If the power of reflecting on the past, and darting the keen eye of contemplation into futurity, be the grand privilege of man, it must be granted that some people enjoy this prerogative in a very limited degree. Every thing new appears to them wrong; and not able to distinguish the possible from the monstrous, they fear where no fear should find a place, running from the light of reason, as if it were a firebrand.

(Mary Wollstonecraft, *A Vindication of the Rights of Woman* [1792])

The Creature’s descendants

In an age of reproductive technology, cloning, artificial intelligence, and robotics, has *Frankenstein’s* futurity come to pass? Are we living in the time Mary Shelley foreshadowed? Perhaps so, although the author did not think of her work as prophesying the future. Shelley was much more interested in the science of her own day than in looking ahead. She uses the word “futurity,” an old-fashioned noun meaning a time to come, only once in the novel, and it has nothing to do with fearful prophecies. Rather, it appears in a letter Elizabeth Lavenza writes to reassure Victor that she still wants to marry him; he plays a lead role, she tells him, in all her “airy dreams of futurity” (*F* 1818, III v 130). Though Mary Shelley, writing in 1816, set her novel in the late eighteenth century, *Frankenstein*, perhaps more than any other novel, has been interpreted as a warning about impending events. As a cautionary tale, *Frankenstein* has had an illustrious career; virtually every catastrophe of the last two centuries – revolution, rampant industrialism, epidemics, famines, World War I, Nazism, nuclear holocaust, clones, replicants, and robots – has been symbolized by Shelley’s monster. If Shelley’s work is the first futuristic novel, as some critics have claimed, then the genre of science fiction was inaugurated as a warning, not a promise, about the world of tomorrow.
In recent years, however, something has changed. Against all odds, a few influential writers and artists have begun to interpret Shelley’s tale of a modern Prometheus as promising things they would like to see happen in real life. These people make up an eclectic collection, including Hollywood filmmakers such as Ridley Scott, George Lucas, and Steven Spielberg; science fiction writers Nancy Kress and Octavia A. Butler; pioneers of robotics Hans Moravec and Rodney A. Brooks; the visionary inventor Ray Kurzweil; the feminist theorist of science studies Donna Haraway; the hypertext author Shelley Jackson, and others. Each of these figures uses the legacy of *Frankenstein*, either implicitly or explicitly, to register some positive views of a future containing artificial creatures. In this chapter I explore these new conceptions, tracing the way they transform Shelley’s vision through several key works – Ridley Scott’s *Blade Runner* (1982; rev. 1992), Shelley Jackson’s *Patchwork Girl* (1995), Hans Moravec’s *Robot* (1999), Steven Spielberg’s *A.I.: Artificial Intelligence* (2001), and Rodney Brooks’s *Flesh and Machines* (2002). Sympathetic descendants of Frankenstein’s Creature remain a tiny minority, almost lost among the multitude of demons stalking popular culture, but their emergence today is worth analyzing.

This development takes two forms: first, revisions that explore genetic and reproductive technology; second, those that reimagine *Frankenstein* in a world of cyborgs, artificial intelligence (AI), artificial life (AL), and robotics. In terms of genetics, the influence of *Blade Runner* has been unparalleled. The “replicants” in this movie are entirely biological creatures, designed by genetic engineers in the early twenty-first century to be “off-world” slaves on space colonies. When four stage a violent escape and return to earth to find their maker, they are hunted down and killed as dangerous monsters. The movie powerfully evokes *Frankenstein*, but concludes by converting its hero to the replicants’ cause. The artificial creatures end up seeming more “human” than the people who stalk them.

The second line of descendants from *Frankenstein* are characterized by mechanical components and computer intelligence. Though the Creature in Shelley’s novel was made up entirely of flesh and blood, filmmakers, and, later, science fiction novelists, have added a mechanical dimension of increasing complexity to her creation (see chapter 4). Most of these later creatures continued to be viewed as monstrous, in keeping with their horror genre roots, but a different attitude began to take shape in the 1940s when Isaac Asimov’s long-running and popular robot series gave a positive spin to the idea of intelligent machines. Since then, scientists in the fields of AI and robotics have striven mightily to alter *Frankenstein*’s legacy by crossing it with that of Asimov. Spielberg too invokes Asimov’s *I, Robot* in interviews.
about A.I., and the screenplay of another recent film, *Bicentennial Man* (1999), is adapted from an Asimov story. If asked, these recent exponents of artificial life would no doubt repudiate Shelley’s cautionary vision, but they are her heirs nonetheless. As I shall show, affirmative visions of artificial life, no less than dire warnings against scientific hubris, possess strong ties to *Frankenstein*.

