Editorial Introduction: The Coming Robotics Era

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The idea of artificial life and automata has a long history in societies and cultures. From golems to vampires, animating the lifeless is a common theme in mythologies and religions. Sometimes those animated beings are threats to humanity, endangering lives with their activities. Other times these automata are boons, providing protection from threats, labor in the fields and homes, and entertainment.

Throughout history this tension between good or bad, benefit or bane, threat or help has seemingly existed with every new technology humans have developed that have shaped our societies and cultures (see Gitelman; Marvin). People hoped the telegraph would end war as countries could talk over their differences, while a century later people lauded the Internet for truly democratizing the world. People saw film as leading to degenerating moralities, while a century later people decry the echo chambers of social networking sites.

Automata, artificial intelligence, and robots all experience the same tensions: artificial intelligence will either make our everyday lives a utopia of ease and comfort, or we will be living under robotic overlords in a dystopic world. Likely the future and the coming robotics era lies somewhere between those extremes. Hopefully, the common dystopic vision presented in popular culture is more fiction than prognostication.

The articles presented in this issue consider these messages that popular culture has presented and thus the tensions that we have been wrestling regarding robots for a century. Robots themselves came into our public consciousness largely through mediated portrayals including the origination of the word "robot" coming from a Czech play in 1920 by Karel Čapek called *R.U.R.* or *Rossum's Universal Robots*. In that play, automatons were developed for use in labor, exploited and treated as slaves, until they eventually overthrow their oppressors. The term "robot" is derived from the "old Church Slavonic word, *robota*, for 'servitude,' 'forced labor' or 'drudgery'" and can be found in other European languages as a result "of serfdom by which a tenant's rent was paid for in forced labor or service" (Markel, emphasis in original). From the very start, popular culture shaped the debate over robots around the concerns of forced labor.

Popular Culture Studies Journal
Vol. 9, No. 1, Copyright © 2021

Such concerns, of course, are nothing new, seeing as how the term itself arises from a system of indentured servitude that shaped Europe and the world through classism, colonialism, racism and imperialism. Thus, this common portrayal of robotic enslavement metaphorically touches upon humanity's history of intolerance and prejudice, and hopefully speaks more to this history than to our future. And yet, what we see in the articles contained herein suggest that we are still grappling with this tension about whether robotic labor constitutes slavery. Can a robot be a slave if it is not aware of its enslavement?

Additionally, we face the question of what it means to incorporate more robots, either physical digital, into our workforce. While popular culture may be concerned about the enslavement of such a workforce, we see underneath this concern the worry regarding the displacement of humans for robots. Indeed, these two concerns appear hand in hand, as the natural extension of human replacement by robots in the workforce would be human replacement for dominance of Earth. Even now, in some businesses and industries, robots have become managers, dictating work requirements to humans – and not always with the humans' health in mind (Dzieza).

In the past, this concern largely involved robots replacing manual labor, such as in factories; however, robots are increasingly being involved in other forms of physical labor, especially in the service industry, as well as encroaching into non-physical labor, from customer service to journalism (Leprince-Ringuet; Semuels). Some economists and futurists believe this coming robotics age will present a challenge for our civilization, whether replacing jobs or increasing income inequality (Dizikes; Kelly). Much as the industrial revolution changed civilization and the world, through which climate change now presents a threat to our civilization, so does the increase of automation across various industries present the next labor revolution. Even now, I write this document through dictation; however, not dictation to a human being, but to the AI integrated into the Microsoft Word app on my smartphone. If an AI can do these tasks for me, why should I pay for a human, with all of the costs associated with keeping such a being alive? Indeed, since the start of the COVID-19 pandemic, jobs shuttered for health and safety reasons are returning with robots having replaced the humans, since the fear of robots contracting this coronavirus is nonexistent (Kelly; Semeuls). Such an upheaval, understandably, generates the concerns, tensions, and messages portrayed in popular culture.

So, what then does our popular culture tell us about how we see robots in the workforce? What are the themes regarding how robots labor for us? Are humans

their masters, or are robots, AI, and automatons in some way controlling us? How have we built our robotic laborers: do they reflect humans with all our strengths and weaknesses, or are they meant to be our better selves? Are we hopeful for how our lives could be improved through the introduction of a robotic labor force, or do we fear that the end times of our civilization are nigh? How will we interact with our fellow robotic laborers? Even now, as I dictate to my smart phone, when I see it incorrectly recording my words, I get mad at it and refer to it as "you." Does such humanization help or threaten us? When I become angry at my digital personal assistant, do I perpetuate gendered power dynamics that traditionally place women at the receiving end of such frustration? The guest editor for this special issue, Liz W. Faber, just published a wonderful book to address questions such as these.

Of course, we have no answers to any of these questions as they are directed towards an unknown future. But through our popular culture, we can engage in a discourse that wrestles with these questions, their answers, and what those answers say about us. The analyses presented herein help us to understand these questions, answers, and wrestlings. From the 1920s to today, these portrayals do not simply tell us about robots; they tell us about ourselves. They tell us about how we treat others based on how they look, how they sound, how they act. They tell us what we think of people we see as inferior to ourselves, as people under our command, and as people that we may not even see as people. These portrayals then are meant to not simply entertain, but to hopefully educate us about ourselves, so that the future we fear does not come to pass.

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