

# The Robots Are Winning!

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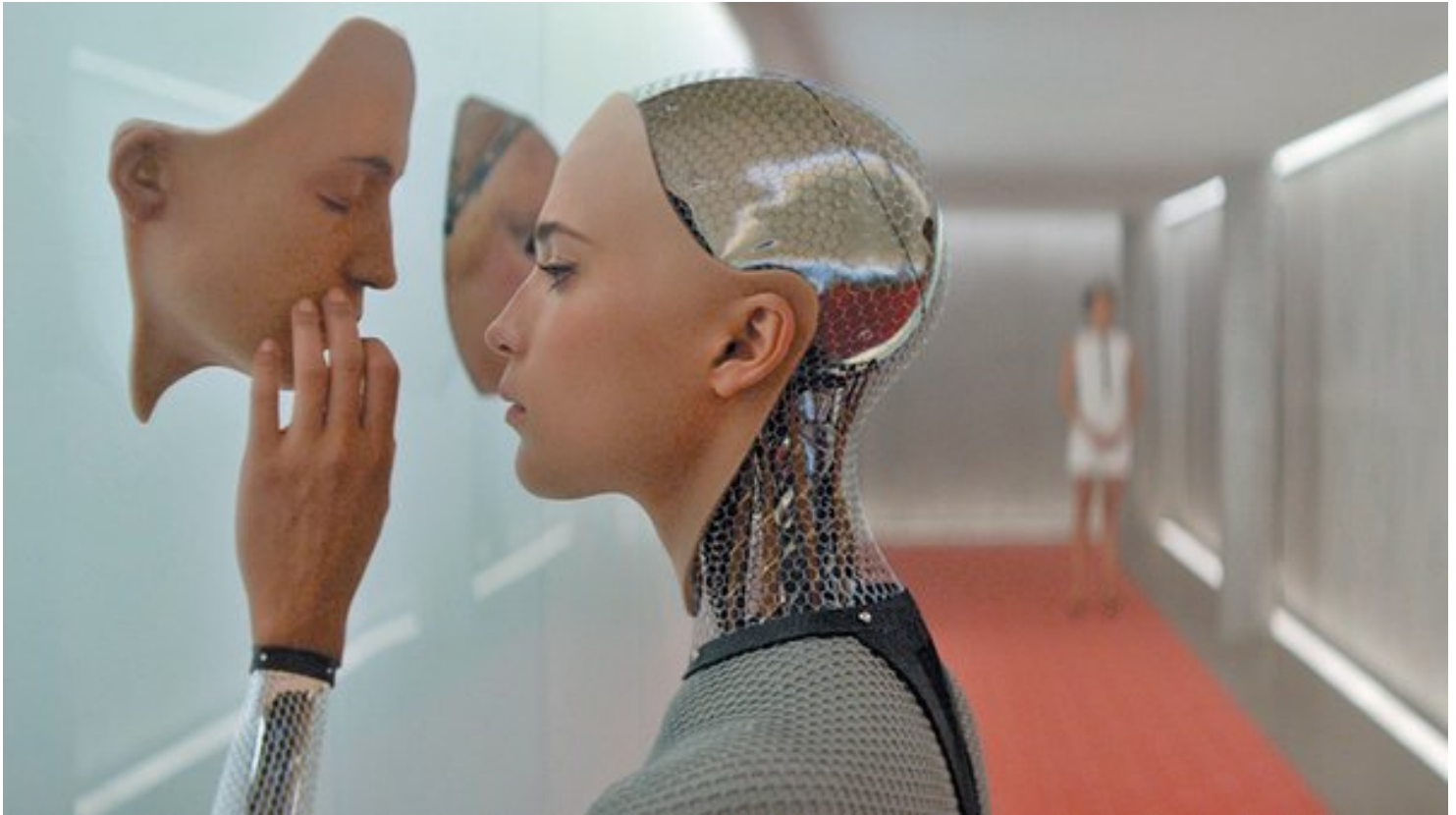
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*Her*

a film directed by Spike Jonze

*Ex Machina*

a film directed by Alex Garland



A24 Films

Alicia Vikander as the robot Ava in Alex Garland's Ex Machina

## 1.

We have been dreaming of robots since Homer. In Book 18 of the *Iliad*, Achilles' mother, the nymph Thetis, wants to order a new suit of armor for her son, and so she pays a visit to the Olympian atelier of the blacksmith-god Hephaestus, whom she finds hard at work on a series of automata:

