight of the various army hospitals, as Whitman noted in *Specimen Days*, had opened his eyes to the disintegrating rather than unifying consequences of modern warfare: "Falmouth, Va., opposite Fredericksburgh, December 21, 1862.—Begin my visits in the camp hospitals in the army of the Potomac. . . . Out doors, at the foot of a tree, within ten yards of the front of the houses, I notice a heap of amputated feet, legs, arms, hands, &c., a full load for one-horse cart. Several dead bodies lie near, each cover'd with its brown woolen blanket" (32). Given the deplorable state of mid-nineteenth-century health care, amputation was often the *ultima ratio* of military doctors. If a wounded soldier did not lose his injured hand, arm, or leg right there on the battlefield, chances were he would lose it later to surgery.<sup>30</sup>

Witnessing the soldiers' dismemberment whether by the machinery of war or subsequently by the machinery of large-scale amputation must have been a gruesome experience for Whitman. Thus, when he later recalled his many visits to military hospitals in and around Washington, it was this violent fragmenting of the body that loomed largest in his imagination: "One man is shot by a shell, both in the arm and legboth are amputated—there lie the rejected members. Some have their legs blown off-some bullets through the breast-some indescribably horrid wounds in the face or head, all mutilated, sickening, torn, gouged out-some in the abdomen-some mere boys-many rebels, badly hurt—they take their regular turns with the rest, just the same as any the surgeons use them just the same."31 Whitman's description of these camps as an industrialized shambles in which each man takes "regular turns with the rest" in order to have some part of his body cut off by the surgeon-operative is by no means accidental. As he recounts in another entry, one of the hospitals had been moved to the second story of the Patent Office, then one of the largest and finest buildings in Washington. When Whitman visited the location, it was already crowded with rows of badly wounded soldiers, whose suffering and dying seemed symbolically elevated by the strange, solemn surroundings. But Whitman goes on to record yet another important symbolic link:

Two of these immense apartments are fill'd with high and ponderous glass cases, crowded with models in miniature of every kind of uten-

sil, machine or invention, it ever enter'd into the mind of man to conceive. . . . Between these cases are lateral openings, perhaps eight feet wide and quite deep, and in these were placed the sick, besides a great long double row of them up and down through the middle of the hall. Many of them were very bad cases, wounds and amputations. . . . It was, indeed, a curious scene, especially at night when lit up. The glass cases, the beds, the forms lying there, the gallery above, and the marble pavement under foot . . . such were the sights but lately in the Patent-office. 32

For over a decade, Whitman had welcomed the progressive spirit of engineers and inventors, taking pride in their creations as well as in the expanding liaison between men and machines. After his voluntary immersion in the carnage wrought by modern technological warfare, however, this liaison must have struck him as highly problematic. In his composite cybernetic picture of the Patent-Office hospital, utensils, machines, inventions of all sorts merge once again with the bodies of his fellow Americans; yet this time their dying bodies are disfigured by amputations and terrible suppurating wounds. Henceforth, Whitman's newly gained insight into the destructive power of military technology would bring about a significant change of poetic roles, from the "rough, splendid workman" of Manahattan, in the words of one of his biographers, to "a mother-man distributing his care among hundreds and thousands of helpless young men who filled the hospital sheds." <sup>33</sup>

While Whitman realized that he could not "do much good to these wounded and dying," he did not want to disentangle himself from their fate either.<sup>34</sup> Although treating the mutilated war victims was ostensibly painful ("[I] cleanse the one with a gnawing and putrid gangrene, so sickening, so offensive"),<sup>35</sup> Whitman continued his famous volunteer service as wound dresser and male nurse throughout the years to come. Significantly, he was not just engaged in soothing physical pain. As he tells us in his notebooks, his daily routine would comprise a wide range of brotherly services, including the distribution of homemade food, fruits, tobacco, writing paper, stamped envelopes, and "a good lot of amusing reading matter." When requested, Whitman would write letters and telegrams to relatives of disabled soldiers, thereby literally transforming himself into a speaker for those who could no longer speak for them-

selves. Urged on by what Wynn Thomas has called "his passionate determination to record the achievements and sufferings of the 'unknown' soldier and, wherever possible, to restore to those soldiers at least a trace of that personal identity that had almost been obliterated by the new techniques of mass warfare," <sup>37</sup> he meekly accepted the passive role of mediator and conduit for the private enunciations of the maimed and muted veterans.

The notion of the poet suppressing his own voice in deference to that of the suffering soldier informs both Whitman's poetry and his prose stemming from that period. Moreover, it seems as if in these texts he begins to question the representational power of art altogether. "Of scenes like these," he asks in *Specimen Days*, "who writes—who e'er can write the story?" (48). In a similar vein, he reports in one of the *Drum-Taps* poems, "entering but for a minute [an impromptu hospital] I see a sight beyond all the pictures and poems ever made." 38 By 1861, against the backdrop of imminent warfare, the great singer of modernity had turned his back on the manifestations of American progress he had once praised, to search for "pleasure new and ecstatic": "I too leave the restgreat as it is, it is nothing—houses, machines are nothing—I see them not." Ten years later, in an epigraph to the *Drum-Taps* series in the 1871 edition of *Leaves of Grass*, this heroic attitude is finally replaced by what might be seen as the poet's aesthetic and rhetorical capitulation:

Arous'd and angry, I'd thought to beat the alarum, and urge relentless war,

But soon my fingers fail'd me, my face droop'd and I resign'd myself,

To sit by the wounded and soothe them, or silently watch the dead.  $^{40}$ 

In subsequent editions, these lines were incorporated in Whitman's most famous war poem, "The Wound-Dresser." If Whitman actually believed that the "whole book [that is, *Leaves of Grass*], indeed, revolves around that four years' war, which, as I was in the midst of it, becomes, in 'Drum-Taps,' pivotal to the rest entire," this poem is essential for helping us to understand what he may have had in mind.<sup>41</sup>

"The Wound-Dresser" introduces as its speaker an "old man bending . . . among new faces" by whom he is called upon to "witness again," to relate what has stayed with him "the latest and deepest" of this traumatic war. In a gesture reminiscent of Davis's narrator in *Life in the Iron Mills*, the graying poet takes his audience on a journey not to the battlefields of honor—in his memory the soldiers' joys fade "like a swift-running river" (309)—but to the limbo of war hospitals:

Whoever you are, follow without noise and be of strong heart.

Bearing the bandages, water and sponge, Straight and swift to my wounded I go,

The neck of the cavalry-man with the bullet through and through I examine

From the stump of the arm, the amputated hand, I undo the clotted lint, remove the slough, wash off the matter and blood. (310)

If Whitman's earlier poetry was an attempt to bring together the different classes and various cultural materials of antebellum America, in "The Wound-Dresser" this comprehensive agenda is turned on its head. What started out in the first half of *Leaves of Grass* as a daring aesthetic venture toward unification now becomes—in much less experimental form—a statement of isolated grief over the fragmentation of the body (in the sense of both the body politic and the scarred body of the common soldier). If the events of the Civil War signaled for generations of Americans to come the vulnerability of their national and political ideals, for Whitman it effected a fundamental change of poetic paradigms: the retreat of the vigorous singer of technological progress into the realm of silent introspection and, especially in the texts written after the war, the realm of a renewed past ("singing my days," he writes in "Passage to India," "singing the strong light works of engineers, Our modern

wonders. . . . Yet first to sound and ever sound, the cry with thee O soul, The Past! the Past! " 411).

By continually revising and adding to subsequent editions of Leaves of Grass, Whitman hoped to forge, out of all available material, his great song of the modern man. Insofar as his momentous book grew out of and reflects the cultural sphere of mid-nineteenth-century America, it may be taken as representing the formal and thematic diversity of American Renaissance writing. What is more, in its shifting assessment of the role of authorship in modern society. Whitman's oeuvre also demonstrates the structural "modernity" of American Romanticism. While his early unifying stances powerfully articulate the author's desire to embody the material and human diversity of modern America, the growing emphasis on fragmentation and dismemberment in the second half of the book signals the "downside" of modernism: the alienation and ultimate silence of literary authors vis-à-vis the overwhelming presence of technology. If Whitman's stance was thus divided between affirmation and alienation, this is also true of the generations of modernist writers who emerged during the first half of the new century. To put it another way, just as his early enthusiasm for the "labor of engines and trades" may have served as a blueprint for the treatment of the technological in the work of Hart Crane or William Carlos Williams, so do his Civil War poems—though idiosyncratic in style and replete with soothing camaraderie—foreshadow the estrangement of the writer from modern society associated with Henry Adams, T. S. Eliot, and the later Ezra Pound.

# In a Cradle Endlessly Rocking

The coupling of the human and the machine remained an alluring topic for nineteenth-century American authors. As the century progressed, however, the focus often shifted away from the manifold consequences of mechanization on the human to the (no less problematic) prospects of the humanization of machines. With technology becoming more sophisticated, and thus also more difficult to grasp, the idea of a thinking or even reproducing apparatus took a firm grip on the American literary imagination. In numerous short stories, pamphlets, children's books, and more, writers expressed either their fascination with or their concerns about a culture of machines turned human (a good case in point

is Ambrose Bierce's short story "Moxon's Master," in which a chessplaying robot attacks its maker after being checkmated by him).<sup>42</sup>

Samuel Butler's Darwinian glance at technological progress may have served as a model for this kind of fiction. In *Erewhon*, or over the Range (1872), the English critic and novelist dealt extensively with the possibility of the machine as an intelligent, reproducing being. If it is true that man, according to the first law of thermodynamics, is himself incapable of originating mechanical energy, how can he object, then, to the future viability of machines on the grounds of their being unable to reproduce? Are we not, he asks in a chapter titled "Book of the Machines," "creating our successors in the supremacy of the earth? daily adding to the beauty and delicacy of their [the machines'] organisation, daily giving them greater skill and supplying more and more of that self-regulating self-acting power which be better than any intellect?" 43

Butler's treatise on the vitality of machines culminates in the audacious statement that, even at present, "machines can within certain limits beget machines of any class, no matter how different to themselves" (254). If man, according to this late nineteenth-century commentator, must be called "a machinate mammal," advanced technology, by contrast, appears to take on human shape:

Let any one examine the wonderful self-regulating and self-adjusting contrivances which are now incorporated with the vapour-engine, let him watch the way in which it supplies itself with oil; in which it indicates its wants to those who tend it; in which, by the governor, it regulates its application of its own strength; let him look at the store-house of inertia and momentum the fly-wheel, or at the buffers on a railway carriage; let him see how those improvements are being selected for perpetuity which contain provision against the emergencies that may arise to harass the machines, and then let him think of a hundred thousand years, and the accumulated progress which they will bring unless man can be awakened to a sense of his situation, and of the doom which he is preparing for himself. (266)

One writer who looked closely at the marvelous contrivances of modern science, and, what is more, also got the message, is Henry Adams. Standing amidst the awe-inspiring machinery at the Great Exposition of

1900, he "began to feel the forty-foot dynamos as a moral force, much as the early Christians felt the Cross." What he experiences as especially striking in this new technology of electromechanics is the smooth, noiseless way in which the dynamo wields its enormous power: "Barely murmuring—scarcely humming an audible warning to stand a hair's breadth's further for respect of power—while it would not wake the baby lying close against its frame." 44

This image of the machine lulling a baby to sleep once more epitomizes the artist's primary concern about technology and its solid footing in nineteenth-, or rather by then twentieth-century American culture: the replacement of the generative powers of art by the reproductive, purely mechanical powers of the machine. Writing at the end of a century that had seen enormous technological change, Adams, as his distancing stance of third-person autobiographical narration readily suggests, seems to forsake the creative forces of art altogether. By stubbornly clinging to a model whose intimidating procreative powers had never been duly acknowledged by Protestant America (the Venus and the Virgin), this avowedly nineteenth-century author thus finally surrendered to having "his historical neck broken by the sudden irruption of forces totally new." 45

To be sure, authorship and the composing, publishing, and distribution of literary texts survived well into the days of electronic writing and storytelling. Yet, as I hope to have shown in this study, the late poststructuralist battles over the death of the author as inventor and proprietor of his or her text date back at least as far as the American Renaissance. By relentlessly negotiating the author's position within the growing technological framework of modern society, Romantic literary discourse paved the way for more recent debates on the role of authorship under advanced conditions of reproduction and dissimulation. In his now classic essay "The Work of Art in the Age of Mechanical Reproduction," Walter Benjamin describes Western art as being on the verge of a fundamental shift from originality to repetition, from the unique and authentic work of art to the mass-produced, dissimulating works of the machine. "Around 1900 technical reproduction had reached a standard," Benjamin claims, "that not only permitted it to reproduce all transmitted works of art and thus to cause the most profound change

in their impact upon the public; it also had captured a place of its own among the artistic processes." 46

Benjamin's essay is concerned mainly with painting, photography, and film, yet its general argument applies to written texts as well. With technological progress and the concomitant proliferation of potential forums for amateur writers (such as newspapers, professional and special interest magazines, dime novels, serials, and so on), the distinction between author and reader, between the "real" and the "sham" writer, was increasingly blurred. In the age of mechanical reproduction, as Benjamin remarks elsewhere, "the reader is at all times ready to become a writer." Because of the ongoing differentiation of the work process, the majority of the work force is turned into "experts" (if only in a very circumscribed and specialized area), which is also to say that the reader is turned into a potential author: "As an expert—even if not on a subject but only on the post he occupies—he gains access to authorship." <sup>48</sup>

Inasmuch as Benjamin attributed the disappearance of authorship to technological progress, he added to a recurring theme of Western cultural discourse: an essentially technophobic anxiety about the loss of authorial control, a fear that resurfaced with each introduction of new and more powerful technologies.<sup>49</sup> To show that this anxiety did not wholly originate in the genuinely modern attitudes of Romantic authors, or, if you wish, that such anxieties were accompanied by an equally strong effort to co-opt technological paradigms into their respective literary projects, has been one of my core interests in conceiving and, finally, writing this book.

