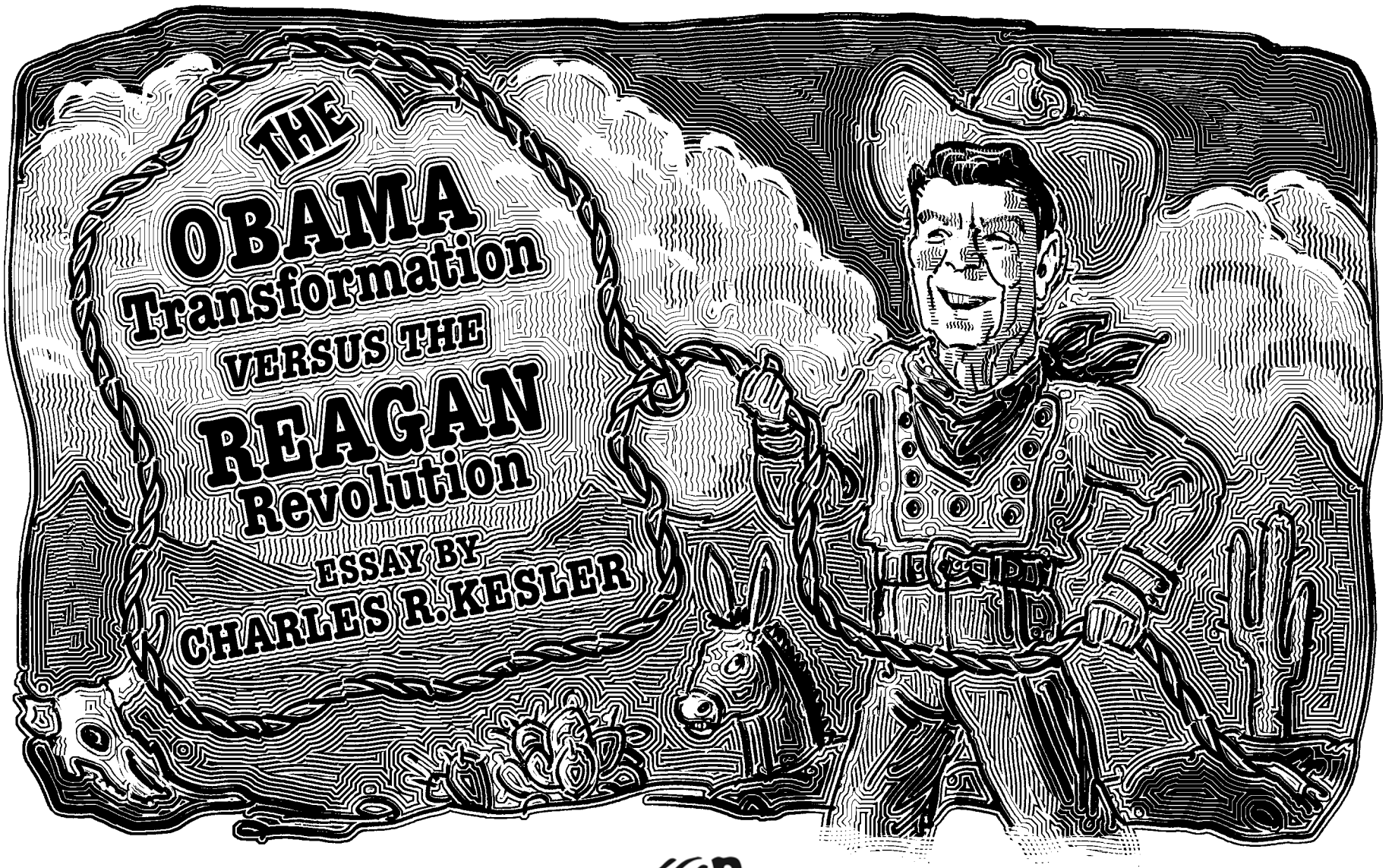
VOLUME XV, NUMBER 3, SUMMER 2015

CLAREMONT
REVIEW OF BOOKS

A Journal of Political Thought and Statesmanship



AND

Christopher DeMuth:
Our Corrupt Government

Brian T. Kennedy:
Choosing Defeat

Timothy Sandefur:
Star Trek Adrift

William Voegeli:
The Church of What's Happening Now

Thomas D. Klingenstein & Peter W. Wood:
Free Speech on Campus

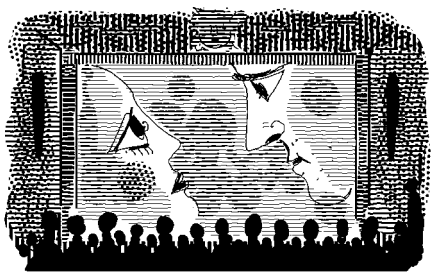
Charles Murray:
Our Kids

James Grant:
Causes of the Crash

Joseph Epstein:
Young T.S. Eliot

A Publication of the Claremont Institute
PRICE: $6.95
IN CANADA: $8.95

SHADOW PLAY
by Martha Bayles



Personal Technology

"What does it mean to understand man well enough to create one?" The question is posed in *Plug & Pray*, a fascinating 2010 documentary about robotics and artificial intelligence (A.I.) by the German filmmaker Jens Schanze. The person asking the question is not one of the A.I. true believers profiled in *Plug & Pray*, such as Raymond Kurzweil in the United States and Hiroshi Ishiguro in Japan. Rather it is Joseph Weizenbaum, the legendary MIT computer scientist turned skeptic, whose 1976 book, *Computer Power and Human Reason*, warned, "No other organism, and certainly no computer, can be made to confront genuine human problems in human terms."

The standard reply to the humanist skepticism expressed by Weizenbaum is that this is 2015 (or 2010, or 1976), and that every day the Kurzweils and Ishiguros of the world are coming closer to creating a machine—most likely a humanoid robot—whose intelligence is equal or superior to that of us mere mortals. In *Ex Machina*, the directorial debut of British filmmaker Alex Garland, that day has arrived. Or has it?

Robots and Rebellion

Before exploring this question, let us step back and consider the first ancestor of this stylish, intriguing film: a play written in 1920 by the Czech author Karel Čapek. Čapek titled his play *R.U.R. (Rossum's Universal Robots)*, and while some of its details are clearly out of date, its major themes still resonate.

One such theme is automation. The word "robot" was introduced by *R.U.R.* and comes from *robota*, which is Czech for demeaning labor. Written three years after the Bolshevik Revolution (which Čapek did not support), the play dramatizes the dangers of taking a coldly efficient approach to the industrial workforce. In the opening scene the year is 2000, and Domin, the director of the world's largest robot company, is welcoming Helena, the daughter of the nation's president, to the main factory. While relating a brief history of robots, Domin explains that the trouble with the human worker is that he "feels joy, plays the violin, wants to go for a walk, in general requires a lot of things that—that are, in effect, superfluous."

