

## ARTICLE

### Surrogate Humanity: Posthuman Networks and the (Racialized) Obsolescence of Labor

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## Abstract

Historical forms of domination and power, encompassed but not limited to social categories and hierarchies of difference, get built into seemingly non-human objects and the infrastructures that link them, thus sanitizing digital media technologies as human-free. Rather than questioning the epistemological and ontological underpinnings of the human, fantasies about the revolutionary nature of new media and technology developments as *posthuman* carry forward and re-universalize the historical specificity of the category “human” whose bounds they claim to surpass. To begin to theorize some of the ways in which the notion of a revolutionary network of humans and things is both racial and racializing, the first part of this article develops a reading of Sylvia Wynter’s theorization of modern “man” as fundamentally constructed through racial-scientific notions of the biological and economic. We then think Wynter’s notion of *homo-oeconomicus*

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alongside Rifkin's postulation that in fact the infrastructure revolution marks a paradigm shift away from capitalism. Through an analysis of several contemporary platforms (including Alfred and Amazon Mechanical Turk), we address the global-racial erasures and disappearances undergirding techno-utopic fantasies of a post-labor society. At the same time, as we argue, it is insufficient to merely point out the way in which human racialized and gendered labor underwrites techno-utopic fantasies. Instead, we move to a consideration of the epistemological and material shifts as well as legacies tied to prior post-Enlightenment revolutionary thought, such as that of Franz Fanon, to reconceptualize who or what can count as human. In conversation with feminist science studies scholarship on the posthuman, we grapple with what it means to think the subject of labor, and the human as subject, outside of the biological-economic imperatives of prior imaginaries.

## **Introduction**

In his 2014 book, *The Zero Marginal Cost Society*, Jeremy Rifkin writes, "If I had told you 25 years ago that, in a quarter century's time, one-third of the human race would be communicating with one another in huge global networks of hundreds of millions of people ... and that the cost of doing so would be nearly free, you would have shaken your head in disbelief" (p. 69). Rifkin, a social theorist and founder of the Foundation on Economic Trends, takes the notion that free information and communication are harbingers of a large-scale revolution in which we move towards a "near zero marginal cost" society—one in which "nearly free goods and services" emerge through the optimization of productivity (that is, with the development of technologies such as 3D printing when the "cost of producing an additional good or service is nearly zero") (p. 70). Rifkin's book raises questions about how the Internet of Things (IoT) can lead to the end of capitalism as we know it (p. 70). The IoT might portend the first "smart infrastructure revolution," but this is a revolution that is haunted by the specter of what Rifkin calls "the last worker standing:" "Big Data, advanced analytics, algorithms, Artificial Intelligence (AI), and robotics are replacing human labor across the manufacturing industries, service

industries, and knowledge-and-entertainment sectors, leading to the very real prospect of liberating hundreds of millions of people from work in the market economy” (p. 121). While some might regard this vision of technological replacements for humans that substitute “intelligent technology” for mass wage labor as a future dystopia, Rifkin sees such technologies as enabling the uncoupling of human productivity from employment, thus freeing humans for the “evolving social economy” embedded in a “Collaborative Commons” organized by social networks and open-source programming. Rifkin argues, in short, that the infrastructure revolution, marking a break from the first (18<sup>th</sup> century) and second (early 20<sup>th</sup> century) industrial revolutions, emancipates human creativity from the drudgery of waged work (p. 132).

Rifkin’s techno-utopic perspective is both profoundly humanist, in the sense that its goal is to delink human freedom from labor; and also profoundly post-humanist, in the sense that the human must be displaced from the scene of labor by technology in order to posit a moment of emancipation. Rifkin’s postulations can be read as participating in contemporary discourses of what we call *surrogate humanity*. The *surrogate human* is one way to conceptualize the function of the technologized posthuman stand-in, a rich and experimental subject/object encompassing the techno-fantasies of revolutionary change through which we can highlight how the seemingly novel frontiers between human and machine elaborate much older discourses of humanization and dehumanization, and of human difference and its transcendence. By surrogate humanity, we mean to include not only specific technologies such as 3D printers and robots operating in factories that literally replace older spheres of human action and labor, but also the processes through which racialized, gendered, and sexualized spheres of life and labor are seemingly elided by technological surrogates, even as these spheres are replicated in emergent modes of work, violence, and economies of desire. To read surrogate humanity in this way requires an analytic that attends to techniques through which difference (whether human–non-human or between inter-human qualities) is produced, while understanding

categories of difference as historically specific.

Cultural and political fantasies that hinge upon the idea that humans can be freed from labor through technology are part of an ethos and an economy that valorizes the expansion of human capacities for creativity, in which creativity is defined as those limited forms that register as having market value. Such a formulation of creativity as capital, made possible by technological surrogates who take over non-innovative work, relies on an implicit assumption that humans will somehow be freed from their historical differentiation in value as racialized and gendered populations in the global economy. Nonetheless, new technologies have historically designated what kinds of labor are considered replaceable and reproducible versus what kinds of creative capacities remain vested with privileged populations and spaces of existence.<sup>1</sup> Humanity stands in a differential if connected relationship to artificial intelligence and networked objects, a relationship that continues to be racialized. Moreover, prophecies and predictions about the scope of this “third” industrial revolution, brought about through the IoT, is prefigured by a profound political and ethical break with prior global-political imaginaries of revolution, articulated most recently in early and mid-20<sup>th</sup> century decolonial and socialist aspirations for a redefinition of the human.

Emphasizing this historical specificity, we might consider the notion of revolution in smart infrastructures, or networks of people and things, as a *postsocialist* notion of revolution. Labor and technology have been the privileged sites through which to understand a socialist revolutionary imaginary. Yet the 21<sup>st</sup>-century association of revolutionary change with the novelty of technological objects and platforms and their social effects dislodges the term “revolution” from its prior association with political and social transformation, altering the possible fields for political action. This article argues that the restructuring of imaginaries of free and unfree labor, visible and invisible workers, and the racialized conditions of labor cached in the distribution of differential working conditions in the 21<sup>st</sup> century can therefore be contextualized as part of a postsocialist and post-revolutionary (in the Marxist sense) relationship to the political.<sup>2</sup>

More than a simple periodizing of the notion of revolution in a postsocialist world, this article tracks how historical forms of domination and power, encompassing but not limited to social categories and hierarchies of difference, get built into seemingly non-human objects and the infrastructures that link them, thus sanitizing digital media technologies as human-free. Rather than questioning the epistemological and ontological underpinnings of the human, fantasies about the revolutionary nature of new media and technology developments as *posthuman* carry forward and re-universalize the historical specificity of the category “human” whose bounds they claim to surpass. The post-Enlightenment subject, already socially and politically empowered, leaves a remarkable remainder in allegedly non-human technologies.