#### NOTES

#### Introduction

- 1. In Irving, The Sketch Book of Geoffrey Crayon, Gent., 61-66.
- 2. As M. H. Abrams pointed out, Coleridge's organic principle emerged in response to what he saw as the "brick and mortar" thinking of dominant mechanical philosophy. While attributing the purely associative or mechanical faculties of reason—which had formerly been seen to comprise all of the inventive process—to fancy, Coleridge was able to invest his second and more important category, *imagination*, with everything that is unfixed, vital, and essentially creative. See Abrams, *The Mirror and the Lamp*, 156–225. The key passages of Coleridge's organicist poetics are in *Biographia Literaria*, 69–88.
  - 3. Thoreau, A Week on the Concord and Merrimack Rivers, 91.
- 4. F. O. Matthiessen, American Renaissance, 133–75. The Triumph of Romanticism also contains Peckham's early influential essay "Toward a Theory of Romanticism." The importance of organicism as a popular New Critical paradigm can be traced in Fogle, "Organic Form in American Criticism, 1840–1870"; and in René Wellek's major survey "The Concept of Romanticism in Literary History." For a comprehensive historical evaluation of organicist metaphors in Western culture, see Channell, The Vital Machine.
- 5. This view is implicitly conveyed in Leo Marx's landmark study *The Machine in the Garden*. It also informs Kasson, *Civilizing the Machine*; and Eichner, "The Rise of Modern Science and the Genesis of Romanticism." Joel Black has argued for a more differentiated evaluation of the Romantic perception of science and technology. Trying to narrow the gap between the two discursive positions, Black wants the Romantics to be seen "not as a source or even as a

symptom of our modern-day cultural schizophrenia," meaning our tendency to see science or technology and the fine arts as two contradicting modes of investigation, "but rather as the first figures to diagnose and treat this condition" ("Newtonian Mechanics and the Romantic Rebellion," 133).

- 6. When using the terms "modernity" and "modern," I do not refer, of course, to their restricted sense as marking roughly the first half of the twentieth century and its literary offspring "high modernism." Rather I want to evoke their broader sociological application to the transition from the feudal, preindustrial modes of production to the technology-driven, highly differentiated conditions of capitalism (a transition that is also geared to the change in scientific and intellectual paradigms concomitant with Enlightenment thought). For a detailed discussion of this view, see Lefebre, Introduction à la modernité. From a different perspective, Matei Calinescu also argued for an encompassing; extended usage of the term. Pointing out the irreconcilable differences between the two major aspects (one technological, the other aesthetic) associated with the concept of modernity, he claims that "at some point during the first half of the nineteenth century an irreversible split occurred between modernity as a stage in the history of Western civilization—a product of scientific and technological progress, of the industrial revolution, of the sweeping economic and social changes brought about by capitalism—and modernity as an aesthetic concept. Since then, the relations between the two modernities have been irreducibly hostile, but not without allowing and even stimulating a variety of mutual influences in their rage for each other's destruction" (Five Faces of Modernity, 41).
- 7. Stovall, The Foreground of "Leaves of Grass," 153 (my emphasis).
- 8. Hawthorne, preface to *The House of the Seven Gables*, 1. For a thorough investigation of Hawthorne's use of the Romance as a form of cultural analysis, see Millington, *Practicing Romance*. Millington argues that for Hawthorne, Romance "is represented less as a literary form than as the psychological and cultural place where his art happens, where writer and reader meet in a special sort of interchange" (43). Although critics have repeatedly exposed the ideological implications inherent in the idea of a genuine American prose form, they seem to agree that "Romances" provided ideal spaces for all sorts of visionary and fanciful writing in nineteenth-century America. See William Ellis's critical survey *The Theory of the American Romance*.
- 9. Reynolds, Beneath the American Renaissance, 6.
- 10. Of the various studies that deal with the cultural representation of technology during the nineteenth century, three works seem to elaborate directly on topics mentioned though not explicitly discussed in Marx's pioneering work: Kasson, *Civilizing the Machine*; Segal, *Technological Utopianism in American Culture*; and Nye, *American Technological Sublime*. All of them stress the "ideological" character of the discourses on technology, and they support the importance of the technological as a symbolic rather than just a material factor in American cultural history.

- 11. For a more comprehensive understanding of the term "technology" and its diversified extensions into the sociocultural sphere, see Bijker, *The Social Construction of Technological Systems*; and Penley and Ross, *Technoculture*. For historical approach to this topic, see Williams, "Cultural Origins and Environmental Implications of Large Technological Systems."
- 12. Marx, "The Idea of Technology and Postmodern Pessimism," 244.
- 13. See Baym, Novels, Readers, and Reviewers, and Woman's Fiction. William Charvat has dedicated much of his work to the history of publishing in nineteenth-century America. Apart from various essays there are two major publications by Charvat concerned with this topic: Literary Publishing in America, 1790–1850, and the posthumously published Profession of Authorship in America, 1800–1870. During the 1970s, Charvat's seminal work was rivaled by John Tebbel's four-volume History of Book Publishing in the United States, a shortened version of which later appeared as Between Covers.
- 14. Tompkins, Sensational Designs, xii.
- 15. Reynolds, Beneath the American Renaissance, 9.
- 16. See Rogin, Subversive Genealogy; Gilmore, American Romanticism and the Marketplace; Michaels, "Romance and Real Estate"; Pease, Visionary Compacts; Bromell, "'The Bloody Hand' of Labor: Work, Class, and Gender in Three Stories by Hawthorne"; and Pfister, The Production of Personal Life.
  - 17. Jehlen, "Introduction: Beyond Transcendence," 10.
  - 18. Macherey, A Theory of Literary Production, 53-64.
  - 19. Peckham, Romanticism and Ideology, 12.
- 20. Ibid., 19–20. On the lingering influence of Romantic ideology in modern critical and literary discourse, see also McGann, *The Romantic Ideology*.
- 21. Foucault, "What Is an Author?" 159.
- 22. Darnton, *The Business of Enlightenment*; Eisenstein, *Print Culture and Enlightenment Thought*. Of related interest are the more general studies on the cultural effects of print technology such as McLuhan, *The Gutenberg Galaxy*; and Ong, *Interfaces of the Word*.
- 23. Ross, "Authority and Authenticity: Scribbling Authors and the Genius of Print in Eighteenth-Century England." Although print technology had been around for some time, it was not until the late seventeenth and early eighteenth centuries that new modes of textual circulation (the emergence of journalism and the novel, for example) started to change the perceptions and demands of audiences and thus made visible the wide-ranging sociocultural impact of this new technology. See Hunter, "From Typology to Type."
- 24. Ross, "Authority and Authenticity," 232.
- 25. Ibid., 237.
- 26. Young, "Conjectures on Original Composition," 319. Young had based his idea of artistic excellence entirely on a biological model. Contrary to the sterile hands of imitators, he reminds us, "the pen of an original writer, like Armida's wand, out of a barren waste calls a blooming spring" (319).

27. In her treatment of the philosophic foundations of English copyright law, Woodmansee identifies a similar shift as the defining moment in the development of the modern notion of authorship. Though neither of the earlier conceptions credited the writer with the responsibility for his creation, the eighteenth century, according to Woodmansee, departed from these models in two significant ways: "They minimized the element of craftsmanship (in some instances they simply discarded it) in favor of the element of inspiration, and they internalized that source of inspiration. . . . That is, from a (mere) vehicle of preordained truth—truth as ordained either by universal human agreement or by some higher agency—the *writer* becomes an *author*" ("The Genius and the Copyright," 427–29). See also Elizabeth Eisenstein's seminal work on the subject, *The Printing Press as an Agent of Change*.

- 28. Young, "Conjectures on Original Composition," 333.
- 29. Ibid., 319.
- 30. Ibid.
- 31. In a brilliant and provocative reassessment of the idea of authorship and its reliance on such key concepts as originality, work, and property, Françoise Meltzer has exposed the shaky status of the notion of originality as a founding principle of the literary critical establishment. See Meltzer, *Hot Property: The Stakes and Claims of Literary Originality.*
- 32. As Charvat notes, "The profession of authorship in the United States began in the 1820's when Washington Irving and James Fenimore Cooper discovered that they could turn out regularly books which readers were willing to buy regularly" (*The Profession of Authorship in America*, 29).
- 33. Ironically, *The Sketch Book* is itself a good case in point. The first edition of *Sketch Book No. 1* (which comprised two thousand copies) was published simultaneously in four different cities; during the first two years alone, an estimated five thousand Americans were willing to pay the enormous price of \$5.37 for a copy. See Charvat, *The Profession of Authorship*, 33–40.
- 34. Irving, The Sketch Book, 56.
- 35. Ibid., 62 (my emphasis).
- 36. For Bloom's theory of literary influence, see The Anxiety of Influence.
- 37. Rachman, "'Es lässt sich nicht schreiben': Plagiarism and 'The Man of the Crowd,'" 52.
- 38. Sandra M. Gilbert and Susan Gubar begin their momentous study of nineteenth-century women writers by asking, "Is the pen a metaphorical penis?" and they go on to ascertain that indeed, "in patriarchal Western culture... the text's author is a father, a progenitor, a procreator, an aesthetic patriarch whose pen is an instrument of generative power like his penis. More, his pen's power, like his penis's power is not just the ability to generate life but the power to create a posterity to which he lays claim" (*The Madwoman in the Attic*, 3–6).
- 39. "Phaidrus," in The Dialogues of Plato, 139-40. Since Plato has become

notorious for barring the artist from his utopian Republic, his definition of writing as an original and lasting act is especially noteworthy.

- 40. Said, "Molestation and Authority in Narrative Fiction," 48–49. By supplying narrative space for the creation of fictitious worlds and characters, the novel, according to Said, represents an ideal platform for the author's desire to increase, to innovate, to make new. See also Said's book-length study *Beginnings: Intention and Method*.
  - 41. Said, "Molestation and Authority," 49.
- 42. Young, "Conjectures on Original Composition," 319.
- 43. Gilbert and Gubar, The Madwoman in the Attic, 7.
- 44. Laqueur, Making Sex, 41.
- 45. Armstrong, "The Art of Preserving Health" (1781), quoted in Flynn, "Running Out of Matter," 156.
- 46. In his Essay of Health and Long Life (1724), the famous Dr. Cheyne addresses the working class as possessing "callous organs of sensation" or, even more drastically, "Ideots, Peasants and Mechanicks," who are incapable of wit (quoted in Flynn, "Running Out of Matter," 154). Given the proliferation of learning and writing concomitant with the Enlightenment, it is not surprising that physicians became obsessed with negotiating the antithetical demands of the mind and the body. As Flynn convincingly shows, doctors increasingly depended on mechanical means—such as the chamber horse and other exercise tools—to cure the negative consequences of the sedentary activities of authors. Dr. Cheyne, then considered one of England's leading nerve specialists, had prescribed one such machine to Samuel Richardson in order to treat his depressive mood and accompanying physical disorders, suggesting that Richardson hire "an amenuensis and dictate to him riding on the new Chamber Horse" (ibid., 147).
- 47. Among contemporary studies focusing on the material rather than purely textual aspects of literary production are Kittler, *Grammaphon Film Typewriter*; Paulson, *The Noise of Culture*; Ezell and O'Keefe, *Cultural Artifacts and the Production of Meaning*; and Wutz and Tabbi, *Reading Matters*.
- 48. In his 1802 Preface to Lyrical Ballads, Wordsworth assumes that there is a formal engagement of every author "that certain classes of ideas and expressions will be found in his book, but that others will be carefully excluded." Although in Lyrical Ballads he had exchanged the "gaudiness and inane phraseology of many modern writers" for incidents and situations from common life rendered "in a selection of language really used by men," this by no means implies that Wordsworth gave up on ideas altogether. On the contrary, his expressed intention was to throw over the appearance of ordinary things a "colouring of imagination," thereby representing them in "the manner in which we associate ideas in a state of excitement" ("Preface to Lyrical Ballads, 596–97). The view that, above all else, it is ideas rather than their extraliterary (historical,

sociopolitical, economical, etc.) ramifications that demarcate literary texts has been prevalent ever since its emergence from Romantic poetics. Even poststructuralism, which seems to mark the opposite extreme of hermeneutic modes of interpretation, places a strong emphasis on the independence of literature from its material surroundings, substituting as it does the idolization of language and the open-ended play of signification for the transcendence of meaning and ideas.