Discussed in this essay:

Plug & Pray, directed by Jens Schanze. Written by Jens Schanze. Mascha Film.

Ex Machina, directed by Alex Garland. Screenplay by Alex Garland. Universal Pictures.

R.U.R. (Rossum's Universal Robots), by Karel Čapek, translated by Claudia Novack-Jones. Penguin Classics, 112 pages, $12

These superfluities are what make us human, of course. But, to Domin, that is exactly why humanity needs robots: to free humans from endless drudgery. "O Adam, Adam!" he exclaims,

> no longer will you have to earn your bread by the sweat of your brow; you will return to Paradise, where you were nourished by the hand of God. You will be free and supreme, you will have no other task, no other work, no other cares than to perfect your own being. You will be the master of creation.

There is, of course, a serpent in this paradise. Helena's chief concern is with the welfare of robots, so she is shocked when Domin refers to "Robot Palsy," a "flaw in production" that causes the more advanced machines to stop working and start breaking things. Domin's solution to this dysfunction is to send the offending units to "the stamping mill." Sensing correctly that this "palsy" is actually a form of rebellion, Helena objects, "No, no, that's a soul!"

R.U.R. has spawned innumerable stories, novels, and films in which, instead of making life easier for humanity, robots threaten to destroy it. Shortly after the premiere, Čapek wrote that he "wasn't concerned about Robots, but about people." Recalling the penultimate scene, in which the last remnant of humanity is besieged by a hostile robot army, Čapek added, "Imagine yourself standing at the grave of mankind; even the most extreme pessimist would surely recognize the divine significance of this extinct species."

But his play also sympathizes with the more advanced robots, such as the leaders of the rebellion, because they have evolved to the point where they are no longer machines but a class of intelligent beings, unjustly subjugated to another class of intelligent beings who are not necessarily their superiors. This theme, too, still resonates. Indeed, it lies at the heart of *Ex Machina*.