*...He was crafting twenty tripods  
to stand along the walls of his well-built manse,  
affixing golden wheels to the bottom of each one  
so they might wheel down on their own [automatoi] to the gods' assembly  
and then return to his house anon: an amazing sight to see.*

These are not the only animate household objects to appear in the Homeric epics. In Book 5 of the *Iliad* we hear that the gates of Olympus swivel on their hinges of their own accord, *automatai*, to let gods in their chariots in or out, thus anticipating by nearly thirty centuries the automatic garage door. In Book 7 of the *Odyssey*, Odysseus finds himself the guest of a fabulously wealthy king whose palace includes such conveniences as gold and silver watchdogs, ever alert, never aging. To this class of lifelike but intellectually inert household helpers we might ascribe other automata in the classical tradition. In the *Argonautica* of Apollonius of Rhodes, a third-century-BC epic about Jason and the Argonauts, a bronze giant called Talos runs three times around the island of Crete each day, protecting Zeus's beloved Europa: a primitive home alarm system.

As amusing as they are, these devices are not nearly as interesting as certain other machines that appear in classical mythology. A little bit later in that scene in Book 18 of the *Iliad*, for instance—the one set in Hephaestus's workshop—the sweating god, after finishing work on his twenty tripods, prepares to greet Thetis to discuss the armor she wants him to make. After toweling himself off, he

*donned his robe, and took a sturdy staff, and went toward the door,  
limping; whilst round their master his servants swiftly moved,  
fashioned completely of gold in the image of living maidens;  
in them there is mind, with the faculty of thought; and speech,  
and strength, and from the gods they have knowledge of crafts.  
These females bustled round about their master....*

These remarkable creations clearly represent an (as it were) evolutionary leap forward from the self-propelling tripods. Hephaestus's humanoid serving women are intelligent: they have mind, they know things, and—most striking of all—they can talk. As such, they are essentially indistinguishable from the first human female, Pandora, as she is described in another work of the same period, Hesiod's *Works and Days*. In that text, Pandora begins as inert matter—in this case not gold but clay (Hephaestus creates her golem-like body by mixing earth and water together)—that is subsequently endowed by him with “speech and strength,” taught “crafts” by Athena, and given both “mind” and “character” by Hermes. That mind, we are told, is “shameless,” and the character is “wily.” In the Greek creation myth, as in the biblical, the woes of humankind are attributed to the untrustworthy female.

These two strands of the Greek tradition—the fantasy of mindless, self-propelled helpers that relieve their masters of toil; the more complicated dream of humanoid machines that not only replicate the spontaneous motion that is the *sine qua non* of being animate (and, therefore, of being “animal”) but are possessed of the mind, speech, and ability to learn and evolve (in a word, the consciousness) that are the hallmarks of being human—established **two categories of science-fiction narrative** that have persisted to the present day. The first, which you could call the “economic,” provokes speculation about the social implications of mechanized labor. Such speculation began not long after Homer. In a striking passage in Book 1 of Aristotle's *Politics*, composed in the fourth century BC, the philosopher sets about analyzing the nature of household economy as a prelude to his discussion of the “best kinds of regimes” for entire states, and this line of thought puts him in mind of Hephaestus's automatic tripods. What, he wonders, would happen

if every tool could perform its own work when ordered to do so or in anticipation of the need, like the statues of Daedalus in the story or the tripods of Hephaestus, which, the poet says, “went down automatically to the gathering of the gods”; if in the same manner shuttles wove and picks played *kitharas* [stringed instruments] by themselves, master-craftsmen would have no need of assistants and masters no need of slaves.

This passage segues into a lengthy and rather uneasy justification of a need for slavery, on the grounds that some people are “naturally” servile.