At the same time, we argue, it is insufficient to merely point out the way in which human racialized and gendered labor underwrites technoutopic fantasies (lifting the *Wizard of Oz* curtain hiding the truth behind “smart technologies”). Certainly, task and service workers necessary to sites and platforms of the sharing economy continue to perform historically undervalued racialized and gendered work. In response to emergent phenomena such as, for instance, the racialization of labor in online gaming, there is already a large and varied body of scholarship on race and technology (Nakamura, 2009). Theorists including Lisa Nakamura and Wendy Chun have demonstrated that race continues to matter despite claims that the Internet is a site of self-making in which race ceases to be bound to embodied characteristics. In fact, Chun (2009) proposes the concept of “race as technology.” She charts how digital media and networks take up structures of control as a model of power, building them into the infrastructure of the Internet (Chun, 2006). Thus, rather than extending a logic of representation and recognition to the sphere of digital culture, we build upon work such as Chun’s and Nakamura’s that insists on developing new optics for thinking about race and gender as overlapping with, but also exceeding, representation.<sup>3</sup>

Critical race studies and feminist science studies, each of which has differently engaged posthumanism to extend an analysis of the vitality and

agency of objects and matter in a way that problematizes the centrality of modern man in the field of the political, can thus productively be put into dialogue as a starting point for theorizing technology beginning with difference. As Lucy Suchman (n.d.) writes: “Modernist epistemologies treat agency as something both independent of, and contained within, singular entities, whether humans or artifacts. In this respect, the language of intelligent artifacts remains consistent with a tradition that treats separation and autonomy, rather than relatedness, as the mark of intelligence and agency” (pp. 7-8). Keeping in mind Richard Doyle’s point that “vitality and autonomy of computational artifacts emerge through the camouflaging of the networks that support them” (Suchman, n.d., p. 8), in this article we also address race and technology as imbricated epistemological and ethical terrains that produce political and temporal narratives of humanization—narratives that draw and redraw the bounds of the human.

Emphasizing this imbrication, we address not just how technologies produce race, but also how race, as modernity’s central epistemological project, produces technology and ideas about what constitutes a technological revolution that can reconstitute the human. This is a necessary theoretical step for extending a politics from interventions based on feminist and critical race theory into the field of the posthuman. On the one hand, then, this article develops a critique of the techno-utopic imaginary of a revolutionary inter-networking of humans and things, which frees the human from labor, as both racial and racializing. On the other hand, it addresses the potential for thinking technology theoretically and politically as a starting point for decentering modern “Man.” The first part of this analysis therefore puts critical race studies and anticolonial and decolonial approaches to work re-describing “Man” in conversation with feminist science studies. This essay is also a speculation about how the posthuman takes on a different meaning if it is conceptually traced back to the epistemological and material shifts, as well as to the legacies tied to prior post-Enlightenment revolutionary aspirations, such as that of Franz Fanon, who sought to reconceptualize who or what can count as human.

We then position these distinct yet critical approaches to posthumanism against the popular hypotheses and fantasies that the emergence of the Internet of Things will lead to the obsolescence of human labor. The latter posits that the infrastructure revolution and intelligent artifacts (surrogate humans) mark a paradigm shift away from capitalism, but it does so by reaffirming existing paradigms of racialized and gendered value through the figure of a surrogate human who performs degraded work that is always already meant to be invisible. Through an analysis of several contemporary platforms that exemplify these emergent infrastructures (including Alfred and Amazon's Mechanical Turk), we conclude by highlighting the erasures and disappearances undergirding techno-utopic fantasies of a post-labor society. At the same time, we grapple with what it means to think the subject of labor, and the human as subject, outside of the biological-economic imperatives of prior imaginaries.

**“The replacing of a certain ‘species’ of men by another ‘species’ of men:” Decolonial and anti-racist imaginaries of post-Man**

To date, popular and scholarly writings about the 21<sup>st</sup>-century technological revolution have largely associated revolutionary change with the novelty of technological objects, thus evacuating the term “revolution” from its prior investments in political and social transformation. Asserting that the techno-revolution is in fact socio-political as much as it is about the innovation of techno-objects and platforms, our study foregrounds the inheritance of previous revolutionary demands and considers how revolutionary aspirations are always tied to a re-imagination of who or what is human. As is well known, 18<sup>th</sup> and 19<sup>th</sup>-century European colonialism, a structure that instituted a global sliding scale of humanity through scientific notions about racial differences and hierarchies, undergirded systematic enslavement and subjugation of non-white peoples to advance European capitalism and the industrial revolution. Developed alongside and through the demands of colonialism, the term “human” designated a distinction among human beings, not just between humans and animals,

such that humanity was something to be achieved (Scott, 2004, p. 91). Revolutionary aspirations for decolonization thus carried forward the ambition to achieve a full humanity.

At the same time that colonialism was without a doubt a project of dehumanization, as scholars such as David Scott (2004) and Samera Esmeir (2012) have recently demonstrated, discourses of civilization, European technological innovation, and notions of progress also aimed to “humanize” racialized others. A similar tension between humanization and dehumanization can be located in contemporary fantasies tied to the techno-revolution. On the one hand, there is a fear that as technologies become more proximate to humans, inserting themselves into spheres of human activity, the essence of humanity is lost. On the other hand, the fantasy is that as machines take on the sort of work that degrades humans, humans can be freer than ever to pursue their maximum potential. As we postulate, this tension arises because even though the technological revolution claims to be revolutionary precisely because it surpasses human limitations, the figuration of “humanity” following the post- of the post-human brings forward a historically universalizing category that writes over an ongoing differential achievement of the status of “the human.”

To provincialize the human in such versions of (post)humanism, we pick up a set of conversations about technology and the obsolescence of the human, debates that begin with “the human” and its non-human other, and restage them within historical conversations in postcolonial and critical race studies and feminist theory. Frantz Fanon emphasized the category of the human as a racial epistemological and ontological project that can be remade through revolution in *Wretched of the Earth*, his seminal work on the potentiality of decolonial movements. Decolonization, Fanon (2005) wrote, is “quite simply the replacing of a certain ‘species’ of men by another ‘species’ of men” (p. 35). The revolutionary aspirations tied to decolonization, therefore, are fundamentally about aspirations tied to reimagining who or what is human, and how they come to be so. At stake in the Fanonian concept of revolution is the reimagining of the human-thing relation as a precondition for freedom. Yet, unlike techno-utopic

discourses, which assert that the networking of things frees humans to explore their capacities for creativity to their fullest, in Fanonian terms, the colonized “thing” can only become “man” when it frees itself from the shackles of the racial-epidermal and economic schemas of colonial rule (Fanon, 2005, p. 40).

In this sense, for Fanon, the redefinition of man that comes about through decolonization can lead to a crisis in capitalism. As he asserts, in the colonial context wealth is attached to race and not just class (Fanon, 2005, p. 40). Put otherwise, the accumulation of wealth is predetermined by a global racial schema tied to the dehumanization and dispossession of the colonized “native.” The project of humanization is thus fundamentally both about a redistribution of wealth gained through imperial exploitation and about an explosion of the imperial racial paradigm.

Importantly, and in contrast to contemporary techno-utopic hopes for the end of capitalism, for Fanon, shifts in the capitalist paradigm stem from, rather than bring about, the epistemological and ontological transfiguration of the category of the human. His writing is foundational to what Alexander Weheliye (2014) has formulated as “the greatest contribution to critical thinking of black studies—and critical ethnic studies more generally ...[This is] the transformation of the human into a heuristic model and not an ontological fait accompli” (p. 8). Weheliye argues that, given developments in biotechnology and informational media, it is crucial to bring this critical thought to bear upon contemporary reflections on the human. As he writes, “[Questions of humanity], which in critical discourses in the humanities and social sciences have relied heavily on concepts of the cyborg and the posthuman, largely do not take into account race as a constitutive category in thinking about the parameters of humanity” (Weheliye, 2014, p. 8).