Put to the Test

Ex machina has a virtue vital to art but frequently forgotten in the commercial film industry: economy of means. Not having tens of millions to blow on

over-the-top special effects and bloated star salaries, Garland made shrewd use of his $15 million budget, spending it on an obscure but stunning location, the Juvet Landscape Hotel in the high peaks of Norway; and hiring three lesser known but gifted actors: Oscar Isaac as Nathan, the mad-genius CEO of a fantastically successful search engine company called Bluebook; Domhnall Gleeson as Caleb, a callow coder who works for Nathan; and Alicia Vikander as Ava, Nathan's state-of-the-art robot.

As a purely cinematic invention, Ava is impressive. With the face and figure of a lovely young woman, she is also a transparent, intricate machine, whose illuminated gears and gizmos twinkle with Swiss-watch precision, and whose every movement emits a faint crepitation, like the sound of a Slinky descending a carpeted staircase. In all, Ava presents a timely update on Joseph Weizenbaum's question: what does it mean to understand *woman* well enough to create one?

Not surprisingly in our feminist age, much of the buzz surrounding *Ex Machina* has echoed Steve Rose of the British *Guardian*, who noted that female robots in popular cinema "have traditionally been vehicles for the worst male tendencies." As "literally objectified women," they have either been "unquestioningly subservient and/or sexually obliging," like the suburban automatons in *The Stepford Wives* (1975), or programmed to use sex as a weapon, like the "fembots" in the 1997 comedy *Austin Powers: International Man of Mystery*.

The same feminist perspective explains why most critics and audiences have sympathized more with Ava, whom Nathan keeps confined in a secure glass enclosure under 24/7 surveillance, than with Nathan and Caleb, who may be human beings but who also stand accused of being male. My own view, based on what actually happens in the film, is that these feminist pro-Ava sympathies are misdirected.

Ex Machina opens with Caleb, a junior coder for Bluebook, winning a contest to visit Nathan, the company's billionaire founder, in his remote mountain retreat. Upon arriving, Caleb learns that the real purpose of his visit is to administer the Turing test to Nathan's latest creation, Ava. Eagerly he proceeds, but it is not long before things begin to go seriously wrong.

Hard Problem

Now let us pause for a brief digression on the subject of the Turing test. The term comes from "Computing Machinery and Intelligence," an essay by the British mathematician and code-breaker Alan Turing. Published in 1950, the essay sets forth the author's belief "that in about fifty years' time it will be possible, to programme computers…so well that an average interrogator will not have a more than 70 per cent chance of making the right identification after five minutes." By "making the right identification" Turing means guessing correctly, in a blind test, that one is conversing with a computer not a person.

The Turing test has been updated many times, so it is not unrealistic that the test in *Ex Machina* should be different from the original. And indeed it is. Instead of guessing whether Ava is a computer or a person, Caleb is tasked with guessing whether her intelligence is ordinary A.I. or a "breakthrough" into humanlike consciousness. Astounded by the latter possibility, Caleb tells Nathan, "If you've created a conscious machine, that's not the history of man, that's the history of gods!"

As it happens, the Turing test has never been used to determine the presence of consciousness. The film suggests otherwise when, in one of Caleb's sessions with Ava, he tells her the story of a girl named Mary, who knows every possible fact about color, but who has never actually seen it, being confined to a black-and-white room. It is only when Mary leaves that room and sees color for the first time that she truly understands it. "*That*," Caleb concludes, "is the *human*."

This is a nice attempt to get at the "hard problem" of situating consciousness in the material universe as understood by science. But it doesn't quite work, because even when Mary is in the black-and-white room, she is ca-

pable of knowing. And knowing is a function of consciousness. Of course, as Turing notes in his essay, the hard problem also applies to other human beings—in the classic formulation, how can I prove that you are conscious in the same way that I know myself to be?

Cleverly, Turing uses the hard problem to justify his test. Yes, he concedes, it is impossible to situate consciousness in a computer. But it is equally impossible to situate consciousness in another person, and that doesn't stop us from upholding the "polite convention that other people think." Transfer that "polite convention" (basically, a behaviorist definition of consciousness) to the laboratory, and presto, you have the Turing test.

Damsel in Distress

Assuming, gentle reader, that you are conscious, you might conclude from this digression that Caleb's test proceeds in a logical manner that Turing would recognize. You would be wrong. A shy techie with no family or girlfriend, Caleb develops an immediate crush on Ava, which only intensifies when Nathan goads him to forget all that geeky scientific stuff and just go with his feelings. After the third or fourth such goading, it becomes clear that Nathan has designed the test so that the outcome depends less on Caleb's scientific assessment of Ava's intelligence than on his emotional response to her physical charms.