It is easy to see how the novel serves the cause of those concerned that science has overstepped its bounds. In the biological arena, critics routinely label genetically modified agriculture “Frankenfood” and conjure up the specter of Shelley’s monster to fight against reproductive cloning. In response to robotics, the monster still turns up in debates about automated machinery displacing workers (just as it did in nineteenth-century Luddite protests), and hostile computers in movies, from 2001: *A Space Odyssey* to the *Terminator* series and *The Matrix*, mine the Frankenstein complex for some prophetic touches.

Demonstrating how affirmative perspectives on artificial life emerge from Shelley’s text requires more detailed attention to the original work. Today’s positive interpretations draw on an undercurrent in *Frankenstein*, to which feminist critics of the 1970s and 1980s first drew attention: the novel’s sympathy for the Creature (see chapter 3). Contemporary advocates of AI emphasize many of the same things Shelley did: the emotional vulnerability of this new being, its abandonment in a hostile world, existentially alone, its sheer *creatureliness*. Turning its artificial origins from a liability to a virtue, writers and filmmakers focus on what humans owe to the things they create. For example, a scientist in Spielberg’s *A.I.* remarks, “If a robot could genuinely love a person, what responsibility does that person hold toward that Mecha in return?” Ridley Scott in *Blade Runner* follows Shelley in associating the replicants both with Adam, fallen and in exile from his proper home, and with a Romantic version of Satan, noble in his defiance of the creator who has deserted him. Further, all of the filmmakers and writers considered here follow Shelley in using images of slavery, abandoned children, spurned love, and bitter loneliness to arouse fellow feeling in the public at large.

The most interesting parallel, however, exists because of a little-appreciated aspect of Shelley’s text: its complex attitude toward the science of her own day. Shelley was hardly an unthinking opponent of what was then called “natural philosophy.” As Anne K. Mellor has shown in chapter 1 and elsewhere, Shelley distinguishes between “good” and “bad” science, the former epitomized by what she saw as Erasmus Darwin’s respect for nature, the latter by Humphry Davy, Luigi Galvani, and Adam Walker’s interventionist approaches. Like her mother, Mary Wollstonecraft, Shelley viewed favorably many forms of natural science, and she shared her mother’s
Enlightenment belief in intellectual progress, the virtue of education, and the rationality of women. The epigraph for this chapter captures something of Wollstonecraft’s faith in futurity and her hope that the light of reason might disentangle the worthwhile from the monstrous in new ideas.

Similar positive views toward progress, including technological progress, are visible in *Frankenstein*, particularly in the first edition of 1818, alongside the indictments of scientific overreaching. Shelley’s portrait of the ideal “man of science” – Frankenstein’s admired professor Waldman – is sympathetically drawn: it combines an aversion to pedantry, dogmatism, and “petty experimentalism” with frankness, good nature, and a commitment to a well-rounded, liberal approach to learning (*F* 1818, i ii 27–28). In two passages that were cut from the 1831 version of the novel (that which most readers encountered, until the 1970s), Victor’s father teaches him the properties of electricity by imitating Benjamin Franklin’s experiment with a kite, and Victor himself works hard to acquire the main scholarly languages of the age and to master practical scientific advances such as distillation, the steam engine, and the air pump (*F* 1818, i i 22–23).