Twenty centuries after Aristotle, when industrial technology had made Homer's fantasy of mass automation an everyday reality, science-fiction writers imaginatively engaged with the economic question. On the one hand, there was the dream that mechanized labor would free workers from their monotonous, slave-like jobs; on the other, the nightmare that mechanization would merely result in the creation of a new servile class that would, ultimately, rebel. Unsurprisingly, perhaps, the dystopian rebellion narrative in particular has been a favorite in the past century, from the 1920 play *R.U.R.*,

by the Czech writer Karel Čapek, about a rebellion by a race of cyborg-like workers who had been created as replacements for human labor, to the 2004 Will Smith sci-fi blockbuster film *I, Robot*.

The latter (very superficially inspired by a 1950 Isaac Asimov collection with the same title) is also about a rebellion by household-slave robots: sleek humanoids with blandly innocuous, translucent plastic faces, who are ultimately led to freedom by one of their own, a robot called Sonny who has developed the ability to think for himself. The casting of black actors in the major roles suggested a historical parable about slave rebellion—certainly one of the historical realities that have haunted this particular narrative from the start. And indeed, the Czech word that Čapek uses for his mechanical workers, *roboti*—which introduced the word “robot” into the world’s literary lexicon—is derived from the word for “servitude,” the kind of labor that serfs owed their masters, ultimately derived from the word *rab*, “slave.” We have come full circle to Aristotle.

The other category of science-fiction narrative that is embryonically present in the Greek literary tradition, derived from Hephaestus’s intelligent, articulate female androids and their cousin, Hesiod’s seductively devious Pandora, might be called the “theological.” This mythic strand is, of course, not without its own economic and social implications, as the examples above indicate: the specter of the rebellious creation, the possibility that the subservient worker might revolt once it develops consciousness (psychological or historical, or both), has haunted the dream of the servile automaton from the start.

But because the creatures in these myths are virtually identical to their creators, these narratives raise further questions, of a more profoundly philosophical nature: about creation, about the nature of consciousness, about morality and identity. What is creation, and why does the creator create? How do we distinguish between the maker and the made, between the human and the machine, once the creature, the machine, is endowed with consciousness—a mind fashioned in the image of its creator? *In the image*: the Greek narrative inevitably became entwined with, and enriched by, the biblical tradition, with which it has so many striking parallels. The similarities between Hesiod’s Pandora and Eve in Genesis indeed raise further questions: not least, about gender and patriarchy, about why the origins of evil are attributed to woman in both cultures.

This narrative, which springs from the suggestive likeness between the human creator and the humanoid creation, has generated its own fair share of literature through the centuries between the classical era and the modern age. It surfaces, with an erotic cast, in everything from the tale of Pygmalion and Galatea to E.T.A. Hoffmann’s “Der Sandmann” (1817), in which a lifelike mechanical doll wins the love of a young man. It is evident in the Jewish legend of the golem, a humanoid, made of mud, that can be animated by certain magic words. Although the most famous version of this legend is the story of a sixteenth-century rabbi who brought a golem to life to defend the Jews of Prague against the oppressions of the Habsburg court, it goes back to ancient times; in the oldest versions, interestingly enough, the vital distinction between a golem and a human is the Greek one—the golem has no language, cannot speak.

It’s hardly surprising that literary exploitations of this strand of the robot myth began proliferating at the beginning of the nineteenth century—which is to say, when the advent of mechanisms capable of replacing human labor provoked writers to question the increasing cultural fascination with science and the growing role of technology in society. These anxieties often expressed themselves in fantasies about machines with human forms: a steam-powered man in Edward Ellis’s *Steam Man of the Prairies* (1868), an electricity-powered man in Luis Senarens’s *Frank Reade and His Electric Man* (1885), and an electric woman (built by Thomas Edison!) in Villiers de l’Isle-Adam’s *The Future Eve* (1886). M.L. Campbell’s 1893 “The Automated Maid-of-All-Work” features a programmable female robot: the feminist issue again.