- 49. Poe, Collected Works, 1831-1842, 608.
- 50. Poe, Collected Works: Poems, 90-91.
- 51. Poe, Collected Works, 1813-1842, 392.
- 52. For the importance of Bowditch's work, see Reingold, *Science in Nineteenth-Century America*, II-28. Rittenhouse's famous "orrery" was based completely on computations of his own. In 1790 the self-made engineer, inventor, astronomer, and clockmaker succeeded Franklin as president of the American Philosophical Society. His life and work are well documented in Brook Hindle's biography *David Rittenhouse*.
- 53. Kasson, Civilizing the Machine, 32.
- 54. Rush, "Of the Mode of Education Proper in a Republic," 14 (my emphasis).
- 55. For a perceptive discussion of Rush's career as physician, author of a voluminous book titled *Medical Inquiries and Observations upon the Diseases of the Mind* (1812), and operator of an asylum for the insane, see Takaki, "*Diseases* of the Mind and Skin," in *Iron Cages*, 16–35.
- 56. Rush seems to have been particularly concerned about masturbation and its morbid effects on the moral character. Against "the train of physical and moral evils which this solitary vice fixes upon the body and mind" he prescribes, quite strikingly, the "close application of the mind to business, or study of any kind, more especially to the mathematics" (quoted in Takaki, *Iron Cages*, 24).
- 57. Thoreau, "Resistance to Government," in Reform Papers, 66.
- 58. Ibid., 73. To be sure, the notion that the state functions as a kind of machine predates the American Revolution for at least a century. In 1651 Hobbes had already likened his Leviathan to a huge engine, an automaton that was conceived as an artificial man whose joints, sinews, nerves, soul, and memory are constituted by the various representatives of the Commonwealth. Its mechanist foundations notwithstanding, Hobbes still considered the machine basically an imitation of nature. Since in all three spheres—art, science, and politics—man strives only to imitate the natural laws, the machine might well be taken as a signifier of a common objective: to represent the harmony that governs the work of God. See Hobbes, *Leviathan*, xviii.
  - 59. Takaki, Iron Cages, 148.
- 60. In the American imagination the sublime has often been conceived as an essentially *moral* experience. Contrary to its European predecessor, the nineteenth-century American idea of the sublime did not so much emphasize the realization of reason through the experience of the vastness and terror of

nature; rather it brought together the rugged western landscape and the various technological achievements of the nineteenth century as complementary forms of an unfolding national identity. For a subtle evaluation of this topic, see Nye, *American Technological Sublime*.

- 61. According to Gabriele Schwab, there is a fundamental difference between the cybernetic organisms of today and the early man-machines of the eighteenth and nineteenth centuries: "While the latter was a product of the mechanical age, the cyborg is a product of the new age of electronic technologies and computers. The human automaton and the cyborg can be seen as collective fantasies used to symbolize a transition in the historical formation of subjectivity. The human automaton, which symbolized the transition between romantic and modern subjectivity, is replaced by the cyborg, which symbolizes the transition between modern and postmodern subjectivity. The human automaton was created as a centered organism and as such served to compensate for the uncontrollable forces of the unconscious at the price of a shift to the inanimate. The cyborg, on the other hand, is 'decentered' in a new way" ("Cyborgs and Cybernetic Intertexts," 200-201). Although Schwab is right in that she correlates the differences between modern and postmodern forms of subjectivity to the varying fantasies of the automaton and the cyborg respectively, this by no means invalidates my own argument that the Romantics used cybernetic imagery to negotiate the tensions between the emerging technological system(s) and the modern notion of authorship. Man-machines had always been complex figures of hybridity and difference. Although their essentially hybrid character eventually became a widely accepted ingredient of their postmodern identity, the paradoxical ontology of the earlier cyborg was taken to represent the shifting status of the author/ artist vis-à-vis the larger society.
- 62. As Ihab Hassan indicates, postmodernism also implies a shift in regard to our traditional understanding of what may count as the human form: "We need first to understand that the human form—including human desire and all its external representations—may be changing radically, and thus must be revisioned. We need to understand that five hundred years of humanism may be coming to an end, as humanism transforms itself into something that we must helplessly call posthumanism" ("Prometheus as Performer," 205).
- 63. Hayles, "Postmodern Parataxis," 404–5. Webster's New World Dictionary, by contrast, still defines the term according to its usage in science fiction literature: "cyborg ('si-borg) n [cyb(ernetic) + org(anism)] a hypothetical human being modified for life in a nonearth environment by the substitution of artificial organs and other body parts."
- 64. Haraway, "A Cyborg Manifesto: Science, Technology, and Socialist-Feminism in the Late Twentieth Century," in *Simians, Cyborgs, and Women*, 150. See also "Cyborgs at Large: Interview with Donna Haraway."
  - 65. Schwab, "Cyborgs and Cybernetic Intertexts," 193-95.
- 66. Haraway, "The Promises of Monsters," 297. Haraway takes pains to ex-

plain that this is a different vision from postmodern reductionism, which holds that there is *no* nature but only representations and copies of it, an endless play of signifiers that defer rather than produce a meaningful picture of a world full of "cacophonous agencies." "The commonplace nature I seek," she contends, "a public culture, has many houses with many inhabitants which/who can refigure the earth. Perhaps those other actors/actants, the ones who are not human, are our topick gods, organic and inorganic" (297).

- 67. Haraway, "A Manifesto for Cyborgs," 191.
- 68. Ibid., 93.
- 69. Schwab, "Cyborgs and Cybernetic Intertexts," 194.
- 70. Ibid.,
- 71. Baudrillard, Simulations, 92.
- 72. Taussig, Mimesis and Alterity, 129.
- 73. Lacan, "Le stade de miroir."
- 74. For a detailed discussion of the function of the *tuché* (as, in Lacanian terms, an encounter with the real) and the automaton, see Lacan's essay "Tuché and Automaton." A revealing exploration of how mirrors and reflected images of the writer figure as complex symbols of modern authorship in (French) literary texts can be found in Dällenbach, *The Mirror in the Text*.
  - 75. See Taussig's chapter "Alterity," in Mimesis and Alterity, 129-43.
- 76. Woodward, "Prosthetic Emotions," 97.
- 77. Woodward, "Prosthetic Emotions," 103. For a historical survey of golems, automata, androids, and other manifestations of the transgression of the fixed boundaries between the living and non-living in Western culture, see Plank, "The Golem and the Robot"; and de Solla Price, "Automata and the Origins of Mechanism and Mechanist Philosophy."

### Chapter One

- 1. On Franklin's career as inventor and scientist, see York, *Mechanical Metamorphosis*, 23–52.
- 2. The invention of the lightning rod led Franklin's contemporaries to invest him—and thus, by inference, his technological skill—with almost mythical power. As even John Adams admitted (Adams hated Franklin because of his Francophile attitude): "Nothing, perhaps, that ever occurred upon this earth was so well calculated to give any man an extensive and universal celebrity as the discovery of the efficacy of iron points and lightening-rods. The idea was one of the most sublime that ever entered a human imagination, that a mortal should disarm the clouds of heaven, and almost 'snatch from his hand the sceptre and the rod.'" Adams follows here Anne-Robert-Jacques Turgot's famous epigram on Franklin: "Eripuit Coelo Fulmen Sceptrumque Tyrannis" (He snatched the lightning from the sky and their scepter from tyrants). John Adams

in the Boston Patriot, May 15, 1811, rpt. in Benjamin Franklin's Autobiography, 247.

- 3. Dauber, The Idea of Authorship in America, 33.
- 4. Responses to Benjamin Franklin—be they affirmative, ironic, or, in some cases, verging on the paranoid—are legion in American literary history. Melville, for example, barely camouflaged his ambivalent stance toward Franklin's multifarious achievements. In stories such as "The Lightening-Rod Man" and, even more scathingly, in his novel *Israel Potter*, he utterly ridiculed the "sage's" tinkering and self-promoting spirit. In the latter text, the narrator comments on the renowned scientist in a telling way: "Having carefully weighed the world, Franklin could act any part in it. . . . Printer, postmaster, almanac maker, essayist, chemist, orator, tinker, statesman, humorist, philosopher, parlor-man, political economist, professor of housewifery, ambassador, projector, maxim-monger, herb-doctor, wit:—Jack of all trades, master of each and mastered by none—the type and genius of his land. Franklin was everything but a poet" (*Israel Potter*, 48).
- 5. The epitaph is reprinted in *The Papers of Benjamin Franklin*, 1:111. For background, sources, and so on, see the editor's note (109–10).
- 6. The Federal Copyright Act was enacted in 1790. Although this first American copyright law granted authors privileges over their work during a fourteen-year period after publication (which, at the author's request, could be extended for another fourteen years), it took much longer actually to enforce the now legalized claim to authorship. As Cathy Davidson notes, "In Massachusetts between 1800 and 1809 fewer than one tenth of all published books were copyrighted" (*Revolution and the Word*, 35).
- 7. The Autobiography of Benjamin Franklin, 1–2.
- 8. Franklin's revisionary style is discussed, for example, in Dauber, *The Idea of Authorship*, 3–38; Leibowitz, *Fabricating Lives*, 29–70; and Renza, "The Veto of Imagination."
- 9. Franklin's rhetorical disclaimer at the beginning of the *Autobiography* would soon become a standard gesture of modern publishing. Even if his narrative has been made easily available through print, he reminds his critical readers, it may still "be read or not as any one pleases" (*The Autobiography of Benjamin Franklin*, 2).
- 10. By the mid-nineteenth century, skilled crafts were increasingly qualified according to either their "usefulness" or their artistic "refinement." For a contemporary assessment of the range and scope of the mechanical and manufacturing trades, see Bigelow, *The Useful Arts* (1840).
- 11. Franklin, "Proposals Relating to the Education of Youth in Pennsylvania" (1749), in *The Writings of Benjamin Franklin*, 2:396.
- 12. Franklin, "Idea of the English School" (1751), in Educational Views of Benjamin Franklin, 129.

13. Carlyle's "Signs of the Times" originally appeared in the *Edinburgh Review* 49 (1829), rpt. in *The Works of Thomas Carlyle*, 14:465.

14. Ibid., 471. The modern ontological separation between the humanities and the natural sciences finally culminated in the notorious "two-culture thesis" put forward by the British novelist and scientist C. P. Snow. In a manner that would have been completely unacceptable to the polytechnic genius of Benjamin Franklin, Snow talks about a rift throughout contemporary Western intellectual life, "a gulf of mutual incomprehension [that is, between writers and scientists]—sometimes (particularly among the young) hostility and dislike, but most of all lack of understanding." Snow's famous lecture first appeared as "The Two Cultures," New Statesman 6 (October 1956). An expanded version, from which I quote here, appears in Snow, The Two Cultures, 9–26. For a critical discussion of his thesis, see Slade and Lee, Beyond the Two Cultures.

- 15. Carlyle, "Signs of the Times," 477.
- 16. Bigelow, Elements of Technology, 6.
- 17. Carlyle, "Signs of the Times," 485-86.
- 18. The notion of technology as system (or complex) of automated machines which in turn might be addressed as a giant machine in its own right informs Lewis Mumford's classic study *Technics and Civilization* (1934). For a more recent study along these lines, see Williams, "Cultural Origins and Environmental Implications of Large Technological Systems"; and Nye, *Narratives and Spaces*.
- 19. This idea becomes especially apparent in Heidegger's famous statement that "the essence of the technical is by no means itself technical." See his influential discussion of the negative consequences of modern technology, "The Question Concerning Technology," in *Basic Writings*, 287.
  - 20. Channell, The Vital Machine, 9.
- 21. Ibid., 30.
- 22. La Mettrie, *Man A Machine*, 80. For a philosophic and historical evaluation of La Mettrie's essay, see Vartanian, *La Mettrie's L'Homme Machine*, 13–113.
- 23. Paulding, Salmagundi, 2:3.
- 24. Ibid., 1:142.
- 25. Significantly, the famous constructor of animated puppets, Jacques de Vaucanson (1709–82), served as an inspector of a textile mill in Lyons for which he designed one of Europe's first automated power looms. A direct comparison of the mechanical movements of a female android to the restrictions of early nineteenth-century social etiquette can also be found in E. T. A. Hoffmann's popular tale "The Sandman" (1817). In describing the bodily features of a perfectly shaped "woman-machine," the unsuspecting narrator says of her/its slightly "unnatural" stiffness: "Her rather strange hollow back and wasp waist seemed the result of excessively tight clothing. There was something measured and stiff about her gait and posture that struck many people as unpleasant, but

it was attributed to a feeling of constraint due to the social occasion" (*Tales of Hoffmann*, 23).