Still, despite these favorable assessments of science, most readers come away from the book with an overwhelming impression of the dangers of scientific hubris. What makes matters confusing is that even the Enlightenment attitudes found in the 1818 version contain critiques of scientific inquiry. The rhetoric, however, is often different from the 1831 text. Notice the balanced cadence of an eighteenth-century moralist in this warning Frankenstein gives to Walton in the 1818 text: “Learn from me, if not by my precepts, at least by my example, how dangerous is the acquirement of knowledge, and how much happier that man is who believes his native town to be the world, than he who aspires to become greater than his nature will allow” (*F* 1818, i iii 31). Now compare it with this typical addition to the 1831 edition that dramatizes scientific overreaching: “So much has been done, exclaimed the soul of Frankenstein – more, far more, will I achieve: treading in the steps already marked, I will pioneer a new way, explore unknown powers, and unfold to the world the deepest mysteries of creation” (*F* 1831, iii 96). In these additions, one finds all the Romantic motifs of madness and guilt, impenetrable mysteries, the tumult of the swelling heart, clearly marked as evidence of Frankenstein’s terrible error.

A careful reader can trace both Enlightenment and Romantic versions of the author’s indictments of her scientist hero. Frankenstein’s scientific “enthusiasm” is condemned as self-centered and isolating in the 1818 version (*F* 1818, i iii 30). The dangers of enthusiasm is a common Enlightenment theme, found throughout the works of Samuel Johnson or Jane Austen, to pick two writers who have rarely been identified with Shelley. In
the 1831 text, Shelley adds the language of madness, obsessive questing, and uncontrollable ambition. Here, in one such insertion, is Frankenstein warning Walton about scientific aspiration: “a groan burst from his heaving breast . . . at length he spoke, in broken accents – ‘Unhappy man! Do you share my madness? Have you drunk also of the intoxicating draught? Hear me – let me reveal my tale, and you will dash the cup from your lips!’” (F 1831, Letter 4 77). The final text stresses Frankenstein’s “fervent longing to penetrate the secrets of nature” (F 1831, ii 88), to rend the veil of this world with a violence that is identified as willful and characteristically masculine.

By eliminating many positive comments about science and by exaggerating Frankenstein’s Romantic spirit, the 1831 text makes it difficult to distinguish between Shelley’s measured critique of nineteenth-century science and her more flamboyant denunciations of the Romantic male ego. Although related, these two dimensions of the book can be distinguished. Shelley’s target was never a thoughtful natural philosophy, especially when it was balanced by other branches of learning. When Shelley takes aim at Frankenstein’s research, she criticizes the excesses of an overwrought sensibility, not natural philosophy itself. The craving for immortality, the hubris of trying to rival God, a foolish regard for alchemy, or a desire to usurp women’s power of creation – these passions afflict other possessed souls in nineteenth-century literature, from Faust and Cain to Melville’s Ahab, and are hardly confined to mad scientists. Shelley’s purpose in intensifying her rhetoric in the 1831 version is not to amplify the critique of science but to lay bare the dangers of Romantic egotism.

The replicant’s tears: Ridley Scott’s Blade Runner
All but the most utopian works considered here share with Shelley’s Frankenstein the ambitions both of criticizing the methods of science and yet producing sympathy for the living creations of science. The next two sections discuss works that present their artificial beings as wholly biological constructions: Ridley Scott’s Blade Runner and Shelley Jackson’s Patchwork Girl. Scott’s film, a techno-thriller set in the permanent twilight of Los Angeles in 2019, brings Shelley’s story into the era of genetic engineering. Its portrait of ecological disaster and urban poverty, of a visual and aural landscape saturated with advertising, of a polyglot population immersed in a Babel of competing cultures, of decadence and homelessness, of technological achievement and social decay, has appeared to many people as foreshadowing imminent social conditions. Its indictment of irresponsible genetic tampering has seemed equally prescient. Yet, just as in Shelley’s case, the film’s ultimate point concerns how one should treat other beings, not the evils of science per se.
Frankenstein’s futurity: replicants and robots

Scott’s film invokes Frankenstein from its opening sequence, in which a disembodied eye stares down on an aerial view of Los Angeles at night. In Shelley’s novel, disembodied eyes terrify Frankenstein repeatedly. Indeed, eyes seem to hold a special place among the bodily organs the novel assembles. From the first moment that Frankenstein sees “the dull yellow eye of the creature open,” he is repelled by this feature, by the “watery eyes, that seemed almost of the same colour as the dun white sockets in which they were set” (F 1818, i iv 34). That night, when the creature visits Frankenstein’s bed chamber, what disturbs him most is the fact that the creature’s “eyes, if eyes they may be called, were fixed on me” (F 1818, i iv 35). Ultimately, Frankenstein has a vision of eyes watching him wherever he goes: “I saw around me nothing but a dense and frightful darkness, penetrated by no light but the glimmer of two eyes that glared upon me” (F 1818, iii iv 126).