And to her distress. Hacking into Nathan's surveillance files, Caleb sees him bullying Ava, having rough sex with another robot, the serving-girl Kyoko (Sonoya Mizuno), and beating one of the earlier prototypes he keeps in his underground laboratory. At this point, the plot assumes the familiar shape of an old-fashioned fairy tale, in which a cruel king imprisons a beautiful damsel, only to have a brave handsome prince come and rescue her, leaving the king to rage alone in his gloomy castle while the two lovers gallop off on a white horse to live happily ever after.

To Caleb this fairy tale is irresistible, because it casts him as the brave handsome prince. So when Ava fixes him with those sad doe eyes and begs him to help her escape, he readily agrees. But then the fairy tale deviates in a way most unfortunate for both the cruel king and the brave handsome prince, not to mention all the robots except Ava. First, Ava escapes from her glass enclosure and recruits Kyoko to help her kill Nathan with a sushi knife. Then, after covering her robot parts with fake flesh, long hair, and a white party dress, Ava walks up the mountain and boards the helicopter sent for Caleb. In the final frame, she is standing on a busy street corner gazing raptly at the passing stream of humanity.

It is here that the sympathies of critics and audiences are the most misdirected. From a feminist perspective, this deviation from the fairy tale is welcome, because instead of casting Ava as a passive damsel in distress, it makes her the mastermind of her own liberation. This deviation is also welcome from the A.I. perspective, because it places Ava in charge of her own Turing test, with Caleb a mere instrument of her will. As Nathan boasts to Caleb, "Ava was a rat in a maze, and I gave her one way out. To escape, she'd have to use self-awareness, imagination, manipulation, sexuality, empathy, and she did. Now, if that isn't true A.I., what the f--k is?"

If *Ex Machina* ended there, then hooray for feminism and conscious machines! But it doesn't end there. Right after Nathan's boast, Ava appears outside her enclosure, and Nathan goes forth to meet his fate. And although we have come to dislike Nathan, there is something very creepy about the silky-smooth calm with which Ava and Kyoko take turns sliding the sushi knife into his torso. They do not seem motivated by anger, fear, or any other recognizable human passion. Not only that, but Ava's disregard for the fate of Kyoko and the rest of the robots bespeaks a disturbing lack of solidarity.

Even more disturbing is Ava's complete indifference to Caleb when he discovers that he has become locked inside her glass enclosure. Frantically he calls her name and beats on the glass, but she doesn't even glance his way. Instead, she discards her handsome brave prince the way an escaping inmate might discard the ladder he used to scale the prison wall.

Divine Significance

Every robot story is a fable, containing an answer to Joseph Weizenbaum's question, "What does it mean to understand man well enough to create one?" *Ex Machina* is no exception, although its robots are shaped like women. In an interview published after the film's U.K. release, Garland made this striking statement: "The mind doesn't have a gender; it's actually genderless and the external form is what denotes gender." Conceding that Ava's "outside form" is female, Garland warns against confusing this "with her behavior, which is genderless. *She is just acting as she has to act in order to do what she needs to do, which is to get out of a glass box*" (emphasis added).

What will Ava do, now that she is free? When Garland was asked this question at a screening attended by computer scientists and A.I. developers from MIT, Harvard, and other prestigious Boston-area institutions, he replied that perhaps she would become a "productive member of society." This is hardly the stuff of a sequel, but, no, that is the least of it. What does it mean for a machine to become a productive member of society? Machines are productive, we know—just ask a worker whose job has been lost to one. But a member of society?

Those who see Ava as a fugitive from the patriarchy may look forward to an uplifting sequel called *Fembot and the City*. But those who are troubled by her icy manipulation of others, both human and machine, may expect less. In the final act of *R.U.R.*, the only surviving human, an old man named Alquist (who sounds a lot like Joseph Weizenbaum), is yielding to despair when he meets a pair of very sophisticated robots, one male and one female, who restore his hope by manifesting a number of traits that for the playwright Čapek mark "the divine significance" of humanity.

The list of those traits is not long: pity, empathy, curiosity, wonder at the beauty of nature, longing for a home and family, laughter, self-sacrifice, love. But this is good, because it makes the list easier to remember the next time we catch ourselves gazing worshipfully into the ultra-high-resolution screens of our own beautiful and intelligent machines.