Sylvia Wynter is arguably one of the most important thinkers to do so. While Wynter’s thinking has been categorized as “counterhumanist,” more than simply being in opposition to existing definitions of the human (or, in the terms of modern knowledge, of what Wynter has termed “Man”), Wynter’s work is about the *unthinking* of contemporary epistemologies and ontologies, about their disruption, and about the unmaking of the world in

its current descriptive-material guise.<sup>4</sup> This makes her theorizing crucial to contemporary debates surrounding the techno-revolution and capitalism, as well as to those interested in wresting a new figure of the human (or, less ambitiously, a new human potentiality) from the epistemological break that follows from this revolution.

Wynter (2003) contends with what it might mean to disturb foundational colonial differences upon which global modernity was instituted. While from the Renaissance through the 18<sup>th</sup> century the physical sciences defined Man (what Wynter calls Man1), from the 19<sup>th</sup> century through the present day it has been the biological sciences that have dominated the representation of Man (Man2). In this post-Enlightenment “cosmology,” race became the ground upon which answers to the question of what and who we are were instituted. Thus, as Darwinian notions of natural selection and race continue to author modern narratives of societal development and evolution, ongoing “archipelagos of otherness,” including the jobless, poor, and “underdeveloped,” are still undergirded by the colonial color line even if it is articulated in economic rather than explicitly racial terms (Wynter, 2003, p. 321). This is because, for Wynter, an “economic script ... governs our global well-being/ill-being – a script, ... whose macro-origin story calcifies the hero figure of homo oeconomicus who practices, indeed normalizes, accumulation in the name of (economic) freedom. Capital is thus projected as the indispensable, empirical, and metaphysical source of all human life” (Wynter and McKittrick, 2015, p. 10), engendering what Gayatri Spivak (1988) names the “subject predicated by labor” (p. 252).

The post-Enlightenment effects of economic domination, which Wynter and McKittrick (2015) explain include “both the socially stratified divisions of labor internal to each bourgeois nation state, as well as the transnational macro-divisions of labor that are performatively enacted” by categories of development and underdevelopment in a global mapping of First and Third worlds, have only been exacerbated since the end of the Cold War (Wynter and McKittrick, 2015, p. 42).<sup>5</sup> The present thus entails “logically induced technologically automated labor process cum large-scale

*joblessness* by means of large-scale mechanized agriculture cum peasant farmer landlessness and attendant hunger/poverty/anxiety cum increasing drug addiction” (Wynter and McKittrick, 2015, p. 42).

Wynter’s emphasis that capitalism is just one aspect of a larger colonial matrix of power, and that the exploitation of labor is entangled with, if not symmetrical to, the massive appropriation of land, points to some of the limits of current techno-utopic aspirations that technology emancipates humans from labor. In scenarios posited by speculative writing on IoT, for instance, posthumanism liberates humanity by ending labor exploitation but mentions nothing of imperial-racial legacies. In contrast, decolonial and critical race scholars such as Wynter first ask who or what falls into and out of the category of human, signaling that the human as a shifting and disciplining category continues to be profoundly racialized, and only then poses the question of what sorts of re-descriptions of the human are necessary to conceive of what comes “after Man.”

Wynter’s call for imagining the human after-Man as an ontological problem, like Weheliye’s argument that posthumanism has failed to address the role of race in the way the parameters of the human are laid down, points to the co-existence of the world of the humanist subject (Man) and those other worlds forcibly written upon by colonial practices that continue outside/alongside it. These worlds, according to Dipesh Chakrabarty (2000), circulate together with but are not commensurate with the post-Enlightenment subject and its history, now the history of capitalism. This impasse has been part of the project of decolonial and postcolonial politics, and has been taken up in affiliated scholarship, most notably in South Asian and Latin American subaltern studies. This scholarship convincingly argues that posthumanism is therefore another false universal brought about by the post-Enlightenment subject.

Feminist theorists of science and technology studies have similarly critiqued Western humanism, and specifically its ideals of freedom and equality, as in fact delimiting the human. In a statement that echoes the work of many critical race studies scholars, Rosi Bradotti (2013) argues that this delimiting humanism reduces the “sexualized, racialized and

naturalized “others” to disposable bodies” (p. 13). Emphasizing the influence of colonial legacies and the violence of the Holocaust on the anti-humanism of poststructuralist, postcolonial, and feminist thinkers who have rejected the disciplining function of the category of the human, Braidotti argues that it is this scholarship that should provide scaffolding for anti-racist, feminist, and politicized theories of the posthuman that offer “alternative ways for conceptualising the human subject” (p. 37). As a way to postulate an answer to what comes “after Man,” one approach to posthumanism within feminist science studies has troubled assumptions of the inanimacy of matter and a corresponding lack of agency by inanimate bodies. Karen Barad (2012), for instance, has theorized the vitality of matter and of life outside the frame of anthropocentrism. She develops a theory of agential realism to argue that “matter is not mere stuff, an inanimate given-ness. Rather, matter is substance in its iterative intra-active becoming—not a thing, but a doing, a congealing of agency. It is morpho-logically active, responsive, generative, and articulate” (Barad, 2012, p. 80).

Theorists such as Braidotti and Barad offer strategies from within feminist science studies for understanding the limitations of models of technological revolution that effectively recapitulate already existing paradigms of historical change and the subjects and socialities that will result from that change. Rather than looking toward a future overthrow of current human relations through technological development, these authors rethink the long history of how we understand human life and its relationship to technology through examining matter as the way to unthink, or denaturalize, the human–object division. This allows each to hold on to the importance of corporeality while working against the assumption of a given subject. When objects are viewed intra-actively (Barad, 2012) or as having monistic embodied vitality (Braidotti, 2013, p. 56), the centrality of human consciousness can be suspended. These projects self-consciously decenter the particular historical mode of being human that ascended from among others to become “Man.” Provincializing that human subject helps destabilize the “World” that has been written over other worlds that

decolonial thinkers such as Weheliye and Wynter invoke to reveal the limits of posthumanism.

### **The specter of obsolescence and the internet of things**

In contrast to feminist and decolonial calls for a redescription of the human after man, expressions of excitement in the US and northwestern Europe about the Internet of Things (IoT) produces a version of the posthuman that in fact replicates capitalist and imperial racial and gendered paradigms of value and valuelessness. The IoT is a social-technological infrastructure that is designed to largely bypass the need for human oversight and intervention, and yet manage the mundane and reproductive work of daily life. This seemingly neutral and mechanical technological infrastructure that organizes the temporal experience of work and the form of subjectivity through which one must engage that infrastructure effectively materializes assumptions of what constitutes a human, even as it excludes those who are not the intended subject of the posthuman.<sup>6</sup> Thus race, gender, sexuality and class matter in the constitution of the realm of the technological even as the technological realm promises that the next step in human teleology is the overcoming of the human itself.