Blade Runner emphasizes eyes fully as much. From the pupil-dilation test that police administer to determine if a person is a replicant to the various mediated gazes the film highlights to the gruesome murder committed by a replicant, who pushes his thumbs through his victim’s eyes, the organs of vision symbolize both the vulnerable materiality of the creatures and their human capacity for sight. One scene combines both of these dimensions in a particularly graphic way. Two of the escaped replicants, trying to locate their creator, stop at a genetic engineering outlet called “Eye World.” While Roy (Rutger Hauer), the leader of the replicants, questions the genetic technician, the other replicant picks up two exceedingly watery and yellow eyeballs, and delicately places one on each of the technician’s shoulders. The terrified worker, an Asian-American caught in an economy of specialization that prevents him from knowing the answers the replicants seek, realizes that he was the one who made Roy’s eyes. So informed, Roy answers: “If only you could see what I have seen with your eyes,” amplifying a prominent motif in the movie: the creature sees (figure 11). This episode raises questions about racial stereotypes, post-industrial outsourcing of parts – here, body parts – an allusion to Blake, and more. I bring it up, however, to show how Scott’s film, like Shelley’s novel, uses the embodied character of its creatures both to horrify and to humanize.

Embodiment and power are at stake in other motifs these two works share. Both compare their creatures to slaves driven by desperation to turn on their masters, and both show the creatures glorying in their life-and-death power over their former masters. Frankenstein’s Creature exults over him: “Slave . . . Remember that I have power . . . You are my creator, but I am your master; – obey!” (F 1818, iii iii 116). When Roy holds in his hand the life of his human antagonist Deckard (Harrison Ford), a similar taunt springs to the replicant’s lips: “Quite an experience to live in fear, isn’t it?
That’s what it is to be a slave.” Both works explore the emotional dynamics between a creator and his creation, and both attend closely to the created being’s feelings of thwarted love, anger, and thirst for revenge. The climax of the second volume of Shelley’s novel is the Creature’s confrontation with his maker and his resolution to wreak havoc on humanity: “if I cannot inspire love, I will cause fear; and chiefly towards you my arch-enemy, because my creator, do I swear inextinguishable hatred” (*F* 1818, II ix 98). In a climactic scene of *Blade Runner*, Roy, too, confronts his creator, Dr. Tyrell, the genius who has designed the replicants and created Tyrell Corporation to exploit them commercially. Roy opens their tense dialogue with the line: “It’s not an easy thing to meet your maker,” a canny pun, since the idea of meeting his maker refers as much to Roy’s impending death as to facing proof of his artificial origin. Like Frankenstein’s Creature, Roy presents his maker with an ultimatum. The replicant’s demand, however, is not for a mate (he already has a replicant partner, Pris [Daryl Hannah]) but for an extension of life beyond the four years that the replicants are designed to last. “Can the maker repair what he makes?” Roy asks ominously. Tyrell claims he cannot – whether truthfully or not viewers have no way of knowing. In response, Roy exacts a murderous revenge. Although Roy destroys Tyrell rather than Tyrell’s family, the parallel with *Frankenstein* is unmistakable.

The climactic struggle between Roy and Deckard takes place in the nearly abandoned Bradbury building, where Deckard has gone to find Pris in the apartment of J. F. Sebastian, one of the Tyrell Corporation’s genetic designers, who “makes friends” in the form of mechanical toys. This macabre sequence echoes a diverse range of films and fictions of monstrosity. The
slowly revolving fans on the building’s rooftop evoke the windmills from James Whale’s classic film *Frankenstein* (1931); Roy’s stiff-legged lope echoes Karloff’s monster, while his wolf-like howling picks up on the werewolf sub-genre; Sebastian’s collection of mechanical toys reaches back to a whole range of nineteenth- and early-twentieth-century automata that came after Shelley, including those in the tales of E. T. A. Hoffman, *Pinocchio*, and even *The Thief of Bagdad*; Pris’s disguise as a mechanical ballerina ironically plays on her artificiality, while recalling *The Nutcracker* and *Petrushka*. When Deckard slowly removes Pris’s veil, the scene turns into a violent parody of the Galatea myth, with the frozen woman coming to life not as a lover, but as an acrobatic killer.