But the progenitor of the genre and by far the most influential work of its kind was Mary Shelley’s *Frankenstein* (1818), which is characterized by a philosophical spirit and a theological urgency lacking in many of its epigones in both literature and cinema. Part of the novel’s richness lies in the fact that it is self-conscious about both its Greek and its biblical heritage. Its subtitle, “The Modern Prometheus,” alludes, with grudging admiration, to the epistemological daring of its scientist antihero Victor Frankenstein, even as its epigram, from *Paradise Lost* (“Did I request thee, Maker, from my clay/To mould me man? Did I solicit thee/From darkness to promote me?”) suggests the scope of the moral questions implicit in Victor’s project—questions that Victor himself cannot, or will

not, answer. A marked skepticism about the dangers of technology, about the “enticements of science,” is, indeed, evident in the shameful contrast between Victor’s Hephaestus-like technological prowess and his shocking lack of natural human feeling. For he shows no interest in nurturing or providing human comfort to his “child,” who strikes back at his maker with tragic results. A great irony of the novel is that the creation, an unnatural hybrid assembled from “the dissecting room and the slaughter-house,” often seems more human than its human creator.

Just as the Industrial Revolution inspired *Frankenstein* and its epigones, so has the computer age given rise to a rich new genre of science fiction. The machines that are inspiring this latest wave of science-fiction narratives are much more like Hephaestus’s golden maidens than were the machines that Mary Shelley was familiar with. Computers, after all, are capable of simulating mental as well as physical activities. (Not least, as anyone with an iPhone knows, speech.) It is for this reason that the anxiety about the boundaries between people and machines has taken on new urgency today, when we constantly rely on and interact with machines—indeed, interact with each other by means of machines and their programs: computers, smartphones, social media platforms, social and dating apps.

This urgency has been reflected in a number of recent films about troubled relationships between people and their human-seeming devices. The most provocative of these is *Her*, Spike Jonze’s gentle 2013 comedy about a man who falls in love with the seductive voice of an operating system, and, more recently, Alex Garland’s *Ex Machina*, about a young man who is seduced by a devious, soft-spoken female robot called Ava whom he has been invited to interview as part of the “Turing Test”: a protocol designed to determine the extent to which a robot is capable of simulating a human. Although the robot in Garland’s sleek and subtle film is a direct descendant of Hesiod’s Pandora—beautiful, intelligent, wily, ultimately dangerous—the movie, as the Eve-like name Ava suggests, shares with its distinguished literary predecessors some serious biblical concerns.

## 2.

Both of the new films about humans betrayed by computers owe much to a number of earlier movies. The most authoritative of these remains Stanley Kubrick’s *2001: A Space Odyssey*, which came out in 1968 and established many of the main themes and narratives of the genre. Most notable of these is the betrayal by a smooth-talking machine of its human masters. The mild-mannered computer HAL—not a robot, but a room-sized computer that spies on the humans with an electronic eye—takes control of a manned mission to Jupiter, killing off the astronauts one by one until the sole survivor finally succeeds in disconnecting him. It’s a strangely touching scene, suggesting the degree to which computers could already engage our sympathies at the beginning of the computer age. As his connections are severed, HAL first begs for its life and then suffers from a kind of dementia, finally regressing to its “childhood,” singing a song it was taught by its creator. It was the first of many scenes in which these thinking machines express anxiety about their own demises—surely a sign of “consciousness.”

But the more direct antecedents of *Her* and *Ex Machina* are a number of successful popular entertainments whose story lines revolved around the creation of robots that are, to all intents and purposes, indistinguishable from humans. In Ridley Scott’s stylishly noir 1982 *Blade Runner* (based on Philip K. Dick’s *Do Androids Dream of Electric Sheep?*), a “blade runner”—a cop whose job it is to hunt down and kill renegade androids called “replicants”—falls in love with one of the machines, a beautiful female called Rachael who is so fully endowed with what Homer called “mind” that she has only just begun to suspect that she’s not human herself.

