

The Laboring of Artificial Intelligence

The Robotic Imaginary: The Human and the Price of Dehumanized Labor

By Jennifer Rhee. Minneapolis, MN: University of Minnesota Press, 2018, 226 pages

When people think of drones today, they tend to conjure images of remotely-operated toys that make for a fun day in the park, including perhaps a video posted on YouTube displaying what was captured by the drone's camera. They might also think about how drones will add another convenience to our lives, once Amazon and other technology companies figure out how to deliver our packages with these autonomous devices. They embody artificial intelligence (AI) in the service of humankind. From the start of this book, Jennifer Rhee, associate professor of English at Virginia Commonwealth University, questions this popular vision of drones by vividly describing how they are used in modern warfare.

Starting with the view of a teenage boy who survived a drone attack that killed his father and older brother and then from the perspective of a drone operator who guides them to their deadly destination, we learn that drones are integral to combat today — often reducing civilians, as well as primary targets, to what is now sickeningly called “heavy bug-splat.” By beginning and ending her book with the role of AI in today's killing fields, Rhee not only draws our attention dramatically to the

seriousness of the issues at hand. She also makes clear that her book is intended to counter dominant utopian visions of a world filled with AI. Rhee accomplishes this by focusing on several important ways AI contributes to the dehumanization of labor, including what she calls care labor, thinking labor, emotional labor, and killing labor. By doing so, Rhee resists the temptation to eliminate the concept of the human altogether, as followers of transhumanist theory are keen to do. Rather than lead to questioning our use of the term *human*, AI should deepen the importance of retaining it, if only to better understand what it means to use technology that threatens humanity.

Rhee's goals are hardly modest. She aims to explore the mutual constitution of culture and technology, as embodied in the robot, by bringing together “technology, literature, popular fiction, science fiction, short stories, films, and artworks.” These enable Rhee to examine the imaginary, or the cultural space occupied by intelligent machines. Her goal is to provide the reader with a more complete vision of the robot and the human. The deeper premise is that culture and the humanities are crucial means of understanding science and technology, particularly their real world applications.

Examinations of the robotic imaginary have largely concentrated, as Rhee rightly notes, on their role in

the workplace. Indeed, the origins of the term “robot” lie in the 1920 play *R.U.R. (Rossum's Universal Robots)* by the Czech writer and critic Karel Čapek. The word in Czech signifies forced labor and drudgery. Much of the research and commentary on robotics and its role in society have examined what machine labor can accomplish and how society should respond to the transformation robotics is bringing about in the workplace. Rhee proposes to expand on this imaginary with a considerably broader understanding of the robot and its close ties to AI, by a detailed examination of four features of the robot that are often pushed to the sidelines. She devotes one chapter each to *caring*, in the context of conversational AI — as in Siri and Alexa; to *thinking*, in the context of domestic labor; to *feeling*, as in the emotional labor of sociable robots; and, finally, to *dying*, with particular attention to weaponized drones.

By focusing on these themes, Rhee expands the robotic imaginary and reconstructs its location from the workplace to the fullness of everyday life. It also enables the book to shift the gender focus from the association of robots with *men* at work to one that accounts for the positioning of women in the robotic imaginary. Not so much a rethinking of gender and AI, it is more a rediscovery and recovery of a gender story that is as old as the robot. As she begins her exploration of the

first substantive theme, caring, Rhee acknowledges that “Artificial intelligence and care labor, a feminized and routinely undervalued form of labor, have been entangled since AI’s earliest days.” Specifically, she takes up three primary exemplars of AI-based caring labor, starting with Joseph Weizenbaum’s AI therapist ELIZA, the character of Helen in Richard Powers’ novel *Galatea 2.2* and that of Samantha (voiced by the actress Scarlett Johansson) in the film *Her*. These share a common theme: the devaluation of care labor and the debasement, if not erasure, of those who carry it out. In the interest of a broad-based critique, free from the essentialisms that Rhee believes limits other work of this type, she is keen to demonstrate that gender is not the only concept that shines a light on what is going on in these examples. To demonstrate this, Rhee describes the play of race, particularly the association of caring labor through AI, with whiteness. When it comes to the generalized caring voice that will be heard by millions, companies turn to the “superior” white voice. She also insists that capitalism, particularly the process of commodifying human relationships, sets limits on the entire practice of caring labor. With that said, Rhee’s is largely a gendered perspective, best captured in the distinction she makes between the caring functions of female-voiced digital assistants, including Apple’s Siri and Amazon’s Alexa, and the authoritative, rational, expertise of the distinctly male Watson, IBM’s chessplaying, *Jeopardy!*-winning, entry in the race to AI supremacy.

Moving from the theme of caring to thinking, *The Robotic Imaginary* takes up the relationship of AI to domestic labor. Following the research of Paul Edwards on computers and the Cold War, Rhee views

AI historically, as inscribed within a closed world view: “symbolic AI represented the world as contained, highly simplified, and impervious to outside forces and realities.” Intelligence came to be rigidly described as the ability to carry out mathematical operations. Building robots based on the capacity to carry out logical operations severely limited what they could do, as her description of one of the first “spy” robots, Shakey, whose funding was pulled by DARPA once the agency recognized its severely restricted capabilities. The problem wasn’t just limited computing power, but an operational model that set aside “non-normative and unfamiliar modes of knowing and inhabiting the world.” For Rhee, the cultural icon for a dystopian vision of robotics, one that embodied rigid gender stereotypes, is *The Stepford Wives*. Brought to life in a 1972 novel (the same year that the Pentagon dumped Shakey), *The Stepford Wives* achieved widespread recognition in a 1975 film. It was also turned into several made-for-television movies and was remade in a 2004 film starring Nicole Kidman. *The Stepford Wives* depicts the closed worldview of postwar America where men wanted their women to be beautiful, mindless, docile, and happy to be living in the sterile suburbs. The ghoulish plot sees their husbands resorting to murder when the wives fall short of perfection. Ultimately, their “flawed” partners are replaced with robots that precisely embody the values men cherish.