- 26. Melville, *Typee*, 126–27.
- 27. Paulding "The Man Machine," 24.
- 28. Gerber, "James Kirke Paulding and the Image of the Machine," 741.
- 29. Franklin, The Future Perfect, 141.
- 30. The numbers are given in *Historical Statistics of the United States*, *Colonial Times to 1970* (Washington, D.C.: U.S. Department of Commerce, Bureau of the Census, 1975). See also Licht, *Industrializing America*, xiii–xviii; and Pacey, *The Maze of Ingenuity*, 293–321.
- 31. Emerson, Journals and Miscellaneous Notebooks, 16:242.
- 32. In "Economy," the first chapter of his programmatic autobiographical text, Thoreau expounds at length on the nation's naive conflation of technological progress with lasting cultural and intellectual improvement. "Our inventions are wont to be pretty toys," he complains, "which distract our attention from serious things. They are but improved means to an improved end, an end which it was already but too easy to arrive at" (Walden, 52). The view that technology is basically just a collection of tools has ushered in what Arnold Pacey describes as one of the two fundamental evaluations of technological advancement, namely, that there is an inevitable logic of linear technological progress with considerable social change following in its wake. In opposition to this "onedimensional" definition of technology, Pacey writes, one could argue that technical improvements are "just one aspect of a wider progress or development within society, and changes in the direction of technical progress occur whenever the values and objectives of society change" (preface to The Maze of Ingenuity). For the question of how technology is involved in changing sociocultural conditions, see the related essays in Smith and Marx, Does Technology Drive History?
  - 33. Thoreau, Walden, 192.
  - 34. Ibid., 193-94.
  - 35. Marx, The Machine in the Garden, 40.
- 36. See Tichi, New World, New Earth.
- 37. Kasson, Civilizing the Machine, 147-48.
- 38. Quoted in Marx, *The Machine in the Garden*, 203. The gradual ascendancy of the useful arts in antebellum public discourse can also be witnessed, according to Nicholas Bromell, in the tendency of mechanical guilds such as the Massachusetts Mechanic Association to stress the invention of new machines and labor-saving devices in general over the purely "ornamental" activities of traditional American artisanry. See Bromell, *By the Sweat of the Brow*, 40–58.
- 39. Emerson, "Nature," in Collected Works, 1:1.
- 40. Ibid., 12.
- 41. The full entry in Emerson's journal reads: "Extremes meet: there is no straight line. Machinery & Transcendentalism agree well. Stage Coach & Rail

Road are bursting the old legislation like green whites; a train from Brussels to Vienna to Constantinople cannot wait for German custom houses" (*Journals and Miscellaneous Notebooks*, 8:397).

- 42. Emerson, English Traits, 94 (my emphasis).
- 43. Emerson, "The Poet," in *Collected Works*, 3:12. For the role of nature in Emerson's theory of art, see also Sealts, "Mulberry Leaves and Satin."
- 44. Science, along with its practical application, technology, accomplished its professionalization in America roughly between 1800 and 1860, a process culminating in William Whewell's *Philosophy of the Inductive Sciences* (1840), which, for the first time, adopted the term "scientist" as a collective name for the various specializations within the scientific community. See Limon, *The Place of Fiction in the Time of Science*, 121. An account of how technology developed into a culture of "experts" can also be found in Marvin, "Inventing the Expert: Technological Literacy as Social Currency," in *When Old Technologies Were New*, 9–31. M. H. Abrams also located the development of the idea of genius, which formed the aesthetic basis of Romanticist exceptionalism, in the growing diversification of modern society; this process, according to Abrams, necessitated "the existence of a controlling design in the mind of the productive artist" (*The Mirror and the Lamp*, 165).
- 45. In his survey of the work and publications of the Society for the History of Technology (SHOT), John Staudenmaier finds that "accurate verification of the true inventor has been a preoccupation in the West for centuries and has given rise not only to the tangled complexities of patent law, but also to a large body of literature in the history of technology assessing the validity of claims to originality" (*Technology's Storyteller*, 40). See also Pacey, *The Culture of Technology*; and Hindle, *Emulation and Invention*. For a discussion of the professional identity of the modern artist, see Schulte-Sasse, "The Prestige of the Artist under Conditions of Modernity."
- 46. Baron Justus von Liebig, "Lord Bacon as Natural Philosopher," *Macmillan's* 8 (1863), quoted in Smith, *Fact and Feeling: Baconian Science and the Nineteenth-Century Literary Imagination*, 35. Smith locates the roots of the cultural gap between poetry and the sciences—as manifested in Snow's two-cultures thesis—not so much in the scientific profession itself as in the efforts of Romantic writers to distinguish their artistic project from that of the scientist and technician. The notion that it is often imagination or even mystic intuition that brings new scientific ideas to life is also a prominent topic in Arthur Koestler's momentous study *The Act of Creation*.
  - 47. Kasson, Civilizing the Machine, 146.
  - 48. Emerson, "The Poet," 19.
  - 49. Emerson, "Art," in Collected Works, 2:217.
  - 50. Emerson, "Art," 218.
  - 51. Ibid.

- 52. Ibid., 217.
- 53. Thus Emerson declares that the useful arts are just "reproductions or new combinations by the wit of man" and as such are miles away from the original creation of the poet ("Nature," 11).
- 54. "In true England," Emerson remarks in *English Traits*, "all is false and forged. This too is the reaction of machinery, but of the larger machinery of commerce" (95).
  - 55. Emerson, "The Poet," 5.
- 56. The project of conquering nature, which has been associated with technological endeavors for centuries, dates back at least as far as Bacon's *New Atlantis* (1626). Echoing the biblical imperative of Genesis, Bacon's utopia calls for an enlargement of "the bounds of Human Empire, to the effecting of all things possible" (quoted in Pacey, *The Culture of Technology*, 87–88).
- 57. Emerson, "Nature," 16.
- 58. Emerson, "The Poet," 11.
- 59. Advertisement in American Publisher's Circular and Literary Gazette 3 (1857), quoted in Zboray, "Antebellum Reading and the Ironies of Technological Innovation," 76. See also Charvat, Literary Publishing in America, esp. 17–37; and Davidson, Revolution and the Word, esp. 15–37, 83–109.
- 60. Melville, "Letter to Nathaniel Hawthorne," [June 1?] 1851, in Correspondence, 191.
- 61. Matthiessen, American Renaissance, 400. Neither Matthiessen, who used the letter in his monumental study as an emblem of what he calls the "economic factor" in Melville's life, nor—somewhat later—Leo Marx, elaborates on the larger framework of technological change that inspired much of Melville's own sense of professional identity. See Marx, "Melville's Parable of the Walls."
- 62. The numbers are given in Putnam's address to the Association of New York Publishers on September 27, 1855, quoted in Zboray, "Antebellum Reading and the Ironies of Technological Innovation," 65. See also Zboray and Zboray, "'Have You Read . . . ?'"
- 63. Writing at an even later stage of this development, Norris attacked the upsurge of goal-oriented, standardized writing courses in America during the last two decades of the nineteenth century. Artistic expression, he emphasized, would never comply with the timetables and marketing policies of capitalist production: "When some man of a different race than ours, living in a more congenial civilization, whose training from his youth up has been adopted to a future artistic profession, succeeds in painting the great picture, composing the great prelude, writing the great novel, don't say he was born a 'genius,' but rather admit that he was made 'to order' by a system whose promoters knew how to wait" ("Novelists to Order—While You Wait," quoted in Levy, *The Culture and Commerce of the American Short Story*, 77).
- 64. Dickinson, "Publication is the Auction" (1863), in Complete Poems, 348.

- 65. Emerson, "The Poet," 4.
- 66. A penetrating discussion of Dickinson's ambiguous self-representation as a writer can be found in Wilson, *Figures of Speech*, 221–76.
- 67. Melville "Letter to Hawthorne," 192.
- 68. Melville, "Letter to Richard Bentley," July 20, 1851, in Correspondence, 198.
- 69. In a review of Poe's tales, Margaret Fuller caustically registered the economic incentives associated with the flourishing magazine business: "No form of literary activity has so terribly degenerated among us as the tale. Now that everybody that wants a new hat or bonnet takes this way to earn one from the magazines or annuals, we are inundated with the very flimsiest fabrics ever spun by mortal brain. . . . The sale-work produced is a sad affair indeed and 'gluts the market' to the sorrow of both buyers and lookers-on" ("Review of Poe's Tales," Daily Tribune, New York, July 11, 1845, quoted in Walker, Edgar Allan Poe: The Critical Heritage, 176).
- 70. Hawthorne, *The American Notebooks*, 8:388. This passage is also quoted in McKee, "'A Small Heap of Glittering Fragments," 139.
- 71. Baym, The Shape of Hawthorne's Career, 98-116.
- 72. It is a well known fact of nineteenth-century American literary history that with the publication of his most successful work, The Scarlet Letter (1850). Hawthorne's career picked up considerable momentum and was dedicated from then on exclusively to the writing of full-length novels. Yet Hawthorne's switch from composing tales and sketches to the more prestigious form of the novel was by no means prompted by personal or aesthetic reasons alone. As most recent critics agree, his decision to give up on the short story form (his last tale, "Feathertop, A Moralized Legend," was published in 1852) was based primarily on economic and technological factors. By the end of the period during which Hawthorne produced his major tales and sketches (1825-50), American publishing had succumbed completely to the industrial revolution, thereby realizing the full capacities of machine-press production as well as introducing new methods of distribution by rail and the modern system of commercial advertising. If The Scarlet Letter, the first of Hawthorne's books to be promoted on a largescale basis, did not fully live up to the expections of its publisher, its relative commercial success was still, according to one critic, "gratifying and surprising enough to the author to alter the way he wrote from that point on" (Frank, introduction to Critical Essays on Hawthorne's Short Stories, 6-7).
- 73. Fairbanks, "Hawthorne and the Machine Age," 155-56.
- 74. Orvell primarily focuses on the new representational media such as photography and mass-produced lithography, but he provides a good overview of Whitman's early career as a journalist and his wide-ranging interest in everything technical and scientific. See Orvell, "Whitman's Transformed Eye," in *The Real Thing*, 3–32.

- 75. Whitman, "Preface, 1855—Leaves of Grass, First Edition," in Leaves of Grass, 713-14.
- 76. Ibid., 720.
- 77. Whitman appended this letter—together with Emerson's enthusiastic praise of his poetry—to the second edition of *Leaves of Grass* (1856). See "Prefatory Letter to Ralph Waldo Emerson," in *Leaves of Grass*, 735.
- 78. Ibid., 732–33.
- 79. Ibid., 735.
- 80. In his chapter titled "Reading," Thoreau praises the literary text as an aesthetic mode that should be represented on canvas or marble if not "carved out of the breath of life itself" (*Walden*, 102).
- 81. Review of Whitman's Leaves of Grass, *Brooklyn Eagle*, September 15, 1855, quoted in Orvell, *The Real Thing*, 8.

#### Chapter Two

- 1. The historian Howard P. Segal has comprehensively traced the proliferation of late nineteenth-century utopian novels that either promulgated or, like Twain's Connecticut Yankee in King Arthur's Court (1889), questioned outright the importance of technology for social improvement. Since technological progress had by then become inseparably interwoven with America's manifest destiny, the majority of these text were, of course, in favor of technology's wonderworking prospects. See Segal, Technological Utopianism in American Culture.
- 2. Hawthorne's interest in the symbolic aspects of the railroad (rather than its practical consequences) has been repeatedly noted. Most critics have followed Leo Marx's interpretation that "in the popular culture of the period the railroad was a favorite emblem of progress" and that Hawthorne's sketch, therefore, must be read as a "compact satire on the prevailing faith in progress" (*The Machine in the Garden*, 27). This reading, however, is not completely satisfying. In her seminal account of Hawthorne's career, Nina Baym affirms the danger of taking the author of this and other sketches of *Old Manse* at face value: "It is unfortunate that the discursive quality of these works has led critics repeatedly to use them as evidence of Hawthorne's deepest thoughts on the issues discussed in them." What is more to the point, Hawthorne seems capable of what Baym calls "literary Realpolitik," that is, taking a negotiator's stance on the social issues to which he addressed himself (*The Shape of Hawthorne's Career*, 102).
- 3. Hawthorne, "The Celestial Railroad," in Mosses from an Old Manse, 132. Further references are cited in the text.
- 4. Petroski, *To Engineer Is Human*, 62. As Petroski points out, Hawthorne already uses the term "engineer" in its modern sense as referring to both the designer of an engine and the one who runs it. By the mid-nineteenth century, Petroski writes, "when the railroad was emerging as the great metaphor of the

Industrial Revolution . . . the engineers of steam engines and iron bridges were in the driver's seat" (61).