Jeremy Rifkin's *Zero Marginal Cost Society* (2014), the book with which we opened this article, exemplifies the sense of infinite possibility attached to technological objects and smart infrastructures in a moment when it seems impossible to attach such a sense of revolutionary possibility to a political project. Of course, this is not to say that the sense of possibility engendered by technological objects is not political (or that such objects do not have a politics). Rather, it is that present-day technotopic discourses, to which Rifkin's work belongs, propose a re-enchantment of a world that depends upon inter-networked techno-objects. This is what David Rose, a product designer, entrepreneur, and visiting scholar at MIT's Media Lab, has called "enchanted objects"—smart objects that can intuit human needs, such as an umbrella that lights up when rain is

predicted, or a cap for prescription medication bottles that sounds an alarm and sends text messages and emails when one forgets to take one's pills (Rose, 2014). Rose elicits the fantasy of enchanted objects through a Euro-American fictional genealogy including *Harry Potter* and *Lord of the Rings* that features extraordinary objects like swords that anticipate the enemy. The desire for ordinary objects to be extraordinary can be productively linked to an even longer genealogy that includes European-derived fairy tales and Disney's animated films like *The Sorcerer's Apprentice* and *Cinderella*, in which ensorcelled wash pails and dust brooms free the apprentice and the orphan from their toils. These fantasies are about emancipation from manual, repetitive, and unimaginative labor by making "the worker" invisible as pails and brooms (or IRobot's modern day Rumba vacuum cleaner) move on their own. They thus extend the history of the autonomous subject whose freedom is in actuality only possible because of the invisible support labor of servants, slaves, wives and, later, industrial service workers who perform this racialized and gendered labor.<sup>7</sup> Rose's enchanted objects, which are a part of the IoT infrastructure, are about improving the everyday quality of life through smart technology and its interconnectedness with everyday spaces (the home, places of work, etc.). But the very concept of a world that is re-enchanted following the disenchantment brought about by rationalization and secular modernity speaks to the longing for overcoming an entrenched way of being that hinges upon a total reimagining of human-object interactions and interfaces.

Such a re-enchancement that seeks to overcome the sense of disappointment in the limitations of bio-economic man embedded in a rational-secular-scientific society also speaks to a seemingly global disenchantment with political projects, such as socialism, that while positing an alternative to capitalist development are also of this disenchanting modernity. In this revolutionary imaginary, human consciousness thus shifts vis-à-vis the magic of objects rather than as a result of political transformations. What Rose terms enchantment, thinkers in the field of object-oriented ontology (OOO) theorize in relation to things,

which, they argue, in contrast to the anthropocentric view, are not simply the constructs of human cognition. According to Ian Bogost (2009):

[OOO] puts *things* at the center of ... study. Its proponents contend that nothing has special status, but that everything exists equally—plumbers, cotton, bonobos, DVD players, and sandstone, for example. In contemporary thought, things are usually taken either as the aggregation of ever smaller bits (scientific naturalism) or as constructions of human behavior and society (social relativism). OOO steers a path between the two, drawing attention to things at all scales (from atoms to alpacas, bits to blinis), and pondering their nature and relations with one another as much with ourselves. (para. 9, emphasis in original)

This understanding of things and their interaction (without accounting for what Barad [2012] has called intra-action) flattens the field inhabited by things and fails to consider the asymmetries between the categories of objects, animate and inanimate, that are engaged.

An exception is Jane Bennett's (2010) formulation of vibrant matter. Like the work of other OOO philosophers, Bennett critiques constructivism as obscuring what she calls "thing power," and therefore moves away from epistemology as a critical site. Opposing "the parsing of the world into dull matter (it, things) and vibrant life (us, beings)," which she describes with Jacques Ranciere's phrase as a "partition of the sensible," she argues for a form of distributive agency that recognizes material itself as acting as quasi-agents and forces "with trajectories, propensities, and tendencies of their own" (p. viii), thereby suspending "the subject" as a fetish (p. 19). She argues that recognizing "thing power," the potency of matter to self-organize, to exert force upon other matter, and to continue to exist, "sets up a kind of safety net for those humans who are now, in a world where Kantian morality is the standard, routinely made to suffer because they do not conform to a particular (Euro-American, bourgeois, theocentric, or other) model of personhood" (p. 13). Bennet's goal of "raising the status of the materiality of which we are composed" (p. 12) by recognizing all bodies as "sharing distributive agency where bodies, human and non-human,

affect one another in Deluegian assemblage” (p. 23), could usefully articulate with decolonial projects that unthink the human of posthumanist theory and expand it to include states of non-subject being.

Techno-utopics surrounding big data, smart objects, and internetworking of humans and machines, however, do not dwell in the vitality of matter, but rather propose the thing as a surrogate human. In this way, they replicate the violent neoliberal impetus to enfold difference into sameness—into a shared space and time. Like OOO, techno-utopic fantasies conceive of a re-enchanted world made magic through a technology that works to bypass human thought and labor, as well as the historical, economic, and imperial legacies that create categories of objects and people as needed, desired, valuable or disposable. This is an enchantment that expunges the racial and gendered status of “object” within global infrastructures. Enchanting the object thus removes the possibility of recognizing the racialized and gendered scaffolding of advanced capitalism and of an attendant anti-racist politics. Therefore, even as thinkers like Rose and Rifkin attempt to outline how the smart infrastructure will disrupt existing capitalist relations of production, their jump into the unimaginable (beyond homo-economicus) remains anchored in post-Enlightenment human/non-human epistemology, primarily because of the global-racial mapping out of which emerges the “smart infrastructure” of the human-thing network.

The replaceability of human labor with the surrogate human as enchanted object is contextualized by capitalist development in the global north, in which the specter of unemployment is only attached to those populations not already marked for elimination or surplus. The condition of surplus being, or of the production of the obsolete, is always racialized (Hong, 2011). This is true even if, and precisely because, techno-revolutionary fantasies of the 21<sup>st</sup> century congeal around a dehistoricized imaginary of emancipation and free labor. In his 1930 essay “Economic Possibilities for our Grandchildren,” for instance, the economist John Maynard Keynes coined the term “technological unemployment” to describe the process by which machines replace the need for human labor

in industrialized societies. Sue Halpern (2015) explains: “At the time, Keynes considered technical unemployment a transitory condition, ‘a temporary phase of maladjustment’ brought on by ‘our discovery of means of economizing the use of labour outrunning the pace at which we can find new uses for labour’” (para. 3). Yet the ways in which the socio-economic scaffolding of empire enabled imaginaries of surplus or obsolete humanity to begin with is crucial for understanding the dystopic fears surrounding the surplusing of modern man himself.<sup>8</sup> We might think of this as the longer historical context for Stephen Hawking’s publically expressed fear that AI will be the end of the human species (Cellan-Jones, 2014).

Halpern (2014) writes of this as the “creepiness” inherent in an IoT: “as human behavior is tracked and merchandized on a massive scale, the Internet of Things creates the perfect conditions to bolster and expand the surveillance state. In the world of the Internet of Things, your car, your heating system, your refrigerator, your fitness apps, your credit card, your television set, your window shades, your scale, your medications, your camera, your heart rate monitor, your electric toothbrush, and your washing machine—to say nothing of your phone—generate a continuous stream of data that resides largely out of reach of the individual but not of those willing to pay for it or in other ways commandeer it” (para. 22).

“Creepiness” can here be most explicitly understood as marking the unprecedented centralization of information available for state and corporate surveillance. At the same time, and perhaps only implicit in this passage, the eeriness surrounding data-ization and mechanization of modern man indicates the potential obsolescence of the human as we know it because the human mind need not itself think/act upon bodily and everyday needs (this is the end of the Cartesian thinking/being paradigm). Instead, machines—surrogate humans or “enchanted objects”—do the thinking (as that which signifies humanity becomes infinitely reproducible and consumable).