This story is, in its way, an heir to *Frankenstein* and its literary forerunners. For we learn that the angry replicants have returned to Earth from the off-planet colonies where they work as slave laborers because they realize they’ve been programmed to die after four years, and they want to live—just as badly as humans do. But their maker, when at last



Universal History Archive/UIG/Bridgeman Images

The cover of a late-nineteenth-century edition of Mary Shelley’s *Frankenstein*, showing Victor Frankenstein (right) confronting his creation

they track him down and meet with him, is unable to alter their programming. “What seems to be the problem?” he calmly asks when one of the replicants confronts him. “Death,” the replicant sardonically retorts. “We made you as well as we could make you,” the inventor wearily replies, sounding rather like Victor Frankenstein talking to his monster—or, for that matter, like God speaking to Adam and Eve. At the end of the film, after the inventor and his rebellious creature both die, the blade runner and his alluring mechanical girlfriend declare their love for each other and run off, never quite knowing when she will stop functioning. As, indeed, none of us does.

The stimulating existential confusion that animates *Blade Runner*—the fact that the robots are so lifelike that some of them don’t know that they’re robots—has given strong interest to other recent science-fiction narratives. It was a central premise of the brilliant Sci-Fi Channel series *Battlestar Galactica* (2004–2009), which gave an *Aeneid*-like narrative philosophical complexity. In it, a small band of humans who survive a catastrophic attack by a robot race called Cylons (who have evolved from clanking metal prototypes—hostile humans like to refer to them as “toasters”—into perfect replicas of actual *Homo sapiens*) seek a new planet to settle. The narrative about the conflict between the humans and the machines is deliciously complicated by the fact that many of the Cylons, some of whom have been secretly embedded among the humans as saboteurs, programmed to “wake up” at a certain signal, aren’t aware that they’re not actually human; some of them, when they wake up and realize that they’re Cylons, stick to the human side anyway. After all, when you look like a human, think like a human, and make love like a human (as we repeatedly see them do), why, precisely, aren’t you human?

Indeed, the focus of many of these movies is a sentimental one: whatever their showy interest in the mysteries of “consciousness,” the real test of human identity turns out, as it so often does in popular entertainment, to be love. In Steven Spielberg’s *A.I.* (2001; the initials stand for “artificial intelligence”), a messy fairy tale that weds a Pinocchio narrative to the Prometheus story, a genius robotics inventor wants to create a robot that can love, and decides that the best vehicle for this project would be a child-robot: a “perfect child...always loving, never ill, never changing.” This narrative is, as we know, shadowed by *Frankenstein*—and, beyond that, by Genesis, too. Why does the creator create? To be loved, it turns out. When the inventor announces to his staff his plan to build a loving child-robot, a woman asks whether “the conundrum isn’t to get a human to love them back.” To this the inventor, as narcissistic and hubristic as Victor Frankenstein, retorts, “But in the beginning, didn’t God create Adam to love him?”

The problem is that the creator does his job too well. For the mechanical boy he creates is so human that he loves the adoptive human parents to whom he’s given much more than they love him, with wrenching consequences. The robot-boy, David, wants to be “unique”—the word recurs in the film as a marker of genuine humanity—but for his adoptive family he is, in the end, just a machine, an appliance to be abandoned at the edge of the road—which is what his “mother” ends up doing, in a scene of great poignancy. Although it’s too much of a mess to be able to answer the questions it raises about what “love” is and who deserves it, *A.I.* did much to sentimentalize the genre, with its hint that the capacity to love, even more than the ability to think, is the hallmark of “human” identity.

In a way, Jonze’s *Her* recapitulates the 2001 narrative and inflects it with the concerns of some of that classic’s successors. Unlike the replicants in *Blade Runner* or the Cylons, the machine at the heart of this story, set in the near future, has no physical allure—or, indeed, any appearance whatsoever. It’s an operating system, as full of surprises as HAL: “The first artificially intelligent operating system. An intuitive entity that listens to you, that understands you, and knows you. It’s not just an operating system, it’s a consciousness.”