- 5. In his chapter "Reading," Thoreau argues in a similar vein. Here, however, it is not the public lecture that is to be denounced but the growing impact of piecemeal reading and the serialized, sentimental romance. Singling out the popular demand for such works in Concord's circulating library, he sees them as a form of machinery geared to satisfy the needs of machinist readers: "If others [publishers, libraries, etc.] are the machines to provide this provender, they [the public] are the machines to read it." What Hawthorne thus marked as the transformation, or, as he calls it, "etherealizing," of written discourse, Thoreau saw at work in the widespread distribution of hopelessly inflated, sensational prose. Yet for both of these Romantic writers, the mechanical paradigm seemed to describe best their apprehensions about the glib, mass-produced products of contemporary reading culture. See Thoreau, Walden, 104–5.
- 6. Hawthorne, "The Old Apple Dealer," in Mosses from an Old Manse, 445. Further references are cited in the text.
- 7. A detailed evaluation of how the railroad altered the perceptions and lifestyle of nineteenth-century Americans can be found in Nye, *American Technological Sublime*, 45–76.
- 8. That Hawthorne also conceived of the old man's predicament in terms of a conflict between our cerebral and emotional faculties (the former, then, being the driving agent of technological change) can be seen in an often quoted entry in his notebooks: "If mankind were all intellect," Hawthorne wrote on January 6, 1854, "they would be continually changing, so that one age would be entirely unlike another. The great conservative is the heart, which remains the same in all ages; so that common-places of a thousand years' standing are as effective as ever" (*The English Notebooks*, 67–68).
- 9. When Burke speaks of terror as the most powerful source of sublimity, he adds that it should "not press too close" and that the observer "should be removed himself to the greatest distance from danger." By the same token, signs of emotional involvement such as pity and commiseration appear to be incompatible with the sublime experience altogether. See Burke, *A Philosophical Enquiry*, 46–48.
- 10. Hawthorne, "The Hall of Fantasy," in Mosses from an Old Manse, 173.
- thorne's third effort at putting together a thematically and structurally coherent edition of his tales (the other two were "Seven Tales of Native Land," ca. 1827, and "Provincial Tales," written before 1832). Since the unifying character of that abortive experiment was meant to be a traveling poet, we can assume with some certainty that Hawthorne wanted to probe the working conditions of literary authors in early nineteenth-century America and, in particular, their potential estrangement from the larger society. Several of the stories were later included in his three major collections, *Twice-Told Tales* (1837), *Mosses from*

an Old Manse (1846), and The Snow-Image (1851). Hawthorne presumably outlined "Old Ticonderoga" sometime between 1832 and 1834. It first appeared anonymously in the American Monthly Magazine 1 (February 1836), and was later reprinted in The Snow-Image. See Weber, Lueck, and Berthold, Hawthorne's American Travel Sketches, 25–70; Thompson, The Art of Authorial Presence, esp. the final chapter, "The Oberonic Self," 202–37; and Baym, The Shape of Hawthorne's Career, 39–52.

- 12. Hawthorne, "Old Ticonderoga—A Picture of the Past," in *The Snow-Image and Uncollected Tales*, 187. Further references are cited in the text.
- 13. The adoption of a phrase from *Biographia Literaria*, where Coleridge accuses eighteenth-century mechanical philosophy of "talking of mind but thinking of brick and mortar," attests to the overpowering influence of this principal originator of Romantic aesthetic theory on Hawthorne's early work. See *Biographia Literaria*, 1:235.
- 14. Rosenberg, "'The Best That Earth Could Offer,'" 147; Weinstein, "The Invisible Hand Made Visible," 48. Critical readings of this multilayered text are too numerous to list here. While most critics tend to focus on Hawthorne's use of allegory and, especially, his critique of transcendental tenets ("The Birthmark" appeared shortly after Hawthorne's return from the Fourierist/transcendentalist community at Brook Farm), there had long been a strain of criticism that concentrated on Aylmer's obsessive search for perfection, thereby taking the story as a powerful dismissal of modern science in general. An early example of the latter is Heilman, "Hawthorne's 'The Birthmark': Science as Religion"; see also Stoehr, Hawthorne's Mad Scientists; Judith Fetterly's feminist "Women Beware Science"; and Eckstein, "Hawthorne's 'The Birthmark': Science and Romance as Belief."
- 15. Bromell, "'The Bloody Hand' of Labor," 559. Bromell's superb essay touches on some of the paradoxes Hawthorne was to encounter when joining his idea of literary work to Coleridge's organicist aesthetics. Although he detects repercussions of the contemporary distinction between manual and mental labor in "The Birth-mark," Bromell is not interested in the influence of technology on Hawthorne and is therefore blind to his use of technological imagery as a means of resolving the apparent contradictions in his self-representation as literary author.
- 16. A growing number of critics have emphasized the cultural, political, and economic implications rather than the purely epistemological layerings of Hawthorne's stories. Thus, Weinstein claims that the sort of allegory Hawthorne applies in "The Birth-mark" functions "as part of a cultural apparatus that produces middle-class subjects and, in so doing, reveals itself as dialogically engaged with one of the most powerful technologies the nineteenth century had for producing subjectivity—the developing market economy in antebellum America" ("The Invisible Hand Made Visible," 45). See also Weinstein's discussion of Hawthorne's "economics of allegory" in *The Literature of Labor and*

the Labors of Literature, 53–86. In a similar vein, Joel Pfister depicts Hawthorne "as an alienated member of [the] emerging nonmanual, 'white-collar' middle class," who tried to negotiate in his fiction the antagonistic ideological implications of class, race, and gender concomitant with the constitution of the middle class in antebellum America. See Pfister, *The Production of Personal Life*, 3. See also Pease, *Visionary Compacts*; and Michaels, "Romance and Real Estate."

- 17. Hawthorne, "The Birth-mark," in Mosses from an Old Manse, 37. Further references are cited in the text.
- 18. Interpretations of Georgiana's role in the story vary considerably. Whereas earlier critics such as Matthiessen contended that "though not sharing in [Aylmer's] desire and apprehensive of the consequences, [Georgiana] is stirred by the purity of his love" (American Renaissance, 253-54), more recent readings tend to emphasize her participation in Aylmer's scheme. This latter view is persuasively articulated by Barbara Eckstein in "Hawthorne's 'The Birth-mark': Science and Romance as Belief," where she argues that "romance is Georgiana's religion" and that this "contributes to the metaphysical excesses of science as science contributes to the metaphysical excesses of romance" (511). Weinstein, following a different path, also claims that the "characterological immobility of others, namely Georgiana and, to a lesser extent, Aminadab . . . continually present[s] the occasions for Aylmer's acts of transcendence" ("The Invisible Hand Made Visible," 73). From yet another perspective, Nina Baym flatly dismisses the long-standing view of Hawthorne as moral conservative and sexist patronizer. Many of his stories written before the Old Manse period, she contends, "narrate the rejection, by a man, of a sexual union with a woman who is either his fiancée or his wife. This rejection affects both man and woman adversely, and in the woman's case, often fatally. . . . The destruction or damaging of the woman seems to result accidentally as a by-product, so to speak, of other intentions" ("Thwarted Nature," 63-64).
- 19. For the latter view, see, among others, Limon, *The Place of Fiction in the Time of Science*, 127–29.
- 20. As Pfister has noticed, gynecological surgery came into being the same year that Hawthorne published "The Birth-mark." When J. Marion Sims performed the first "sexual surgery" in 1843 (an operation to remove the female reproductive organs), *Harper's Weekly*, in praise of this daring achievement, wrote that "there was rapture in his work, [much] like that of a lover's pursuit or a great artist's creation" (*The Production of Personal Life*, 22).
- 21. Weinstein, "The Invisible Hand Made Visible," 66–67. Weinstein's claim rests on the fact that early on in the story, Aylmer impresses his hand on Georgiana's arm, and that, when erasing the birthmark (which again is shaped like a hand), he also tries to remove the physical traces of his interference with her body.
- 22. Thoreau, Walden, 102.
- 23. For a comprehensive treatment of Aminadab, his name, and his allegorical

function, see Pribek, "Hawthorne's Aminadab"; and Rees, "Aminadab in 'The Birth-mark.'"

- 24. The Lowell mills figure in many critical assessments of technology and labor in antebellum America. John Kasson argued that the mills "marked a critical juncture in America's transition to a mature industrial society" and that they reflected the contradictory "adjustment of workers to factory life" (*Civilizing the Machine*, 74). Weinstein's juxtaposition of contemporary supporters and critics of Lowell factory life centers on the "visible" effects of industrial labor, especially in regard to issues of health and the like ("The Invisible Hand Made Visible," 57–60). See also Pfister, *The Production of Personal Life* 104–21; and Foner, *The Factory Girls*.
- 25. From "Duties and Rights of Mill Girls," which appeared in the *New England Offering* in August 1848. Mostly written by the operatives themselves, the *New England Offering* and, somewhat earlier, its predecessor the *Lowell Offering* were considered the official mouthpiece of the Lowell mills.
- 26. Larcom, A New England Girlhood, 183.
- 27. Ibid., 181.
- 28. Henry Colman, "Lowell, Massachusetts" (1836), quoted in *Civilizing the Machine*, Kasson, 79–80.
- 29. Babbage, *The Economy of Machinery and Manufactures*, 39. As Andrew Zimmerman has pointed out, the mechanist vision of this and other early nineteenth-century rationalizations of "machinofacture" differed from the mechanical philosophies of Descartes, Hobbes, and La Mettrie in that they grasped "the body not merely theoretically as a machine but also practically, as a mechanically manipulatable machine" ("The Ideology of the Machine and the Spirit of the Factory," 14).
- 30. See Pfister, *The Production of Personal Life*, 3–8. Pfister's discussion of the contemporary concept of domesticity and the relation it bears to the historical formation of the middle class relies heavily on Blumin, *The Emergence of the Middle Class*.
- 31. Pfister, *The Production of Personal Life*, 57. This process corresponds, of course, to the general emphasis on labor division within modern capitalist societies. Following in the wake of Adam Smith's groundbreaking *Wealth of Nations* (1776), Babbage was the first to examine in detail the economic causes and consequences of specialization; what is more, he even advocates the systematization and streamlining of mental work through the use of calculating machinery. See Babbage, *The Economy of Machinery and Manufacture*, 169–90, 191–202.
- 32. Hawthorne's post at the Boston Custom House, where he was in charge of the weighing and gauging of salt and coal, had clearly made him "an alienated member of this emerging nonmanual, 'white-collar' middle class," according to Pfister (*The Production of Personal Life*, 3).
- 33. Hawthorne, The English Notebooks, 418–19 (my emphasis).
- 34. Hawthorne might well have joined the transcendentalist experiment at

Brook Farm, where he lived for a few months in 1841, precisely because it offered, according to one of its founders, "a more natural union between intellectual and manual labor" (quoted in Pfister, *The Production of Personal Life*, 3).

- 35. Hawthorne, "The Procession of Life," in Mosses from an Old Manse, 216.
- 36. Hawthorne, "Monsieur Du Miroir," in Mosses from an Old Manse, 168. Further references are cited in the text. The story was actually among the earliest pieces to be included by Hawthorne in Old Manse. It had first appeared in The Token and Atlantic Souvenir (Boston: Charles Bowen, 1837), 49–64.
- 37. See Abrams, The Mirror and the Lamp, 168-69.
- 38. See, among others, Dolis, "Hawthorne's Tactile Gaze"; Williams, "'The Aspiring Purpose of an Ambitious Demagogue'"; and Trachtenberg, "Seeing and Believing."
- 39. Trachtenberg, "Seeing and Believing," 461-62.
- 40. Hawthorne, The House of the Seven Gables, 48. Further references are cited in the text.
- 41. In one of the text's seminal scenes, when Phoebe connects the relentless expression on Pyncheon's face to the character revealed in the daguerreotype, Hawthorne connects the "enlightening" effect of photography directly to its practice of using the sunlight as catalyst in the developing process: "Then, all at once, it struck Phoebe, that this very Judge Pyncheon was the original of the miniature, which the Daguerreotypist had shown her in the garden, and that the hard, stern, relentless look, now on his face, was the same that the sun had so inflexibly persisted in bringing out" (*The House of the Seven Gables*, 119).
  - 42. Trachtenberg, "Seeing and Believing," 477.
  - 43. Michaels, "Romance and Real Estate," 167.
- 44. In order to release Georgiana's mind "from the burthen of actual things," Aylmer makes use of a series of optical phenomena (one is actually tempted to call it an early form of cinematography), all of which were designed to blur the boundaries between the real and its airy reflection on a screen: "Then again, when she felt a wish to look forth from her seclusion, immediately, as if her thoughts were answered, the procession of external existence flitted across a screen. The scenery and the figures of actual life were perfectly represented, but with that bewitching, yet indescribable difference, which always makes a picture, an image, or a shadow, so much more attractive than the original" (45). This astounding spectacle of aesthetic replication has prompted Miles Orvell to call Aylmer's visual performances a "virtual reality machine." See Orvell, "Virtual Culture and the Logic of American Technology," 17.
- 45. Quoted in Marks, "Hawthorne's Daguerreotypist," 334.
- 46. See Michaels, The Gold Standard and the Logic of Naturalism, 100.
- 47. On the cultural responses to photographic representation, see Orvell, "Reproduction and 'The Real Thing'"; Trachtenberg, "Mirror in the Marketplace"; and Williams, "'The Inconstant Daguerreotype.'"