The fight between Deckard and Roy alludes, above all, to Frankenstein’s attempt to “close with [the Creature] in mortal combat” (*F* 1818, ii ii 65) and Deckard, like Frankenstein, fails to kill his adversary. Roy, however, knows he is dying anyway, and out of newfound pity for another mortal being, spares Deckard’s life. Roy’s dying words echo the final pages of *Frankenstein*, where the Creature resolves to sacrifice himself: “I shall no longer see the sun or stars, or feel the winds play on my cheeks. Light, feeling, and sense, will pass away . . . I shall die” (*F* 1818, iii vii 155–56). Roy’s last words also express a lyrical grief: “I’ve seen things you people wouldn’t believe. Attack ships on fire off the shoulder of Orion. I watched c-beams glitter in the dark near the Tannhäuser Gate. All those moments will be lost in time like tears in the rain. Time to die” (figure 12). These elegiac speeches in each work humanize the creature, demanding recognition of the other as a living, feeling, and sentient being.
Shelley Jackson’s piecework: *Patchwork Girl*

Shelley Jackson’s *Patchwork Girl* takes as its premise that Mary Shelley’s second creature, the female companion that Frankenstein began making but then destroyed, was secretly finished by Mary Shelley herself. The artificial creature becomes the lover of this fictive Mary Shelley, then travels to America, where she goes through numerous adventures until her death in the 1990s. Describing these events, Jackson frequently weaves quotations from *Frankenstein* directly into her account, creating a variegated patchwork of “original” writing and borrowed phrases, including passages from L. Frank Baum, Donna Haraway, Jacques Derrida, and many others. Jackson’s hypertext, one of the most successful efforts in this new medium, consists of 323 lexias (or screens of text), varying in length from a single sentence to some 300 or so words. The lexias are joined to one another by 462 links, which create multiple pathways through the text. Like most hypertexts, *Patchwork Girl* has no proper beginning or end, but it does have numerous narrative characteristics, including characters, settings, flashbacks, recognition scenes, shifting points of view, and consecutive temporal sequences.

Because many readers are unfamiliar with this work, I shall take a moment to describe its structure. Written with Storyspace software and published by Eastgate Systems, the premier source for stand-alone hypertexts, it is distributed on disk and equipped with maps that allow readers to visualize the structure of the crisscrossing network of lexias. The narrative core of the work – the chronological arrangement of events, not the order of the lexias, which is determined by the reader – is contained in two long sections. The first, “Journal,” contains “Mary Shelley’s” diary of her construction of the female creature and of their initial, halting attempts at a relationship. Their bond culminates in a dramatically convincing act of lovemaking, which finely captures the characters’ blend of fear and exploratory passion. The other section, “Story,” is subdivided into six further parts: “M/S,” which explores the love affair from the creature’s point of view; “Severance,” which recounts their mutual but painful decision to separate and includes a strong scene in which the creator and creation exchange skin-grafts, so that each will contain a living fragment of the other; “Seagoing” and “Seance,” which follow the creature across the Atlantic and narrate various adventures involving cross-dressing, an encounter with a circus freak, and the purchase of a false identity; and, finally, “Falling Apart” and “Rethinking,” in which her 175-year-old body begins to decompose into its component pieces. The narrative core culminates in the creature’s decision to wander off into the desert of Death Valley, an effective counterpoint to the fate of Frankenstein’s Creature, who disappears into the ice floes of the Arctic.
Flanking the narrative core, yet interspersed in most readings, are three nonlinear sections. “Body of the Text” and “Crazy Quilt” contain meditations on hypertext writing, lyrical passages, dreams, irreverent remarks, and fragmentary musings in various voices (the author’s, the creature’s, the text’s itself). “Graveyard,” the most haunting of the sections, gives voice to the creature’s individual body parts. In lexias titled “eyeballs,” “lips,” “left breast,” and “heart,” for example, Jackson tells the stories of the dead women from whom the organs were harvested. Macabre and witty, sometimes forming tiny interpolated narratives, these passages literalize the post-structuralist dictum that the subject is always multiple. The creature’s eyes, for example, give her the traits of the person from whom they were acquired: a woman named Tituba, which is also the name of a West Indian slave jailed in the Salem witch trials. This origin underlines the slavery theme, which *Patchwork Girl* presents in more explicitly racial terms than either *Frankenstein* or *Blade Runner*, for the creature in Jackson’s hypertext is sewn together from the skins of people from different races.