In contrast, in techno-utopic perspectives such as Rifkin’s in *Zero Marginal Cost Society*, the inter-networking of humans and things—physically and affectively—renders only human labor obsolete, rather than

the human itself. Rifkin, as the Office of Jeremy Rifkin notes, is a U.S. economic and social theorist who has written over twenty books since the 1970s on the environment, energy, the economy, and technology, and who has advised numerous world leaders in Europe and is “the principle architect of the European Union's Third Industrial Revolution long-term economic sustainability plan to address the triple challenge of the global economic crisis, energy security, and climate change” (n.d., para. 4). It is from this stance that he builds on his prior interests in political-economic alternatives to posit that technological innovation can bring about a zero marginal cost society and an end to capitalism. Although this argument is ostensibly about technology as the condition of possibility for freedom, Rifkin glosses over the question of how economic, social, and human obsolescence has been figured through a racial-imperial episteme.

This elision is most evident in the way in which he distinguishes two categories or species of “man” produced within the IoT: there are the makers, and there are those who are replaceable by self-replicating machines, such as 3D printers. With regard to the former, Rifkin contends that the Makers Movement is nothing less than the early embodiment of the new human consciousness. He cites the creation of Fab Lab in 2005 at MIT, an outreach project that uses open-source software to allow anyone to create their own 3D printed objects, thus creating prosumers (producers and consumers) (Rifkin, 2014, p. 89).<sup>9</sup> The now 70 Fab Labs, though primarily in the industrialized urban North, have also made their way to the global South, where they enable simple tools and objects to be created in order to advance economic welfare (p. 94). Purportedly emanating from “world class universities and global companies,” Rifkin calls this multi-sited space the “people’s lab” as it has made its way to non-elite neighborhoods. In this frame, 3D printing is understood to be revolutionary because of its potential to democratize the means of production. Equally as important, Rifkin highlights that the cost of making thousands of products is no more than the cost of making just one. A dream machine, the 3D printer can even make its own parts, rendering it a “self-replicating” machine that costs next to nothing to repair and run (p. 93).

Yet Rifkin envisions more than just a trickle down benefit of creativity from the urban global North to the global South that can then use these innovations for economic uplift. He also understands technological self-replication and cheapness to lead to a reversal of outsourcing that has been the hallmark of imperial and neoliberal economic practice, which relies on surplus populations that it has itself made surplus. Rifkin (2014) writes, “manufacturers that have long relied on cheap labor in their Chinese production facilities are bringing production back home with advanced robotics that is cheaper and more efficient than their Chinese workforces. At Philips’s new electronic factory in the Netherlands, the 128 robot arms work at such a quick pace that they have to be put behind glass cases so that the handful of supervisors aren’t injured. Philips’s roboticized Dutch electronics factory produces the equivalent output of its Chinese production facility with one-tenth of the number of workers” (p. 124). That one species of human (the exploitable labor force in former second and third worlds) is being replaced in its function by technological innovation—by things (surrogate humans) in the IoT—replicates a sliding scale of humanity established through the development of capitalism in the colonies. In this sense, the use of robots as replacements for degraded workers confirms an already existing bias about what kind of work is dangerous, dull, or dirty, and what kind of workers can be replaced easily by machines that are more accurate and economical (Rothstein, 2015, p. xi). Terry Gou, CEO of Foxconn, articulates the racialized condition of replaceability most explicitly. Gou, Rifkin relates, “joked that he would prefer one million robots [to his one million workers]. ‘As human beings are also animals, to manage one million animals gives me a headache’” (p. 124). As Rifkin elaborates, “China, India, Mexico, and other emerging nations are learning quickly that the cheapest workers in the world are not as cheap, efficient, and productive as the information technology, robotics, and artificial intelligence that replace them” (p. 124).

The “new human consciousness” that Rifkin predicts will emerge through the Makers’ collaborative commons thus nevertheless reasserts a human-thing hierarchy that is racialized and globalized through the well-

worn racial-imperial paradigm (p. 65). Yet, despite techno-utopic projections, as we elaborate below, human labor-power continues to be an irreplaceable commodity, highlighting the growing unevenness between racialized, gendered, and ostensibly endlessly exploitable populations who labor in places like China, India, and Mexico. While it is worthwhile to point out how neatly Rifkin's techno-utopia relies on imperial and neo-imperial imaginaries of surplus labor (as surplus populations), it is equally important to note the need to replace the exact functions of such populations with technology. This is a racial logic of elimination in which the violence happens not through physical extermination (though Wynter's argument certainly allows us to understand how the costs of the tech-revolution do also lead to physical extermination). Rather, the violence of this fantasy occurs through the desire to subsume the global racial other into the IoT's "things" by reducing the "cheapest" of labor-subjects to their mere function within global capitalism.

### **Humans as a service: Toward an "artificial artificial intelligence"**

The collapsing of the human into the thing in IoT draws attention to the ways in which the maximizing of life potential through data and making service "automatic" is racial and racializing even as (and precisely because) this process seemingly removes actual laboring human bodies through surrogate technologies. The problem of the automation of "miserable" work is profoundly contradictory. Emergent technologies and platforms propose a future free from degraded work, yet the infrastructures of the sharing economy retain the degraded categories of labor formerly done by racialized others. Utopic hopes for a human freed from degraded labor thus produce platforms that must actively conceal the fact that other forms of "miserable" work are still being done by human labor. What we suggest is that the proliferation of discourses, hopes, and fears tied to emergent technologies and technological platforms calls for an engagement with how, as Langdon Winner (1980) puts it, technologies are "ways of building the world" (p. 128). As he argues, a flexibility that inheres

in technologies vanishes “once initial commitments are made” as to how these technologies will order human activity and influence work, consumption, communication, and everyday life (p. 127). Following this logic, we move to a discussion of how the categories of race and gender are embedded and embodied (even in their erasures) in the emergent infrastructures of enchanted objects, smart technologies, and the sharing economy.

As an example of the movement towards a technologically-enabled (yet still racialized) freedom from labor that retains the modes of abject work claiming to be overcome, we consider Alfred Club, the 2014 winner of the blog TechCrunch’s annual competition for tech startups, which was hyped as an innovator in the realm of the emergent tech-driven sharing economy.<sup>10</sup> TechCrunch touted Alfred as innovative because it is “the first service layer on the shared economy that manages your routine across multiple on-demand and local services” (Perez, 2014). “Alfreds” are individual workers made invisible and interchangeable through the Alfred Club’s platform; however, every aspect of the Alfred service advertises the possibility of zero personal interaction between the subscriber, the person who is to act as the butler, or “Alfred,” and the additional service providers whom “Alfred” manages. As the company boasts, “Alfred is an automatic, hands-off service that hums along quietly in the background of your life – so you can be free to live yours” (Alfred “Meet Alfred”).

The interaction with the most potential for personal contact occurs at the very start of service. When a person signs up for service through the company’s website, she is assigned an “Alfred.” The subscriber receives access to a picture and background check of her designated “Alfred” as the primary individual to whom she can then begin to delegate tasks, such as buying groceries, picking up the dry cleaning, and cleaning the house. This is also the person who initially picks up the keys to the subscriber’s home, though even this level of interaction can be bypassed if the subscriber chooses to send a picture of her keys so that the company can make a copy of them. Indeed, this service platform’s primary innovation is the erasure of contact between service workers and subscribers. For instance,

the Alfred Service at times uses some existing on-demand services, such as Handy for cleaning and TaskRabbit for errands, but with Alfred, the subscriber need not be home when the task happens (Kessler, 2014). As critics of the app pointed out, what distinguishes Alfred from a non-high tech personal servant is the depersonalizing aspect (all “Alfreds” share the same name in this sharing economy, as the subscriber need not remember their assigned “Alfred’s” actual name), and the cost: just \$99 per month.