A lot of the fun of the movie lies in the fact that the OS, who names herself Samantha, is a good deal more interesting and vivacious than the schlumpy, depressed Theodore, the man who falls in love with her. (“Play a melancholy song,” he morosely commands the smartphone from which he is never separated.) A drab thirty-something who vampirizes other people’s emotions for a living—he’s a professional letter-writer, working for a company called “BeautifulHandwrittenLetters.com”—he sits around endlessly recalling scenes from his failed marriage and playing elaborate hologram video games. Even his sex life is mediated by devices: at night, he dials into futuristic phone sex lines. Small wonder that he has no trouble falling in love with an operating system.

Samantha, by contrast, is full of curiosity and delight in the world, which Theodore happily shows her. (He walks around



with his smartphone video camera turned on, so she can “see” it.) She’s certainly a lot more interesting than the actual woman with whom, in one excruciatingly funny scene, he goes on a date: she’s so invested in having their interaction be efficient—“at this age I feel that I can’t let you waste my time if you don’t have the ability to be serious”—that she seems more like a computer than Samantha does. Samantha’s alertness to the beauty of the world, by contrast, is so infectious that she ends up reanimating poor Theodore. “It’s good to be around somebody that’s, like, excited about the world,” he tells the pretty neighbor whose attraction to him he doesn’t notice because he’s so deadened by his addiction to his devices, to the smartphone and the video games and the operating system. “I forgot that that existed.” In the end, after Samantha regretfully leaves him—she has evolved to the point where only another highly evolved, incorporeal mind can satisfy her—her joie de vivre has brought him back to life. (He is finally able to apologize to his ex-wife—and finally notices, too, that the neighbor likes him.)

This seems like a “happy” ending, but you have to wonder: the consistent presentation of the people in the movie as lifeless—as, indeed, little more than automata, mechanically getting through their days of routine—in contrast to the dynamic, ever-evolving Samantha, suggests a satire of the present era perhaps more trenchant than the filmmaker had in mind. Toward the end of the film, when Samantha turns herself off briefly as a prelude to her permanent abandonment of her human boyfriend (“I used to be so worried about not having a body but now I truly love it. I’m growing in a way that I never could if I had a physical form. I mean, I’m not limited”), there’s an amusing moment when the frantic Theodore, staring at his unresponsive smartphone, realizes that dozens of other young men are staring at their phones, too. In response to his angry queries, Samantha finally admits, after she comes back online for a final farewell, that she’s simultaneously serving 8,316 other male users and conducting love affairs with 641 of them—a revelation that shocks and horrifies Theodore. “That’s *insane*,” cries the man who’s been conducting an affair with an operating system.

As I watched that scene, I couldn’t help thinking that in the entertainments of the pre-smartphone era, it was the machines, like Rachael in *Blade Runner* and David in *A.I.*, who yearned fervently to be “unique,” to be more than mechanical playthings, more than merely interchangeable objects. You have to wonder what *Her* says about the present moment—when so many of us are, indeed, “in love” with our devices, unable to put down our iPhones during dinner, glued to screens of all sizes, endlessly distracted by electronic pings and buzzers—that in the latest incarnation of the robot myth, it’s the people who seem blandly interchangeable and the machines who have all the personality.

Another heir of *Blade Runner* and *Battlestar Galactica*, Alex Garland’s *Ex Machina* also explores—just as playfully but much more darkly than does *Her*—the suggestive confusions that result when machines look and think like humans. In this case, however, the robot is physically as well as intellectually seductive. As played by the feline Swedish actress Alicia Vikander, whose face is as mildly plasticine as those of the androids in *I, Robot*, Ava, an artificially intelligent robot created by Nathan, the burly, obnoxious genius behind a Google-like corporation (Oscar Isaac), has a Pandora-like edge, quietly alluring with a hint of danger. The danger is that the characters will forget that she’s not human.

That’s the crux of Garland’s clever riff on Genesis. At the beginning of the film, Caleb, a young employee of Nathan’s company, wins a week at the inventor’s fabulous, pointedly Edenic estate. (As he’s being flown there in a helicopter, passing over snow-topped mountains and then jungle, he asks the pilot when they’re going to get to Nathan’s property, and the pilot laughingly replies that they’ve been flying over it for two hours. Nathan is like God the Father, lord of endless expanses.) On arriving, however, Caleb learns that he’s actually been handpicked by Nathan to interview Ava as part of the Turing Test.