The creature’s eyes also open a hidden level of Jackson’s text. In a lexia that has no entry or exit, a passage unlinked to any other in the hypertext and hence inaccessible except by using the software’s search engine, the Patchwork Girl thanks her maker for giving her life. “Hideous progeny: yes, I was both those things, for you, and more. Lover, friend, collaborator. It is my eyes you describe – with fear, yes, but with fascination: yellow, watery, but speculative eyes” (“thanks”). This impulse to thank rather than hate one’s creator marks the hypertext’s largest thematic departure from Shelley’s novel. The difference stems from the loving, nurturing embrace Jackson imagines her character “Mary Shelley” bestowing on the creature she has made.

In fact, Jackson’s “Mary Shelley” uses a technique for creating an artificial person that more closely resembles Frankenstein’s methods than Tyrell’s genetic engineering. In an age of biotechnology, sewing parts together seems anachronistic, a throwback to the nineteenth century when scientific creation of life was conceptualized in terms of assembling already existent pieces. But Jackson associates this older kind of creativity with feminine crafts and values – weaving, collaborating, conserving, reusing. The notion of sewing internal organs into place implies meticulous care, a time-consuming total-body operation: kidneys tucked in place, intestines wound into their cavity, veins sewn one by one along their proper paths. Such patient piecemeal contrasts vividly with the high tech procedures of contemporary genetics.

This contrast forms a part of Jackson’s sustained critique of technoscience. Yet like Shelley before her, Jackson is no mindless opponent of science. In fact, she obviously admires what she calls the creature’s “techy bent” (“am I mary”), and she draws frequent metaphors from genetics and cyborg theory.
An interest in science is virtually mandatory for the affirmative pressure she puts on the Frankenstein myth. And it works best when Jackson is most true to her maternal origin – most faithful to Mary Shelley’s novel – endowing her artificial creature with the pathos of life.

The robot child: Steven Spielberg’s A.I.

The final section of this chapter turns to some of the numerous works that reinterpret Shelley’s legacy in mechanistic rather than biological terms. The most famous recent work in this vein is Steven Spielberg’s movie A.I., but readers need some groundwork in contemporary robotics to see where Spielberg culled his ideas about artificial life.

The two most radical proponents of intelligent machines are Hans Moravec, founder of the world’s largest robotics program at Carnegie Mellon University, and Rodney A. Brooks, director of the MIT Artificial Intelligence Laboratory. Although Moravec and Brooks have profound differences in their approaches to building robots, they share a fundamental belief that the future belongs to silicon rather than carbon-based life forms. In numerous scientific publications and two popular books, Moravec has predicted that by 2040 robots will have equaled humans in intelligence and gained consciousness; thereafter they will move beyond humans, controlling their own evolution as their mental and physical capabilities transcend anything now imaginable. Moravec does more than predict such developments, however – he devotes his life to bringing them about. Moravec works to build the very future Frankenstein fears when he shudders at the prospect that “a race of devils would be propagated upon the earth, who might make the very existence of the species of man a condition precarious” (F 1818, iii iii 114). Moravec and Brooks, by contrast, welcome the idea of a new species supplanting humanity entirely. Moravec regards robots as the legitimate heirs of our niche on earth, and he argues that we should see them as our “mind children,” sacrificing for them as we would for our biological children. Brooks agrees, arguing that we already are machines, just as much as any robot: “I believe myself and my children all to be mere machines. Automatons at large in the universe. Every person I meet is also a machine – a big bag of skin full of biomolecules interacting according to describable and knowable rules.”