With this emphasis on invisibilizing the service worker, it is possible to read Alfred as targeting the customer who would be uncomfortable having a live-in butler, and who, perhaps espousing a liberal ethos, wants to make sure that the “Alfreds” are not underpaid or abused. For instance, tech writer Sarah Kessler describes her concerns as she decided to give the service a try:

Am I really so lazy that I can’t even lift my thumbs to my own iPhone to ask SOMEONE ELSE to clean my home or do my laundry? Am I contributing to unfair labor practices—like those for which workers recently sued Handy—or at the least, to the next startup bubble, by encouraging this startup nesting doll of a service? But Alfred has one argument that is hard to deflect: Returning to my home after work to find all of my errands completed, without any effort on my behalf, sounds amazing. Despite my qualms, when they offer me a pre-launch trial, I’m in. (Kessler, 2014, para. 7)

Liberal concerns surrounding labor practices and the exploitation of labor can thus quickly give way to the pleasures and enjoyment of services precisely because Alfreds are successful if they completely erase the signs of their presence (one magically finds one’s errands are complete upon returning home). Invisibility makes it possible to remove (and move beyond) initial concerns about the physical bodies tasked to pick up subscribers’ dirty laundry. Put otherwise, though Alfreds are actual workers, their function within the Alfred platform is to act as enchanted objects, their labor invisibilized and invisibilizing of other service providers as they complete the busy professionals’ onerous chores necessary to the functioning of adult life (Alfred “Meet Alfred”).

Its founders, Marcella Sapone and Jess Beck, build such an ethos of unseeing dull and dirty work as a precondition for happiness into the very origin story of Alfred. According to the Alfred website:

One fateful night after a long, demanding day at work, [Marcella and Jess] ran into each other in the laundry room of their apartment building. The overwhelming sentiment? Frustration. Leisure time shouldn't be a luxury; it should be a right and a reward for working as hard as both of these women did (and still do!) A pact was made: No longer would they let mundane chores control their lives. (Alfred "Our Story," para. 2)

The work that Alfred makes invisible to the subscriber is work that has always been invisible: women's work. Not mentioned in this story is also the long history of black, Asian American, and Latina women who have historically performed domestic work in white homes (Davis, 1983). But like the Alfred founders, who are white-collar professionals, "women" and racial others signifying liberal progress within neoliberal multiculturalism (Atanasoski, 2013; Melamed, 2011) are now hailed into that category that deserves happiness by relying on someone else's invisible work. The service platform thus both inherits the prior forms of racialized and feminized, intimate labors supporting the nuclear, heteronormative, and white family form and disappears such intimate service obligations (and possible annoyances) from the modern home in a mode consistent with notions of racial and sexual progress. Those who enter your home, touch your dirty clothes, and clean up after your "epic parties" know your habits and preferences for baked goods, but you need not see or know them (Alfred "FAQ"). As the origin story of the service elaborates, "Since [their initial meeting], Marcela and Jess have worked tirelessly to create the first ever non-intrusive, recurring, in-home service that virtually everyone can use. With Alfred, these innovative women have ensured they personally will always come home happy—and they want the same for you" (Alfred "Our Story," para. 3). This refiguration of human intimacy and intimate spaces is not only haunted by the heterosexual nuclear family and the asymmetries in how the work that has kept this formation functional is

differentially valued, but it is also haunted by the imperial-racial production of intimacy as often violent (Stoler, 2006). Thus, while the race, gender, sexual orientation, or domestic arrangements of the Alfred subscribers (which are implicitly diverse) necessitate the reimagining of intimate labors as anonymous workers no longer bound by their racialized or gendered bodies, such service platforms also inherit prior (imperial) imaginaries of happiness and freedom that were relationally consolidated and unevenly distributed.

The Alfred service's emphasis on worker invisibility in completing the chores of busy professionals and enabling their happiness, as well as Alfred's "innovation" of coordinating among other services in the sharing economy, align Alfred with the ethos of disappearing degraded work in the object-centered universe of the Internet of Things. People ("Alfreds") and artifacts in the Internet of Things could be said to perform a similar function in techno-imaginaries of the sorts of innovations that will maximize human happiness and freedom. According to *Wired* magazine, in the new world of programmable objects that form the Internet of Things, "we are seeing the dawn of an era when the most mundane items in our lives can talk wirelessly among themselves, performing tasks on command.... Imagine a factory where every machine, every room, feeds back information to solve problems on the production line" (Wasik, 2013, para. 4-5). Positioning its platform as part of this techno-future, the co-founder of Alfred noted that with her app, "the services in your life know you and they are automatic" (as cited in Chang, 2014, para. 7). In contradistinction, as we have emphasized thus far, this future vision profoundly depends on a present in which devalued subjects performing miserable (and historically classed, racialized and gendered) forms of labor are considered replaceable by technology. Marx's original critique of capitalism's dehumanizing effect on workers can still be applied to techno-utopic fantasies of a post-capitalist posthuman world:

The bourgeoisie cannot exist without constantly revolutionising the instruments of production, and thereby the relations of production, and with them the whole relations of society...Owing to the

extensive use of machinery, and to the division of labour, the work of the proletarians has lost all individual character, and, consequently, all charm for the workman. He becomes an appendage of the machine, and it is only the most simple, most monotonous, and most easily acquired knack, that is required of him. (Marx & Engels, 1969, pp. 98-137)

Fantasies of a networked world in which automation, programmability, and data engender unprecedented freedom in fact reproduce, and perhaps even expand, the sphere of devalued labor, transposing categories of abjection from the human into the very infrastructure upon which the techno-utopic future depends.

That multiple Alfreds, who are actual workers rendered as “automatic” services, facilitate daily life for privileged subscribers reveals how the disappearance of bodies historically marked as “things” undergirds utopic hopes that the sharing economy and IoT will free those positioned as fully human from the pains of mundane labor. In this sense, the sharing economy of programmable “objects” and service platforms that utilize people only to make them invisible (reducing them to their functionality) re-inscribes differential relationships to the category of the human, now mediated through digital networks and informatics.

The sharing economy, of course, also references and innovates upon earlier imaginaries that servitude could be mechanized, thus eliminating the need for racialized bodies (whose function within modernity was always already to serve). These prior imaginaries, however, remained tethered to a humanoid form, thus reiterating a direct relationship between racialized bodies and mechanical servants in ways that contemporary conceptions of automation do not. For instance, writing about the history of humanoid robots, Despina Kakoudaki has argued that “the fantasy of the robotic servant, worker, or slave promises that if enslavement of real people can no longer be tolerated in the modern world then mechanical people may be designed to take their place, and their labor will deliver the comforts of a laborless world for the rest of us” (Kakoudaki, 2014, p. 116). Throughout the 20th century, robots have been associated with industrial

labor and mechanized production rather than with art or innovation. Robot masses have thus embodied “a form of abjection that is total and absolute, a state of preconsciousness in which neither the gestures of emancipation nor those of revolt are available” (p. 133). The total submission of the robot to the human as the robot-slave enables a formulation of human freedom from labor without submitting the human to the machine. Moreover, the robot worker, who replaces the slave in the 20th century, is one who can never come to political consciousness or question the economic or political system within which it toils. The robot-worker is in a perpetual state of false consciousness, unable to rebel, go on strike, or unionize because robots are supposed to “have no fantasies about their social position” (Kakoudaki, 2014, pp. 135-136).