- 48. Quoted in Kasson, Civilizing the Machine, 153.
- 49. A general account of Hawthorne's aesthetic views can be found in Gupta, "Hawthorne's Theory of Art," 314.
- 50. Prominent examples are, among others, Bell, Hawthorne's View of the Artist; Gupta, "Hawthorne's Theory of Art"; and Doubleday, Hawthorne's Early Tales.
- 51. Hawthorne, "Drowne's Wooden Image," in Mosses from an Old Manse, 310. Further references are cited in the text.
- 52. According to Michael Wutz, "Hunnewell's ship functions in the multiple capacity as the guiding North Star, however misguiding it might be to Drowne; [and] as a legendary locus of hell in the frozen realm of the North, as Hunnewell's own residence" ("Hawthorne's Drowne," 104). The latter connection is actually made explicit in the text itself, when a Puritan observer suggests that "Drowne has sold himself to the devil; and doubtless this gay Captain Hunnewell is a party to the bargain" (317).
- 53. Poe, "Tale-Writing—Nathaniel Hawthorne," in Complete Works, 13: 143.
  - 54. August 13, 1842, in Hawthorne, The American Notebooks, 332.
  - 55. Quoted in Bell, Hawthorne's View of the Artist, 94.
- 56. Notable examples are Howard, "The Watchmaker, the Artist, and the Iron Accents of History"; and Bromell, *By the Sweat of the Brow*, 101–4, 108–12.
- 57. Hawthorne, "The Artist of the Beautiful," in Mosses from an Old Manse, 459. Further references are cited in the text.
- 58. The idea of creating a human machine actually dates back at least as far as the Greco-Roman period. In the *Pneumatics* of Hero of Alexandria (62 A.D.), we find a sample of ancient automata all of which represent an attempt to simulate life by sundry if sometimes rather crude technological means. For a general history of automata, see Buchner, *Mechanical Musical Instruments*; and Chapuis and Droz, *Les automates*.
- 59. Price, "Automata and the Origins of Mechanism and Mechanist Philosophy," 10. To make this connection even more compelling, Price relates this anecdote about Descartes's attempt to build a mechanical human being: "Long before [Descartes] published his *Discourse*, and perhaps before he had become interested in theology, he toyed with the notion of constructing a human automaton activated by magnets. One of his correspondents, Poisson, says that in 1619 he planned to build a dancing man, a flying pigeon, and a spaniel that chased a pheasant. Legend has it that he did build a beautiful blonde automaton named Francine, but she was discovered in her packing case on board a ship and dumped over the side by the captain in his horror of apparent witchcraft" (23).
- 60. The literary classic that made this intention a major topic is, of course, Mary Shelley's *Frankenstein: Or the Modern Prometheus* (1818). I know of only one critic who has established a link between Owen Warland and Frankenstein.

See Lewis, "Victor Frankenstein and Owen Warland: The Artist as Satan and as God." For a psychohistorical approach to machines and automata, see Plank, "The Golem and the Robot."

- 61. Franklin, Future Perfect, 14.
- 62. In addition, his first name might well be taken as a reference to the social reformer Robert Owen, whose progressivist, labor-oriented utopia, envisioned in *A New View of Society* (1813), had already inspired Paulding's biting satire "The Man-Machine."
- 63. Mumford, Technics and Civilization, 14.
- 64. Ibid., 14–15. The classic source on this topic is E. P. Thompson's seminal essay "Time, Work-Discipline, and Industrial Capitalism." See also Lundmark, "The Mechanization of Time."
- 65. Bowron, Marx, and Rose, "Literature and Covert Culture."

## Chapter Three

- I. In his famous semiological analysis of Poe's story "The Facts in the Case of M. Valdemar," Roland Barthes sees Poe as textualizing a "loss of [authorial] origin," the moment "one can no longer locate who is speaking and one simply notes that speaking has started" ("Textual Analysis: Poe's 'Valdemar,'" 194). Along similar lines, Joseph Riddel describes Poe as a forerunner of postmodern intertextuality and, consequently, a critic of the notion of the author's autonomousness and originality. See Riddel, "The 'Crypt' of Edgar Poe."
- 2. In "Some Secrets of the Magazine Prison-House," Poe bewails the lack of "remuneration for literary labor" which forces many of the best writers into the service of the magazines and reviews (*Collected Works*, 1843–1849, 1206).
- 3. For a more detailed analysis of Poe's response to the shifting demands of the marketplace, see Whalen, "Edgar Allan Poe and the Horrid Laws of Political Economy."
- 4. According to Terence, Whalen, "printing and publishing were at the heart of antebellum economic development." In Boston, for example, the publishing industry, which included engraving, lithography, type founding, stereotyping, bookbinding, and the production of newspapers and miscellaneous documents, "produced wealth on the same scale as any other class of manufacturing" (ibid., 388).
- 5. Pollin, "The Word 'Autorial' in Poe's Criticism," 15. Pollin also argues that Poe's frequent use of the grammatically illegitimate adjective "autorial" could be read as an attempt to establish antebellum writers as a professional group that has its "own critical vocabulary and orientation" (15).
- 6. As early as 1914, Lewis Chase called Poe's writing "a laboratory of poetic craft," indicating that Poe was the "type *par excellence* of the pertinacious quest for technical perfection" (*Poe and Poetry*, 26–27). See also Leon Chai, *The Ro-*

mantic Foundations of the American Renaissance. To Chai, Poe is a literary representative of the shift from purely materialist late eighteenth-century science to what Chai calls "Romantic science." Following Laplace's effort at the mathematization of non-formal concepts, Poe "incorporates aspects or elements of the theory of probability into his tales of ratiocination." Since Laplace's desire to achieve a comprehensive, unifying theory of natural phenomena reflects the Romantics' claim to universality, his influence on Poe may clarify "Poe's own Romanticism, with its special mixture of neoclassicism and (in the sphere of science) intuitive apprehension of some of the preoccupations of our own century" (Romantic Foundations, 105–7.

- 7. Setting the register for much of what later critics had to say about the sensationalism of "Maelzel's Chess-Player," T. S. Eliot flatly dismissed its subject matter as derived from a "pre-adolescent mentality" that delights in "wonders of nature and of mechanics and of the supernatural, cryptograms and ciphers, puzzles and labyrinths, mechanical chess-players and wild flights of speculation. . . . What is lacking is not brain power, but that maturity of intellect which comes only with the maturing of the man as a whole" ("From Poe to Valéry, 35). Echoing Matthiessen's American Renaissance (1941), Eliot also detects "a certain provinciality about [Poe's] work, in a sense in which Whitman is not in the least provincial" (29). In his classic study on the American Renaissance, Matthiessen glaringly neglected Poe as a major writer of his time. Although he accepted Poe as a forerunner of the modernist movement (namely, of Pound and Eliot), Matthiessen seems to share Whitman's negative attitude: Whitman, he says, recognized Poe's "'intense faculty for technical and abstract beauty,' but judged him finally to belong 'among the electric lights of imaginative literature, brilliant and dazzling, but with no heat'" (American Renaissance, 541). It is worth noting that Whitman's evaluation of Poe's literary merits, as Justin Kaplan points out, was quite ambiguous. While he "could not originally stomach him at all," Whitman finally judged Poe "a victim of history-like Paine." Whitman was also the only major writer present at Poe's reburial in Baltimore in 1875. See Kaplan, Walt Whitman: A Life, 116-17.
- 8. Poe's narrator in "Loss of Breath," suffering from an abrupt incapacity of breathing, describes his liminal existence in fitting terms: "Behold me then safely ensconced in my private *boudoir* . . . alive with the qualifications of the dead—dead with the propensities of the living—an anomaly on the face of the earth" (*Collected Works*, 1831–1842, 62–63).
- 9. The best account yet of the problem of death in Poe's work is Kennedy, *Poe, Death, and the Life of Writing*, esp. the introductory chapter, "Writing and the Problem of Death," 1–31, and "The Rhetoric of Dread: Poe's Letters," 89–113. Kennedy interprets Poe's attraction to the topic with regard to both the changing phenomenology of dying (whereas, for earlier generations, dying had not aroused anticipatory dread, nineteenth-century Americans experienced

death as disquieting and ambiguous) and the prospects of writing to overcome death metaphorically, that is, to alleviate its horrors by translating its wide-spread meanings into text.

- 10. See Poirier, A World Elsewhere.
- 11. Bense, *Literaturmetaphysik*, 10. Bense's study is interesting in that it seeks to reconcile the modern writer with his technological surroundings, while at the same time trying to salvage the metaphysical essence of the work of art itself. Not surprisingly, Bense presents Poe as an early representative of the confluence of technology and metaphysics. See the chapter on Poe, 26–29.
  - 12. Poe, Complete Works, 14:194-95.
- 13. During the histrionic public exchanges of what came to be known as "the Little Longfellow War," Poe was himself accused of plagiarism by one of Longfellow's defenders. In response to this accusation, he insisted that the task of the poet is not to invent new forms but to apply existing formal patterns in a new way: "I am charged with imitating the repetition of phrase in the two concluding lines of a stanza [in "The Raven], and of imitating this from Coleridge. But why not extend the accusation, and insinuate that I imitate it from every body else? For certainly there is no poet living or dead who has not put in practice the identical effect—the well-understood effect of the refrain. . . . Is he [who accused me] prepared to confess himself so absurdly uninformed as not to know that whatever a poet claims on the score of original versification, is claimed not on account of any individual rhythmical or metrical effects (for none are individually original) but solely on account of the novelty of his combinations of old effects?" (The Broadway Journal, March 15, 1845, in Collected Writings, 3:46.) For an account of Poe's entanglement in plagiarism cases, see, among others, Ketterer, The Rationale of Deception in Poe, 54-63.
- 14. Poe, "Introduction [to Pinakidia]," in Collected Writings, 2:1-2.
- 15. Poe, "Marginalia," in Collected Writings, 2:141. Further references are cited in the text.
- 16. See the notes to "Marginalia Introduction," ibid., 110, b.
- 17. Rachman, "'Es lässt sich nicht schreiben': Plagiarism and 'The Man of the Crowd,'" 52. According to Whalen, Poe's concept of literary labor also resembles the routines of the urban workshop and the factory, "a form of production that derives its raw material not from divine inspiration, experience or a discrete literary tradition, but instead from the whole jumbled mass of information that has been accumulating from ancient times down to the present moment" ("Poe and the Horrid Laws of Political Economy," 392).
- 18. Poe, "The Power of Words," in Collected Works, 1843-1849, 1215.
- 19. For Donald Pease, "The Philosophy of Composition," trying to bring the reader backstage and explain to him the doings of the author provides "not a 'critical' perspective, but only another staged version of the same activity resulting in 'The Raven.'" Thus, when Poe philosophizes about the ontology of art, he does so only as an author and poet, which is only to say that he is never

quite willing to give up on his belief in the "power of words" (Pease, Visionary Compacts, 181–84). Daniel Hoffman also perceived Poe's poetics as "equating analytical intellect with physical strength and at the same time calling its exercise a moral activity" (Poe Poe Poe Poe Poe, 105). From yet another perspective, Brian M. Barbour argues in "Poe and Tradition" that the ambiguity of Poe's theoretical position reflects a conflict of influences of the master writers of European Romanticism, on the one hand, and the moralist undercurrent of American transcendentalism, on the other. See also Auerbach, The Romance of Failure, 20–70.