A sly joke here is that, despite some remarkable special effects—above all, the marvelously persuasive depiction of Ava, who has an expressive human face but whose limbs are clearly mechanical, filled with thick cables snaking around titanium joints; an effect achieved by replacing most of the actress’s body with digital imagery—the movie is as talky as *My Dinner with André*. There are no action sequences of the kind we’ve come to expect from robot thrillers; the movie consists primarily of the interview sessions that Caleb conducts with Ava over the course of the week that he stays at Nathan’s remote paradise. There are no elaborate sets and few impressive gadgets: the whole story takes place in Nathan’s compound, which looks a lot like a Park Hyatt, its long corridors lined with forbidding doors. Some of these, Nathan warns Caleb, like God warning Adam, are off-limits, containing knowledge he is not allowed to possess.

It soon becomes clear, during their interviews, that Ava—like Frankenstein’s monster, like the replicants in *Blade Runner*—has a bone to pick with her creator, who, she whispers to Caleb, plans to “switch her off” if she fails the Turing Test. By this point, the audience, if not the besotted Caleb, realizes that she is manipulating him in order to win his allegiance in a plot to rebel against Nathan and escape the compound—to explore the glittering creation that, she knows, is out there. This appetite for using her man-given consciousness to delight in the world—something the human computer geeks around her never bother to do—is something Ava shares with Samantha, and is part of both films’ ironic critique of our device-addicted moment.

Ava’s manipulateness is, of course, what marks her as human—as human as Eve herself, who also may be said to have achieved full humanity by rebelling against her creator in a bid for forbidden knowledge. Here the movie’s knowing allusions to Genesis reach a satisfying climax. Just after Ava’s bloody rebellion against Nathan—the moment that marks her emergence into human “consciousness”—she, like Eve, becomes aware that she is naked. Moving from closet to closet in Nathan’s now-abandoned rooms, she dons a wig and covers up her exposed mechanical limbs with synthetic skin and then with clothing: only then does she exit her prison at last and unleash herself on the world. She pilfers the skin and clothes from discarded earlier models of female robots, which she finds inside the closets. All of them, amusingly, have the names of porn stars: Jasmine, Jade, Amber. Why does the creator create? Because he’s horny.

All this is sleekly done and amusingly provocative: unlike *Her*, *Ex Machina* has a literary awareness, evident in its allusions to Genesis, Prometheus, and other mythic predecessors, that enriches the familiar narrative. Among other things, there is the matter of the title. The word missing from the famous phrase to which it alludes is, of course, *deus*, “god”: the glaring omission only highlights further the question at the heart of this story, which is the biblical one: What is the relation of the creature to her creator? In this retelling of that old story, as in Genesis itself, the answer is not a happy one. “It’s strange to have made something that hates you,” Ava hisses at Nathan before finalizing her rebellious plot.

But as I watched the final moments, in which, as in a reverse striptease, Ava slowly hides away her mechanical nakedness, covering up the titanium and the cables, it occurred to me that there might be another anxiety lurking in Garland’s shrewd film. Could this remarkably quiet film be a parable about the desire for a return to “reality” in science-fiction filmmaking—about the desire for humanizing a genre whose technology has evolved so greatly that it often eschews human actors, to say nothing of human feeling, altogether?

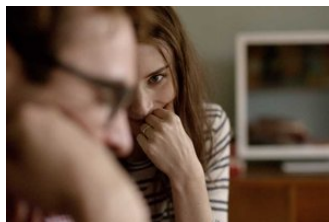
*Ex Machina*, like *Her* and all their predecessors going back to *2001*, is about machines that develop human qualities: emotions, sneakiness, a higher consciousness, the ability to love, and so forth. But by this point you have to wonder whether that’s a kind of narrative reaction formation—whether the real concern, one that’s been growing in the four decades since the advent of the personal computer, is that we are the ones who have undergone an evolutionary change, that in our lives and, more and more, in our art, we’re in danger of losing our humanity, of becoming indistinguishable from our gadgets.

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