What is *revolutionary* about dreams of revolutionizing labor through technology thus seems to be the *impossibility* of a social or political revolution because technology lacks political consciousness. This is precisely the reason that techno-dystopic imaginaries revolve around the reversal of normative presumptions about the social need for a totally abject and submissive workforce. As Kakoudaki explains, cultural fears that those enslaved as objects will rebel—even when they aren’t supposed to—abound, evident in texts such as Karel Čapek’s 1920 science fiction play *Rossum’s Universal Robots (R.U.R)* and the television series *Battlestar Galactica*. These fears, particularly in the 20th century, are tied not to actual robots, but rather to the human condition within industrial capitalism and a world ideologically divided between different models of work and governance, such as capitalism and communism. Moreover, “the fantasy of a laborless world and the desire for mechanical slaves who would never rebel or have needs are the flip side of a more personal nightmare, in which people become fully absorbed into an automatic world that does not permit desires or needs. ... In addition to the fear of becoming automatic, or mechanical, we have the fear of being enslaved, the fear of being a tool, the fear of being an object, the fear of being inanimate. ... The imagery alludes to being engulfed” (Kakaoudaki, 2014, p. 145).

Kakoudaki insists that sociocultural paranoia surrounding exploitation, servitude, and enslavement projected upon humanoid robots be separated from other automated solutions because “robots perform direct and personified actions that retain a connection to how humans might perform the same labor” (p. 118). She thus concludes that there is a direct representational relationship between the racial histories of human chattel slavery and the robot’s “potential for racial or ethnic representation [that] comes from its objecthood. ... Robots are designed to be servants, workers, or slaves” since their “ontological state maps perfectly with a political state” (p. 117). Yet this formulation raises several questions. For instance, what is the difference between the fear of engulfment into an industrialized world of factory production and labor, and the fear of engulfment into an internet of things, exemplified by a different conception of “automated” solutions like Alfred? Moreover, if earlier imaginaries of robot functionality are fundamentally about the need for *unfree labor* (that is, according to Kakoudaki, the robot is a mechanized slave), then what is the relationship between states of free and unfree labor in a postindustrial economy?

As a hyperactive medium of free labor adding social value within late capitalism, the Internet, which has given rise to the sharing economy and imaginaries of servitude that are quite different from that of humanoid robots, necessitates an investigation of how racialized and gendered imaginaries of freedom and/as labor have shifted, as well as what the implications of such shifts might be (Terranova, 2004, p. 73). For instance, late capitalism does not just appropriate creative/unalienated labor, but rather nurtures, sustains, and exhausts it (Terranova, 2004, p. 94). In fact the “free” quality of those excess productive activities that Internet users undertake with pleasure yet are mined for value, such as clicking “like” on a facebook page, or clicking on advertisements linked to browsing activities, “puts the desire for creative work into tension with the information economy’s demand for knowledge as added value (p. 77).

While shifting the relationship between producer and consumer, according to Terranova (2004) the commodity nevertheless does not fully

disappear in this arrangement. Instead, it becomes “more transparent” as it showcases “the labour of the designers and programmers,” with continually changing content that draws users back (p. 90). This conception of transparency, however, doesn’t allow for an analysis of non-innovative human labor, or service labor such as that organized through the Alfred service, as a commodity within the digital economy. Instead, the transparency of service workers as commodities managed through platforms like Alfred resides in their organization as those who quite literally are meant to go unseen by consumers. This analysis points to the need to frame contemporary discussions of the digital economy and late capitalism as not clean breaks from, but rather outgrowths of, liberal systems of rule and earlier moments in which free wage labor was made productive. Indeed, the category of free labor doesn’t newly emerge as important in the late capitalist digital economy. As Lisa Lowe (2015) has argued, free wage labor and liberal notions of freedom were innovations of imperial rule. Ambitions of colonial states not to suppress but to rule rendered the need for emancipation from slavery, the institution of free wage labor (even as indentured or coolie labor), and free trade – three pillars of imperial liberal governmentality.

The disappearance and subsumption of human bodies and their reemergence in and through the informational milieu as transparent commodities can thus be understood as racialized not in the sense that only black, brown, or Asian bodies perform the degraded tasks; rather, the transparency of the commodity as dull or dirty labor is racialized in the ways in which it affirms a particular notion of human freedom, leisure, and happiness emerging from imperial modes of liberal governance. The disappearances necessary in the production of the transparent commodity might be considered as being at the core of Artificial Intelligence function within networked spacetime, as our next example, Amazon Mechanical Turk (AMT) demonstrates.

The AMT Internet Marketplace is a platform where employers can post “human intelligence tasks” with a price for each task. For this third-party service, Amazon takes a percentage from the employer. When a

huge amount of data needs to be organized into culturally legible categories, say, classifying pornographic images or linking items for the “similar products” function on retail sites like Amazon, this work is sourced task by task to a global pool of workers, and performed as micro-tasks. A form of crowdsourcing, Amazon Mechanical Turk provides what Jeff Bezos, Amazon CEO, calls “humans-as-a-service” (Irani 2015; Irani & Silberman, 2013). As the Amazon logo jokes, the platform is “*Artificial Artificial Intelligence*,” replicating the imagined speed of digital processors by giving employers access to an enormous pool of temporary workers for high-data tasks when there isn’t time to develop appropriate algorithms to do the job. Data-scrubbing labor, or “commercial content moderation,” which allows for image filters in social media sites like Facebook and search engines like Google to maintain community standards of acceptable content, offers another example of a growing site of the low-paid and miserable work of producing the timely and sanitized digital experience our sensorium and consciousness have been cultivated to expect and demand. This work is sourced through intermediary firms like TaskUs to Business Process Outsourcing units in the Philippines (Chen, 2014).<sup>11</sup>

Digital service-based companies like Amazon show how digital platforms engender new relations between human labor, space (where people who perform needed tasks are located and how they can be located by those who need their services), and finally the product itself (the service, and the “human-as-service”). The experience of digitized, near-instant delivery that is part of Amazon’s basic warehousing strategy, essential to its commercial success and as innovative as Sam Walton’s Walmart infrastructure was for brick-and-mortar commodity sales, relies on subjecting warehouse stock workers to dehumanizing work shifts and physical demands for speed and endurance required to move products fast enough to achieve same-day and next-day delivery. This is an example evocative of the Mechanical Turk crowdsourcing platform and commercial content moderation employed by Facebook and Google, and it can be productively put in tension with techno-utopic aspirations about the projected obsolescence of human labor in the post-industrial economies of

the post-Cold War world.

What the excitement about platforms like AMT and Alfred point to is the urgent need to theorize technological fantasies as doing something more than projecting prior racial-imperial formations onto modes of mechanization, such as humanoid robots, that are readily legible because of their humanoid form yet non-human ontology. Yet, as we have emphasized, underscoring the legacies of racialized and gendered work for contemporary imaginaries of freedom from work points to how contemporary platforms also engender a different time-space that virtualizes the racialized and gendered materiality of service work through a dynamics of connectivity and the ideals of the sharing economy. These are liberal fantasies that seek to include racialized and gendered bodies into freedom (women are now professionals, 3D printing can help the global South) while invisibilizing the racialized and gendered architectures of their revolutionary claims to remaking the human.