- 20. Poe, "Anastatic Printing," *The Broadway Journal*, April 12, 1845, rpt. in *Collected Writings*, 3:84. Further references are cited in the text.
- 21. This also meant that books would consist of direct reproductions of the author's original handwriting. Although Poe mentions the increased discipline and cultivation of a "neat style of handwriting" which will be necessary to guarantee the legibility of the manuscript, in "Anastatic Printing" he does not elaborate further on this issue. As his two early articles on "autography" (Southern Literary Messenger, 1836) suggest, however, he may well have considered the manuscript version a more natural, organic form of writing which reflects not only the formal idiosyncrasies but also the mentality, character, and even gender of the author. Commenting on a signature of the well-known writer Catharine Sedgwick, Poe offers this interesting analysis: "The penmanship of Miss Sedgwick is excellent. The characters are well-sized, distinct, elegantly, but not ostentatiously formed; and, with perfect freedom of manner, are still sufficiently feminine. . . . Strong common sense, and a scorn of superfluous ornament, one might suppose, from Miss Sedgwick's hand writing, to be the characteristics of her literary style" ("Autography," in Collected Works, 1831–1842, (269).
- 22. See Richard Poirier's otherwise perceptive essay "Literature, Technology, People." Although he is outright critical of the presumed antagonism between high art and technology, Poirier still sees technology as being the driving agency behind the modern author's alienation from society: "Having created a new mass of People, having then removed literacy as a pre-requisite for demanding a place of sustained significance in historical narrative—a prerequisite that in the past made the preterite masses, as they might be called, relatively powerless, malleable, and silent—Technology thereby induced Literature to become still more inaccessible" (65).
- 23. In a famous essay, Benjamin describes the loss of originality in Western art as a result of mass production and technical reproducibility. One of the key terms of his discussion is "aura," the ritual function of art, its ongoing negotiation between distance and presence, between authenticity and artificiality. According to Benjamin, aura occurs only in the original and unique work of art, because "the presence of the original is the prerequisite to the concept of authenticity. . . . The whole sphere of authenticity is outside technical—and, of course, not only technical—reproducibility" ("The Works of Art in the Age of Mechanical Reproduction," in *Illuminations*, 220).

- 24. Poe attributes this effect to the growing demand for "neatness and beauty" of the manuscript, a demand that will ultimately revive the ancient profession of the scribe (who, in turn, will then replace the male typesetter). Since their "delicacy of organization fit[s] them peculiarly for such tasks," Poe believes that the new technique will provide abundant employment for women acting as scribes and amanuenses to exclusively male authors. See Poe, "Anastatic Printing," 86.
- 25. As secretary of state under Washington, Jefferson had helped to pass the nation's first patent law, whose standards for inventions, aside from their novelty, were based equally on utility and social importance. "A smaller agent, applicable to our daily concerns," he declared in 1815, "is infinitely more valuable, than the greatest which can be used only for great objects. For these interest the few alone, the former the many" (quoted in Meier, "Thomas Jefferson and a Democratic Technology," 28).
- 26. Some of the sociocultural repercussions of this famous chess automaton are discussed in Cook, "From the Age of Reason to the Age of Barnum."
- 27. Unlike the Dupin trilogy, however, this appears to be an essay "in which the author exercised his own abilities as a detective" (Panek, "'Maelzel's Chess-Player,'" 370).
- 28. Known also as the "difference" or "analytical engine," Babbage's invention is considered to be one of the first crude computers. It could handle a huge amount of data and would print out the results on punch cards. Although the engine was never completely assembled during his lifetime, a working model went on exhibit at the 1862 World's Fair in London. In his autobiography Babbage described the basic principle of his invention as a transformation of space into time, a transformation that—given the success of modern chess-playing computers—finally proved to be much more powerful than Poe was yet able to concede. "It is impossible to construct machinery occupying unlimited space," Babbage wrote, "but it is possible to construct finite machinery, and to use it unlimited times. It is this substitution of the infinity of time for the infinity of space which I have made use of, to limit the size of the engine and yet to retain its unlimited power" (*Passages from the Life of a Philosopher*, 94).
- 29. Poe, "Maelzel's Chess-Player," in Complete Works, 14:9. Further references are cited in the text.
- 30. Further references to Lacan's "Seminar on 'The Purloined Letter'" and Derrida's caustic response to Lacan's general argument, "The Purveyor of Truth," are cited in the text.
- 31. Johnson, "The Frame of Reference: Poe, Lacan, Derrida," 217.
- 32. For the link between the exchange of useful information in Poe's detective tales and the economic value of such information in antebellum society, see Whalen, "The Horrid Laws of Political Economy," 405–6.
- 33. A critical assessment of Poe's sources can be found in Wimsatt, "Poe and the Chess Automaton."

- 34. Poe, "Eureka," 313.
- 35. Wolfgang von Kempelen, who also designed prototypes of artificial human limbs and invented a special typewriter for the blind, specifically built the Chess-Turk to fit a mutilated Polish veteran named Worousky. According to the English mechanic and magician Nevil Maskelyne, Worousky, who had lost both of his legs in combat, was "furnished with artificial limbs. . . . [H]is appearance, together with the fact that no dwarf or child travelled in Kempelen's company, dispelled the suggestion that any person could be employed inside the machine." Why Poe would dismiss any such solution as absurd is not altogether clear. Since the chess player correlates perfectly with his idea of a symbiotic relationship between writer and technology, he might have preferred to identify with a "normal" man rather than a cripple. See Panek, "'Maelzel's Chess-Player,'" 372.
- 36. See Williams, "The Political and Feminist Dimensions of Technological Determinism."
  - 37. Slotkin, "Myth and the Production of History," 70.
- 38. On the issue of how early Americans adopted the rising culture of technology according to their specific geographic and sociopolitical needs, see Licht, *Industrializing America*.
- 39. A frequently cited example of Jefferson's initial disapproval of industrialization is "Query XIX: Manufactures," in *Notes on the State of Virginia*, 164–65.
  - 40. Quoted in Meier, "Thomas Jefferson and a Democratic Technology," 21.
- 41. A comprehensive account of how "manifest destiny" came to be equated with a "natural" right to conquer and subdue the American West can be found in White, "It's Your Misfortune and None of My Own," esp. 73–84. The relation between expansionism and industrialization is discussed in Slotkin, The Fatal Environment.
- 42. Cowan, introduction to Cowan and Kronick, *Theorizing American Literature*, 1.
- 43. In John Gast's famous painting Westward-ho or American Progress (1872), the Indians—together with buffalo, wild horses, bears, and other animals—are depicted as fleeing from "Progress incarnate," represented by a fair, scantily dressed maiden who is about to unroll a skein of telegraph wire. Four years earlier, a Currier and Ives lithograph titled Across the Continent: Westward the Course of Empire Takes Its Way (1868) had adopted a similar stance. In this stunning visualization of the struggle between old and new technologies, an ever-progressing, smoke-spurting railroad bypasses—and thus literally leaves behind in the ongoing technological revolution—a small number of natives, all either on horseback or in canoes, who are forced to look on in disbelief and awe. See Smith, "Recourse of Empire."
- 44. Poe, "The Colloquy of Monos and Una," in Collected Works, 1831-1842, 608.
- 45. Bann, Romanticism and the Rise of History, 3-4.

- 46. Ibid., 5.
- 47. Poe, "The Man That Was Used Up: A Tale of the Late Bugaboo and Kickapoo Campaign," in *Collected Works*, 1831–1842, 380. Further references are cited in the text.
- 48. That the principal function of this figure is indeed to "signify," to act as a kind of sounding board for the narrator's (as well as the public's) projections, can also be gleaned from the conspicuous conjunction of a commonplace name (John Smith) with a series of deflating middle initials (A. B. C.) that, by referring to the alphabet, make a strong connection as well with the construction and constructedness of language.
- 49. See Curran, "The Fashionable Thirties"; Hoffman, *Poe Poe Poe Poe Poe*, 193–95; and Whipple, "Poe's Political Satire."
- 50. The intricacies of public imposture are a major topic of Poe's satirical sketch "Raising the Wind; Diddling Considered as One of the Exact Sciences," in Collected Works, 1843–1849, 869–82. For Ketterer, who briefly mentions "The Man That Was Used Up," "undoubtedly the tale is also about the efficacy of deception. . . . The age is 'inventive' because it makes possible the equipment that allows the general to look like a human being. But 'inventive' also mean fabricative. The impression that the narrator has of the general depends upon fabrication" (Rationale of Deception, 80). See also Mead, "Poe's 'The Man That Was Used Up': Another Bugaboo Campaign."
- 51. Mead, "Poe's 'The Man That Was Used Up,'" 281-82.
- 52. White, "Figuring the Nature of the Times Deceased," 35.
- 53. In the earliest published version (*Burton's Gentleman's Magazine*, August 1839), Poe translates the Latin phrase as "events in which he performed so conspicuous a part." See editor's notes in *Collected Works*, 1831–1842, 382.
- 54. Arendt, "The Concept of History: Ancient and Modern," in *Between Past and Future*, 43.
  - 55. Mead, "Poe's 'The Man That Was Used Up,'" 283.
- 56. See Kennedy, Poe, Death, and the Life of Writing, 115.

# Chapter Four

- 1. On November 15, 1851, the first of a series of negative reviews of *Moby-Dick* appeared in the *Literary World*. See Melville, *Correspondence*, 211.
- 2. Melville to Hawthorne, November [17?] 1851, in Correspondence, 14:212. Further references are cited in the text.
- 3. Melville to Evert A. Duyckinck, December 13, 1850, in Correspondence, 174.
- 4. Melville, *Pierre*, or *The Ambiguities*, 340. Further references are cited in the text.
- 5. Renker, Strike Through the Mask, xix.
- 6. Melville, Selected Poems, 144. Further references are cited in the text.

- 7. "And when he [the angel] saw that he prevailed not against him, he touched the hollow of his thigh; and the hollow of Jacob's thigh was out of joint, as he wrestled with him" (Genesis 32:25).
- 8. Economic and sociopolitical aspects of Melville's technological narratives are discussed in Fenton, "'The Bell-Tower'"; Marx, "Melville's Parable of the Walls"; Fisher, *Going Under*; Dillingham, *Melville's Short Fiction*; Rogin, *Subversive Genealogy*; and Jaworski, "Desert and Empire."
- 9. Such readings literally proliferate within more recent Melville criticism. Challenging examples are Wiegman, "Melville's Geography of Gender"; Young, "The Machine in Tartarus"; Bromell, *By the Sweat of the Brow*, 72–75; and Martin, "Melville and Sexuality." Some critics combine psychoanalytical interpretations with a discussion of antebellum commercialism and the marketplace in general, yet do not link these investigations to Melville's self-representation as a professional writer. See, among others, Brown, "The Empire of Agoraphobia"; and Weinstein, "Melville, Labor, and the Discourse of Reception."
- 10. For the representation of science and technology in this text, see Emery, "Melville on Science"; Werge, "Melville's Satanic Salesman"; and Fisher, "'The Lightning-Rod Man': Melville's Testament of Rejection."
- 11. Melville, "Cock-A-Doodle-Doo!" in Piazza Tales, 270.
- 12. Ibid.
- 13. Melville, "A Utilitarian View of the Monitor's Fight," in Selected Poems, 17.
- 14. See Giedion, Mechanization Takes Command.
- 15. The Hawthornesque style and quality of this text has been repeatedly noted by Melville scholars. The most compelling analysis of the structural, thematic, and even rhetorical correspondences with some of Hawthorne's stories can be found in Pfister, *The Production of Personal Life*, which dedicates a whole chapter ("Melville's Birthmarks: The Feminization Industry," 104–21) to tracing Hawthorne's influence on "The Bell-Tower," "The Tartarus of Maids," and *Billy Budd*.
- 16. Melville, "The Bell-Tower," in *Piazza Tales*, 176. Further references are cited in the text.
- 17. For a description of early nineteenth-century public celebrations of technology whose rhetoric and pompous staging often recall the events represented in "The Bell-Tower," see Nye, American Technological Sublime, 17–76. Joel Pfister also claims that "the bell towers that stood watch over the factories and armories of New England would have signaled connections in the minds of readers between the emergence of a contemporary "empire of necessity" and the one sketched in the story" (The Production of Personal Life, 105). Given the suggestive symbolism of this as well as many other of Melville's shorter narratives, it is doubtful whether in his tales, as Michael Paul Rogin argues, Melville is really "freeing his fiction from referentiality . . . pointing beyond [society] to a higher, empty realm" (Subversive Genealogy, 157–58). Rarely lacking the social import

that so acutely marked his novels, the *Piazza Tales* should be read as an effort at intensifying rather than slackening the writer's search for identity within a rapidly changing cultural landscape.