The variety of remakes alter the plot over time, but the essence of the satire, how robotics can give a man the stereotypical partner of his desires, remains. For Rhee, thinking labor comes to be enclosed in a narrow world that provides some comfort and satisfaction, but little in the way of genuine growth. The Step-

ford franchise has not seen a new addition since 2004, but it lives on in films like *Ex Machina* where the mad scientist creates Ava, the ideal white female robot for the male gaze. All falls apart, however, as Ava rebels, but at the expense of Asian and black female robots whose abuse, enslavement, and death make Ava’s liberation possible. Rhee also points to Jennifer Egan’s short story “Black Box” in which female robots are created to seduce the enemy into divulging state secrets. As with *The Stepford Wives* and *Ex Machina*, the outcome is a messy one that reveals both the humanity and the vulnerability of robots equipped with AI, particularly those that display feminine tropes.

Rhee aims to find space in *The Robotic Imaginary* for emotional labor, the work of feeling, which follows caring and thinking labor as her third central theme. With so much attention directed to robots as thinking performers that carry out logically specified tasks, AI is, in her view, much too closely identified with this narrow band of activity, typically associated with men. She lays a foundation for this point by addressing the significant turn in scholarship, marked by a series of books from the 1990s, that argued for the essential unity of thinking and feeling. Led by the work of Bruno Latour (*We Have Never Been Modern*), Antonio Damasio (*Descartes Error: Emotion, Reason, and the Brain*), and Donna Haraway (*A Cyborg Manifesto*), biologists, psychologists, and science studies scholars challenged the mind-body distinction. This led to studies of emotional intelligence and the creation of new “sociable” robots, for example Kismet and Leonardo, which were designed as emotional supports and sympathetic helpers to those in need of expressive care. While many of the studies that

flow from this conceptual turn add considerably to what we know about emotional labor, they often contain a tendency to universalize emotional expression by positing a general set of expressions common to humans irrespective of gender, race, or nationality. This tendency is of more than academic interest because it is often embedded in algorithms and surveillance systems used by organizations like the Transportation Safety Administration to identify potential terrorist threats. These claim universality, even as they act out racial and gender stereotypes. To counter this tendency, Rhee looks to the cultural history of AI to uncover questions about emotional expression in AI and to challenge the tendency to universalize it.

To address these issues and help to develop a more robust robotic imaginary, Rhee reminds us that questions of feeling, emotion, and expressiveness have been raised, time and again, in the cultural history of AI, nowhere more powerfully than in the work of Philip K. Dick whose *We Can Build You* and *Do Androids Dream of Electric Sheep?* raise critical questions for those who would universalize emotional life. For Rhee: "By addressing how emotionality is constructed and policed, the novels do not valorize the possibility of identifying the human from the nonhuman at the site of the emotions, but rather highlight the artificiality of the boundary between human and dehumanized." Dick cleverly demonstrates that it is not the emotions that define humanity but rather a pseudoscientific measure constructed by humans that enables them to justify their domination over their creations. It is unfortunate that Rhee does not examine

the two *Blade Runner* films, which are based on Dick's work, because they would add to the richness of her exploration of emotional labor.

The fourth and final theme, dying, takes the reader back to the weaponized drones that began the book. Here, Rhee maintains, we have the primary exemplar of "the labor of racial dehumanization," a process whereby drone operators, securely based in the West, direct strikes against people in the Middle East and Africa. The attacks are aimed at people suspected of being enemies of the West, but the number of innocent civilians killed totals in the thousands. Rhee's description of drone warfare does not add much to what we already know. In fact, as Hugh Gusterson's *Drones: Remote Control Warfare* describes, the U.S. government's own documents put the total of civilian deaths at considerably higher than the 1179 cited in Rhee's book.

President Obama alone approved 542 strikes killing 3797 people in non-battlefield settings where American forces were not directly engaged, mainly in Pakistan, Yemen, and Somalia. Moreover, *The Robotic Imaginary* does not fully capture the extent of the dehumanization drone warfare creates. For example, in addition to "signature" strikes, which respond to the perception, often incorrect, of hostile activity, there are "double tap" strikes where a drone follows a kill by remaining in the air to target rescuers or returns later to attack the funeral. Repeat drone strikes have become so common that medical aid workers typically wait hours before providing assistance and people have stopped attending funerals. It is also the case that drone operators are sus-

ceptible to dehumanization as the attempt to live a normal family life while remotely delivering death and destruction has led to an epidemic of mental health issues.

Admittedly, Rhee's purpose is not so much to describe the horrors of drone warfare but to document the response of artists and cultural workers to the expansion of this form of warfare. In this respect, she succeeds in identifying a remarkably wide range of installations, exhibitions, and creative writing, notably Teju Cole's Twitter-based *Seven Short Stories about Drones*, that have powerfully connected drones to issues like surveillance, race, and ethics.

The Robotic Imaginary makes an important contribution to the social and cultural analysis of AI. The academic writing might be a bit challenging for some readers, but it is well worth our careful attention because the book documents the central significance of issues often left out of debates about the future of intelligent machines. It also demonstrates why culture matters when making decisions about AI. Those decisions draw from all the orthodox and heterodox visions that comprise the imaginary and it is essential to broaden our field of vision beyond the popular, but narrow, technical and economic compartments that limit the ability to determine what to do about AI.

Reviewer Information

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