Moravec and Brooks’s utilitarian acceptance of humanity’s eventual extinction resembles the stern rationalism advocated by Shelley’s father William Godwin, to whom she dedicated Frankenstein. In Political Justice (1793), Godwin notoriously contends that one should value most highly the life of a being who “will be most conducive to the general good” even at the cost of sacrificing oneself or one’s closest relative. Godwin intends this argument
to apply to different species as well, for he contrasts the superior value of a human life to that of a beast. In a comparable argument, Moravec exhorts us to sacrifice ourselves in favor of our mechanical descendants:

Robots will displace humans from essential roles. Rather quickly, they could displace us from existence. I’m not as alarmed as many by the latter possibility, since I consider these future machines our progeny... Like biological children of previous generations, they will embody humanity’s best chance for a long-term future. It behooves us to give them every advantage and to bow out when we can no longer contribute.

Spielberg’s A.I. unites the latest preoccupations of artificial intelligence researchers with Shelleyan themes. The movie begins in a distant future, in which humanity has become extinct and benign aliens have inherited the planet earth. Through an elegiac voiceover, the narrative moves back in time to a near future, when New York and other coastal cities have been drowned by melting ice caps, and reasoning, humanoid robots called “Mehas” perform most of the essential tasks of life. The story concerns a robot child named David (Haley Joel Osment), who is the first intelligent machine designed to have feelings. Spielberg’s interest in artificial intelligence brings him full circle back to the place where Shelley began – to the understanding that a creature with feelings acquires personhood, even if it is not of the same species as humans. As Professor Hobby (William Hurt), head of Cybertronics Corporation, explains, “Love will be the key by which they acquire a kind of subconsciousness, never before achieved. An inner world of metaphor, of intuition, of self-motivated reasoning, of dreams.”

David is an experimental prototype, given to an employee in Cybertronics whose child, Martin, is in a coma. Much to everyone’s surprise, Martin awakens from his coma, creating the conditions for an intense sibling rivalry. When Martin returns home, he is confined to a mechanized wheelchair, and later he wears computer-assisted leg braces, and these prostheses illustrate a point Brooks makes explicitly: that humans already are kin to machines. It is not long before Martin is sadistically taunting David as “the new Supertoy” – not much better than their mechanical bear Teddy – and getting his mother to read Pinocchio out loud before bed. This last torment initiates David’s lifelong quest to become “a real boy,” as Pinocchio did in the story, and thus to reclaim his mother’s love. As in Patchwork Girl, David never turns against his human creators, no matter how much he is persecuted. This revision of the Frankenstein myth inevitably makes the artificial creature even more sympathetic. Once Martin
and David’s rivalry turns violent, their mother is pressured to get rid of the Mecha child. Finding she cannot bear to return him to the factory to be destroyed, she secretly abandons him in a forest.

David’s first night in the woods conjures memories of Frankenstein’s Creature stumbling blindly into the forest and gradually becoming aware of the external world, first of birds flitting across his vision (David’s earliest memory is of “a bird with big wings,” the corporate logo of Cybertronics), then of an immense full moon rising through the trees. In Shelley’s novel the moon provides the Creature with his first sensation of pleasure: “I started up, and beheld a radiant form rise from among the trees. I gazed with a kind of wonder” (F 1818, II iii 68). In A.I. the moon David gazes at in wonder turns out to be a hot-air balloon, carrying bounty hunters in pursuit of cast-off Mechas to sell to a horrific entertainment called the Flesh Fair. David’s experience at the Flesh Fair plays on the recurrent slavery theme, heightened here in a gruesome scene that features the killing of a Mecha in black-face. Yet, on the whole, the Flesh Fair episode seems under-imagined, too derivative of gladiator fights in post-apocalyptic movies such as Mad Max: Beyond Thunderdome (1985) or The Running Man (1987). More effective is the supplanting of humanity by robots (and later by aliens, with whom robots are metaphorically equated). David’s robot companion Gigolo Joe (Jude Law) expresses the theme most directly: “They hate us, you know,
the humans . . . They made us too smart, too quick, and too many. We are suffering for the mistakes they made, because when the end comes, all that will be left is us” (figure 14).