- 18. Whether the footnote was originally Melville's or, rather, was added later on by *Putnam's* editor George William Curtis is of no import for my argument here. The Northwestern-Newberry critical edition reprints the footnote as most likely that of Melville himself. See Melville, *Piazza Tales*, 187. For the history of its publication, see Newman, *A Reader's Guide to the Short Stories of Herman Melville*, 79–80.
- 19. Slavery as an important point of reference in the story is discussed in Fisher, *Going Under*, 95–104; and Franklin, *Future Perfect* 144–50.
- 20. The biblical reference to Ham is discussed in Fisher, *Going Under*, 99. Rogin blames the twinning, and thus dissolving of identities, in Melville's short fiction to public discourses over slavery and the increasing divisions within the national union. See Rogin, *Subversive Genealogy*, 158–59.
- 21. Famous examples are the models and time-measuring experiments of such a protean Renaissance figure as Leonardo da Vinci. For a history of time and its measurement, see Wright, *Clockwork Man*.
- 22. As E. P. Thompson has written, "A general diffusion of clocks and watches is occurring . . . at the exact moment when the industrial revolution demanded a greater synchronization of labour." Petitioning against tax increases, English clock- and watchmakers could argue in 1798 that "the cotton and woolen manufactories are entirely indebted for the state of perfection to which the machinery used therein is now brought to the clock and watch makers, great numbers of whom have . . . been employed in inventing and constructing as well as superintending such machinery" ("Time, Work-Discipline, and Industrial Capitalism," 65-69). The shift in the cultural notation of time is also inscribed in many of the philosophical and sociological discourses on modernity. "Insofar," writes Peter Osborne, "as 'modernity' is understood as a periodizing category in the full sense of registering a break not only from one chronologically defined period to another, but in the quality of historical time itself, it sets up a differential between the character of its own time and that which precedes it. This differential formed the basis for the transformation in the late eighteenth century in the meaning of the concepts of 'progress' and 'development,' which makes them the precursors of later, twentieth-century concepts of modernization" (The Politics of Time, 16).
  - 23. Melville, Correspondence, 180.
- 24. For a critical discussion of this influential essay, see chapter 5.
- 25. Melville, Correspondence, 179.
- 26. Occasionally critics have indicated that with "Tartarus," Melville may have written a story about his own profession, yet none of them actually traces the broader implications of that idea, including Melville's symbolic feminization of technology. For instance, H. Bruce Franklin argues that "the seedsman him-

self may be considered a portrait of the creative writer within capitalist society, who, like Melville himself, must sell his art as a commodity in order to live" (*The Victim as Criminal and Artist*, 53). For Nicholas Bromell, by contrast, the story proposes a view of the writer's work as "independent of, though covertly dependent on, the manual labor of others." Although Bromell's reading comes closest to my own, his main concern is the exploitation of the mill girls, which Melville seems to accept as a prerequisite to the spiritual mode of literary work. See Bromell, *By the Sweat of the Brow*, 73–74.

- 27. Fisher actually calls this text "one of the strongest explicit (and even stronger implicit) denunciations of industrialism, and the kind of servitude and loss of will it entails, by an articulate American during the period which comprises our literary as well as our technological coming of age" ("Melville's 'Tartarus,'" 80).
- 28. Ibid., 100. For the idea of America as an agrarian paradise, see Smith, Virgin Land.
- 29. Melville, "The Paradise of Bachelors and the Tartarus of Maids,"; *Piazza Tales*, 324. Further references are cited in the text.
  - 30. Thoreau, A Week on the Concord and Merrimack Rivers, 91.
- 31. Quoted in Miller, "The Responsibility of Mind in a Civilization of Machines," 62.
  - 32. See Fisher, "Melville's 'Tartarus,'" 86.
  - 33. Larcom, A New England Girlhood, 184.
- 34. See Plank, "The Golem and the Robot," 14.
- 35. Emerson, The Conduct of Life, 89.
- 36. Melville's own career as writer is pivotal in Marx, "Melville's Parable of the Walls," and, later on, in Davidson, "Courting God and Mammon." Among those who read the story with an eye to antebellum commercial and political practices are Deane, "Herman Melville: Four Views of American Commercial Society"; Fisher, *Going Under*, 179–99; and Rogin, *Subversive Genealogy*, 192–200.
- 37. Rogin, Subversive Genealogy, 195-96.
- 38. Marx, "Melville's Parable of the Walls," 604.
- 39. Melville, "Bartleby, the Scrivener," in *Piazza Tales*, 19–20. Further references are cited in the text.
- 40. Originally published in 1911, Taylor's *Principles of Scientific Management* laid the foundations for modern organization and decision-making theory. For the most comprehensive discussion of Taylorism, its nineteenth-century roots, and its variegated cultural ramification, see Rabinbach, *The Human Motor*.
  - 41. La Mettrie, Man A Machine, 93.
  - 42. Kafka, "A Hunger Artist," in The Complete Short Stories, 276-77.
- 43. Melville, White-Jacket or The World in a Man-of-War, 248. Further references are cited in the text.
- 44. In a later chapter, when Lemford's manuscript is actually blown to pieces

by a cannon blast, this is hailed as a more effective mode of distributing written texts than even traditional publishing. See Melville, *White-Jacket*, 191–92.

## Chapter Five

- 1. "While the American experience would surely dishearten a visionary like Thoreau," Boorstin claims, "it could actually encourage a Puritan or a Jeffersonian. The belief that man could change his institutions at will and that from such changes utopia would flow was perhaps the most basic of the romantic illusions to dissolve in America" (*The Genius of American Politics*, 173).
- 2. Significantly, in Melville's unfinished text about a young sailor crushed by the relentless workings of military jurisdiction, the implacable conflict between society and the individual also culminates in an imagery replete with technological connotations. When discussing the "unnatural" circumstances of Billy's execution, that is, the conspicuous absence of reflexive motion in the hanged body, the ship's surgeon is prompted to remark that Billy died "much like a watch when carelessly winding it up you strain at the finish, thus snapping the chain." (Billy Budd, Sailor, 125).
- 3. References to the story as a forerunner of realist fiction can be found in virtually every essay or study dedicated to Davis's career. The most comprehensive sources on this topic are Pfaelzer, *Parlor Radical*; and Harris, *Rebecca Harding Davis and American Realism*. Although he recognizes the innovative style of the story, Walter Hesford might be singled out as the only critic who locates *Life in the Iron Mills* among its Romantic contemporaries "because it shares in and extends the accomplishments of the romance" ("Literary Contexts of 'Life in the Iron-Mills,'" 70).
- 4. Davis, *Life in the Iron Mills and Other Stories*, 13-14. Further references are cited in the text.
  - 5. Pfaelzer, Parlor Radical, 25.
- 6. Davis's interest in Hawthorne's works is well documented. In her memoir, *Bits of Gossip*, she recalls having read some of his anonymously published stories as a child. "There was no talk of enchantment in them," she tells us, but their representation of "commonplace folk and things which I saw every day took on a sudden mystery and charm, and, for the first time, I found that they too belonged to the magic world of knights and pilgrims and fiends" (*Bits of Gossip*, 30). In her groundbreaking introduction to the Feminist Press edition of *Life in the Iron Mills*, Tillie Olsen comments extensively on the special bond between Hawthorne and Davis. See Olsen, "A Biographical Interpretation," 104–9. See also Harris, *Rebecca Harding Davis and American Realism*, 36–37, 88–90; and Pfaelzer, *Parlor Radical*, 9–11.
- 7. On Deborah's physical disability and its narrative use as "economical trope for a whole range of human misery and corruption," see Thomson, "Benevolent Maternalism and Physically Disabled Figures," 559.

- 8. Seltzer, "The Still Life," 465.
- 9. To my knowledge, only Sharon Harris briefly mentions a structural allusion in *Life in the Iron Mills* to "The Artist of the Beautiful" and "The Birth-mark," but she does not elaborate on either of these texts. See Harris, *Rebecca Harding Davis and American Realism*, 36–39.
  - 10. Seltzer, Bodies and Machines, 113.
- 11. Haraway, "A Cyborg Manifesto," in Simians, Cyborgs, and Women, 152.
- 12. Scarry, The Body in Pain, 4.
- 13. Davis, Margaret Howth; A Story of Today, 3-7.
- 14. On the history of "The Deaf and the Dumb," see Harris, Rebecca Harding Davis and American Realism, 61.
- 15. Davis quoted in Olsen, "A Biographical Interpretation," 105-6.
- 16. Two years after her encounter with Alcott and Emerson, Davis would cast the same argument in slightly different terms. In "The Wife's Story" (1864) she juxtaposes the artistic ambitions of a young girl of explicitly transcendentalist roots with her husband's more practical-minded Midwestern family. In contrast to the "mental power" associated with Concord, Massachusetts, the heroine's hometown, her new in-laws seem "but clogs of flesh, the mere hands by which the manual work of the world's progress was to be accomplished." In the end, however, it is these hands that nurse her feverish body, helping her to achieve a lasting, if somewhat problematic, synthesis between the physical demands of her femininity and her social vocation as a caring, responsible mother. See Davis, Life in the Iron Mills and Other Stories, 182.
  - 17. Folsom, "Appearing in Print," 135.
- 18. "Review of Whitman's Leaves of Grass," *Brooklyn Eagle*, September 15, 1855, quoted in Orvell, *The Real Thing*, 8.
- 19. Whitman, "A Song for Occupations," in *Leaves of Grass*, 212. Further references are cited in the text.
- 20. Killingsworth, Whitman's Poetry of the Body, xvii.
- 21. Whitman, "One's-Self I Sing," in Leaves of Grass, 1. Further references are cited in the text.
  - 22. Whitman, "To a Locomotive in Winter" (1876), ibid., 472.
  - 23. Whitman, "Our Old Feuillage," ibid., 175.
- 24. The "transcendental turn" in Whitman's career becomes manifest in his 1871 poem "Passage to India": "Passage O soul to India! . . . Not you alone proud truth of the world, Nor you alone ye facts of modern science, But myths and fables of eld . . . with joy I sing" (ibid., 412). The lingering influence of Whitman's sexual orientation on his poetic work has been fairly well documented. See, among others, Black, Whitman's Journey into Chaos; Martin, The Homosexual Tradition in American Poetry; and the essays in Shively, Calamus Lovers.
- 25. A comprehensive analysis of Whitman's changing rhetoric and poetic style during the later phases of his career, that is, roughly from the 1860 edition of

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Leaves of Grass to his death in 1892, can be found in Warren, Walt Whitman's Language Experiment, 174-211.

26. Thomas, "Fratricide and Brotherly Love," 27.

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- 27. Whitman, "First O Songs for a Prelude," in Leaves of Grass, 280-82. The Drum-Tabs poems were later included in successive editions of Leaves of Grass. All references to this group of poems are from the 1965 edition.
- 28. Whitman, Prose Works, 1892, 25. Further references are cited in the text.
- 29. In "A Song of Jovs," Whitman still evoked a joyful communion between men and their machines: "O the engineer's joys! To go with a locomotive! To hear the hiss of steam, the merry shriek, the steam-whistle, the laughing locomotive! To push with resistless way and speed off in the distance" (Leaves of Grass, 177).
- 30. On medical practices during the Civil War and the history of surgery in nineteenth-century America in general, see Adams, Doctors in Blue; Steiner, Disease in the Civil War; and the relevant essays in Scott, Surgery in America from the Colonial Era to the Twentieth Century.
- 31. Whitman, Prose Works, 1892, 47.
- 32. Ibid., 40.
- 33. Zweig, Walt Whitman: The Making of the Poet, 335. Zweig also mentions the Patent Office incident, yet does not elaborate on its sociocultural context.
  - 34. Whitman, Prose Works, 1892, 33.
  - 35. Whitman, "The Wound-Dresser," in Leaves of Grass, 311.
  - 36. Whitman, Prose Works, 1892, 35.
  - 37. Thomas, "Fratricide and Brotherly Love," 35-36.
- 38. Whitman, "A March in the Ranks Hard-Prest, and the Road Unknown," in Leaves of Grass, 305.
- 39. Whitman, "Song of the Banner at Daybreak," in Leaves of Grass, 289-91.
- 40. Whitman, Leaves of Grass, 309.
- 41. Quoted in Reynolds, Walt Whitman's America, 413.
- 42. See Franklin, Future Perfect.
- 43. Butler, "Book of the Machines," in Erewhon, 250. Further references are cited in the text.
- 44. Adams, The Education of Henry Adams, 380.
- 45. Ibid., 382.
- 46. Benjamin, "The Work of Art in the Age of Mechanical Reproduction," in Illuminations, 219-20.
- 47. Benjamin, "The Author as Producer," in Reflections: Essays, Aphorisms, Autobiographical Writings, 225.
- 48. Ibid., 225.
- 49. It is worth noting that Benjamin was actually intrigued by the possibilities of technological innovation as a means of social revolution. Contrary to some contemporary interpretations, his is an utterly utilitarian, revolutionary stance that welcomes the powers of machinery as a means to democratize the work

process. "Literary qualification," he writes in his essay "The Author as Producer," "is founded no longer on specialized but, rather, on polytechnic education, and is thus public property. . . . The Soviet state will not . . . banish the poet like Plato, but it will . . . assign him tasks that do not permit him to display in new masterpieces the long-since-counterfeit wealth of creative personality." For the professional writer, this means that he will be transformed "from a supplier of the productive apparatus into an engineer who sees it as his task to adapt this apparatus to the purposes of the proletarian revolution" ("The Author as Producer," 225, 232, 237-38).

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