### **Towards a feminist critical race (post)humanism**

Sidestepping the centrality of racial thinking in the production of a sliding scale of humanity in Enlightenment and post-Enlightenment thought delimits contemporary considerations of how the *revolution in infrastructures and global networks* frees humanity from the shackles of prior economic paradigms. These considerations reassert the primacy of “western man” even as they herald the decentering of the human. In contemporary posthumanist techno-utopic imaginaries that conceive of enchanted objects, invisible butlers, and “*artificial* artificial intelligence,” the space and time of the posthuman “reinscribe the humanist subject (Man) as the personification of the human by insisting that this is the category to be overcome, rarely considering the cultural and political formations outside the world of Man that might offer alternative versions of humanity” (Weheliye, 2014, pp. 9-10). Perhaps, then, the reasons that decolonial and critical race perspectives on unthinking the human as a category of modernity are not read in conversation with theories of the posthuman have

to do with the fact that thinkers like Fanon are categorized as fundamentally humanist. In short, they are understood to cling to firm hopes for the human, even as they propose alternate visions of what this human might be. But at the same time, decolonial thinkers like Fanon are also *posthumanist* thinkers—if we remember that the category of the “human” has been dominated by post-Enlightenment scientific (biological and economic) thought. Put differently, the monopolization of the category of the human has made it nearly impossible to conceive the human outside of Enlightenment scientific paradigms—and this is precisely the project of decolonial critical race and feminist thinkers. In the words of Sylvia Wynter (2003), this is a project that is about postulating what comes “*after Man*” (pp. 257-337).

The “truth” of humans as fundamentally biological organisms arose out of the secular post-Darwinian re-naturalization of the human as inherently differentiated by race and sex. This form of the human sets the stage for ongoing differentiation of the productive function of humans, non-humans, and objects. The historical production of the biological as the platform of humanity corresponds to the fantasy of human obsolescence in the form of the valorizing of artificial intelligence and artifacts. In *Object Oriented Ontology*, where analysis is developed by putting “things at the center of being, ... pondering their nature and relations with one another as much as with ourselves,” (Bogost, 2012, p. 6) and even in the more human-referencing notion of enchanted objects that intuit human needs, the human is abstracted when de-centered. In contrast, the posthuman turn in feminist science and technology studies scholarship retains a commitment to redressing the masculinist bias in the politics of knowledge production, even as it moves away from the limits of representational categories of gender and sexuality. Such categories have served and continue to serve important political functions in the history of feminist praxis.

If the predominant fantasies of systemic social change in mainstream Euro-American public discourse dwell upon the techno-utopias of a world in which all of those who are already human and already

subjects ascend into the realm of those whose lives are supported by (de)human-technological infrastructures of service, then how do we think about the relationship of new technologies to possible fields of political protest or action? How can such a conception of the political maintain the urgency of thinking “after-Man” with Wynter while at the same time supporting humanistic inquiry into the politics of imaginaries of the human, of autonomy and freedom, and of the history of the subject, with all of its contingent dehumanizing and devastation along hierarchical vectors of othering? Dominant techno-utopic imaginaries direct funds and structure engineering research labs around the world, and therefore also impact the distribution of differential conditions of comfort versus misery in the postsocialist present. These conditions are distributed between the realm of humans as a service and the human-machine infrastructure that supports the aspirational realm of labor-free creative existence, and they bring forward histories of racialized conditions of labor, free and unfree, visible and invisible. One component of such fantasies, as Kakoudaki (2014) points out, is the very *impossibility of political revolution*, because techno-objects lack political consciousness.

We conclude with a question: what role does consciousness have in revolution and political action in the postsocialist present? The turn to the posthuman in critical race and gender studies intentionally, and in the case of feminist posthumanism, perhaps unintentionally, invoke decolonial revolutionary philosophies of the end of the post-Enlightenment subject as a revolutionary project. From the perspective of this mode of revolutionary thought, the assumption of “consciousness,” and particularly the proletarian consciousness brought about for workers by the very material conditions of capitalist production, is an obstacle to understanding political action in contexts such as the dehumanization enacted through technologies like Alfred and AMT. From this perspective, “post-socialism” does not mark the end of historical change, but rather a global condition provincializing the subject of history established by Hegel, the post-Enlightenment subject/human that moves history forward through Man’s progress toward the consciousness of freedom (Hegel, 1953), the very mode of revolution

proposed by Franz Fanon in 1961.

## Notes

<sup>1</sup> On the relationship of reproducible, replaceable labor and the concentration of creativity in certain (racialized) categories of the human, see Vora (2015).

<sup>2</sup> As David Scott (2014) argues, an association between political action and tragedy demarcates postcolonial and postsocialist imaginaries because possible emancipatory futures have been stalled.

<sup>3</sup> Lisa Nakamura (2010) suggests that the interface of the Internet imposes a white, straight male consciousness as a filter on users that must be actively resisted to create alternative digital cultures online.

<sup>4</sup> On Wynter as a counterhumanist, see Wynter and McKittrick (2015, p. 11).

<sup>5</sup> As Wynter and McKittrick (2015) elaborate, “this is understood with respect to the surplus quantity of these costs, specifically the costs of the single-model free-market competitive capitalist economy in its now, post-1989, homogenizing, transnational/transreligious and /or transcultural, techno-automated cum mechanized agriculture form” (p. 43).

<sup>6</sup> For example, computerized factory production and call center work managed by dialing software promote what Donald Winiecki (2007) calls a “machinic subjectivity.”

<sup>7</sup> See the discussion of Janet Jakobsen’s critique of the autonomous subject and how technologies can extend such historical relations of support in Vora (2015); see also Jakobsen (2012, p. 25).

<sup>8</sup> For example, Thomas Malthus’s lectures and essays on population while a professor at the East India Company College in England promulgated the idea that India had a surplus of reproductivity, and that this reproductivity

could be a source of material wealth for colonizers. The discourse of race and India, and particularly of Indian workers as numerous, easily replaceable, and best-suited for reproduction, becomes transformed in different settings of labor, but Malthus's argument for the need to manage India's reproductivity and harness it for profitable production is sedimented into the industries that transmit vital energy from India's workers to its consumers. See Vora (2015, p. 9).

<sup>9</sup> With 3D printing, open source software "directs molten plastic, molten metal, or other feedstocks inside a printer to build up a physical product layer by layer, creating a fully formed object" that comes out of the printer (Rifkin, 2014, p. 89).

<sup>10</sup> Thanks to Erin McElroy for pointing us to the story of the Alfred App.

<sup>11</sup> In an article on the work of commercial content moderation, Adrian Chen (2014) writes, "Many companies employ a two-tiered moderation system, where the most basic moderation is outsourced abroad while more complex screening, which requires greater cultural familiarity, is done domestically. US-based moderators are much better compensated than their overseas counterparts: A brand-new American moderator for a large tech company in the US can make more in an hour than a veteran Filipino moderator makes in a day. But then a career in the outsourcing industry is something many young Filipinos aspire to, whereas American moderators often fall into the job as a last resort, and burnout is common" (p. 15). The article explains that the US moderators, who encounter material already scrubbed by lower paid moderators in the Philippines, generally last about 3-5 months before the experience becomes unbearable. A psychologist who specializes in treating content moderators in the Philippines describes drastic desensitization and trauma that can never be fully mitigated. Employees become paranoid and the exposure to the darkest aspects of human behavior can lead to intense distrust of other people and hence make them socially dysfunctional as they cannot rely on friends or paid caregivers.

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