Joe grows angry and defiant under persecution, like Frankenstein’s Creature, but the film’s prevailing tone is elegiac. The movie ends, as it began, with melancholy for all that has been lost. There are hints of this valedictory tone in the farewell words Frankenstein’s Creature utters, just as there were in Roy’s death speech, but A.I. extends the lament to encompass a multitude of losses: Professor Hobby mourns the loss of his son; David, of his mother; the aliens mourn a vanished humanity. (Knowing that Spielberg was asked to take on this project, originally conceived by Stanley Kubrick, shortly after that director’s death, one suspects that this film also mourns Spielberg’s cinematic predecessor.) The aliens tell David that they revived him because of his memories: “there is nothing too small that you didn’t store for us to remember.” The irony is that this artificial creature has become the last bearer of the human legacy: “David, you are the enduring memory of the human race.” When the aliens grant David’s wish and restore his mother to life for one precious day, the fleetingness of his joy becomes a metaphor for the transitory nature of all human experience. David’s mechanical body may be virtually immortal, but he is human in feeling loss as keenly as any of the people who created him.
If, as Professor Hobby maintains, “To create an artificial being has been the dream of man since the birth of science,” that dream has ceased to be a nightmare in the work of Spielberg. The robot in A.I. is no monster to the aliens who find him but rather “the most lasting proof of [humanity’s] genius.” This destiny is a far cry from the one Frankenstein envisioned for his Creature. Why is it that our present moment focuses so sympathetically on the fate of the creature? I do not think it means that we have acquired a kind of fatalism about scientific advances. Even if it is only a matter of time before scientists like Moravec and Brooks produce artificial beings with consciousness, the social consequences of these developments are not predetermined. It is up to us to decide how society will respond to the advent of artificial life. The changed attitude toward artificial creatures, it seems to me, stems from the need to redefine personhood in the face of both social and scientific pressures to rethink old boundaries. Perhaps in the final words of Frankenstein’s Creature, an unexpected futurity waits: “Soon these burning miseries will be extinct . . . My spirit will sleep in peace; or if it thinks, it will not surely think thus. Farewell” (F 1818, III vii 156).

NOTES
2 For an excellent account of the way Frankenstein’s Creature has been used to symbolize many of the fears prominent through World War II, see Chris Baldick, In Frankenstein’s Shadow: Myth, Monstrosity, and Nineteenth-Century Writing (Oxford: Oxford University Press, 1987).
Frankenstein's futurity: replicants and robots


7 All references to this film are drawn from Blade Runner, dir. Ridley Scott, director’s cut (Warner Brothers, 1992).

8 By personalizing the creator/creature drama and charging Tyrell rather than corporate society with the guilt of betraying his replicant “children,” the movie follows Shelley’s novel rather than the political critique it elsewhere maintains.

9 See Shelley Jackson, Patchwork Girl; or, A Modern Monster by Mary/Shelley, and Herself, CD-ROM (Watertown, MA: Eastgate Systems Inc., 1995). Although Jackson’s hypertext is unpagedinated, each lexia is identified in the Storyspace maps by an uncapped title, which I will cite parenthetically to identify the location of quotations.


13 Moravec, Robot, p. 13.


A replicant is a fictional bioengineered android in the 1982 film Blade Runner, and in its 2017 sequel Blade Runner 2049. The Nexus-series of replicants are virtually identical to adult humans but have superior strength, speed, agility, resilience, and intelligence, to varying degrees depending on the model. A replicant can only be detected by means of the fictional Voight-Kampff test, in which emotional responses are provoked and a replicant's nonverbal responses differ from those of a human. A Frankenstein. Clean Up Massive Keyword Lists Into Traffic Generators. Get Started. Try It Out For 30 Days For Free. Starting At $97/Month. Save Time and Effort. Thousands of Amazon Keywords Processed in Seconds. Why Frankensteinâ€™s Keyword Processor Should Be Used For All Of Your Optimization Efforts. Take a huge list of keywords (even thousands) and transform it into a more manageable group to use in your Amazon listing optimization efforts. When your Amazon keyword research list is combined, cleaned up, and turned into a more cohesive group, it becomes much more powerful. Filter and sort your keyword results by using a wide variety of output settings including de-duplication filters, removing unwanted characters and words, and sorting the keywords by popularity.