THINK IN PUBLIC

A PUBLIC BOOKS READER

Public Books

EDITED BY SHARON MARCUS AND CAITLIN ZALOOM

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PART III. READ IN PUBLIC

INTRODUCTION

SHARON MARCUS AND CAITLIN ZALOOM

In an age of ignorance, how do we learn to think? Who protects old ideas from extinction? How do new ideas emerge and take flight?

One short answer to all these questions: books. Thanks to their durability as physical objects, books connect people and ideas across space and time. Books stimulate and preserve inconvenient truths and inspire new ways of thinking. At their best, books require slow research, careful argument, and immersed engagement. The independent, the unorthodox, and the solitary have long turned to books to fuel their imaginations.

Another short answer: universities. Universities preserve old insights and foster new ones. They are social laboratories where students experiment with politics and expression. At their best, universities gather people from around the world and encourage them to challenge received wisdom, advance knowledge, and overturn established hierarchies.

Our answer is *Public Books*. A digital magazine that unites the best of the university with the openness of the internet, *Public Books* celebrates the power of books to spread research, pioneer new ways of thinking, and introduce ideas into our lives. Our site puts readers and writers in deep conversation with books past and present—serious books, popular books, good books, and even bad books that can teach us something important when examined seriously.

Public Books is a gathering place for those who seek, as our motto and the title of this collection put it, to "think in public." Our contributors know their subjects deeply and use their knowledge to wrestle with complex problems, confront urgent issues, and

offer insight into problems old and new. Our readers value knowledge and arguments that challenge us to think differently.

Today we think of a scholar as an authoritative specialist who teaches and writes. But the original meaning of "scholar" was a student: someone who learns and reads. *Public Books* exists to nurture public scholars: professors who want to speak to the broadest possible audience and readers who want to learn more about ideas both timeless and timely. Our contributors are public scholars—and our readers are, too.

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We founded *Public Books* in 2012 on these precepts: That publics are thirsty for knowledge. That those who devote their lives to mastering their subjects need to be heard. That expertise and authority are not confined to white, straight, cisgender men. That it is desirable for academics to speak to a broader audience and exciting for readers outside the academy to debate what academics have to say. Most importantly, that boundaries between disciplines and ways of knowing deserve to be bridged —and barriers between the academy and the public deserve to be broken.

Academia, for too long, has excelled at building walls: walls between colleagues and specialties, walls between the corridors of research and the world outside. And now, to the benefit of public scholars and ideas, these walls are tumbling down. Whole generations of graduate students, unable to secure employment in the ivory tower, are flooding the public square. Union drives have humanists uniting with ethnographers and lab scientists. Competing universities join forces to fend off attacks by partisan politicians who want to defund knowledge. All the while, young people fighting for commonsense gun laws and humane immigration policies find themselves embracing theories of intersection and solidarity. All signs point toward a future for knowledge based on unification, not division.

It's time to embrace this new openness, to look broadly for inspiration and interconnection, to speak out widely and wisely.

Academics can no longer stay in cloistered enclaves, reassuring themselves that universities and colleges will always provide a secure oasis for books and ideas, for informed answers and clear thinking. We cannot sit back, assuming that the value of knowledge speaks for itself and that we can focus exclusively on

dissertations, conferences, and publications geared toward specialists in our subfields.

To make the life of the mind a public good, academics need to join with critics, artists, activists, and readers everywhere. To fight for the policies and budgets and norms that support the thinking life, we must make our hard-earned knowledge part of debates in the world at large. We must build bridges both within the academy and beyond it if we want to preserve what is essential and expand our collective sense of what is possible.

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As the editors of *Public Books*, we have worked to create a place where the latest knowledge is accessible and open to all, where public scholars can draw on the power of books and create new ideas. Kate is an anthropologist who studies finance and loves to read contemporary fiction. Sharon is a literature professor who in another life almost became a scientist. In 2011, we started talking about how difficult it was to find writing that brought academic depth to discussions of contemporary books, television, and politics. Instead of watered-down versions of ideas, we craved articles by experts who could present complicated ideas clearly, accessibly, and accurately. We knew many of our friends outside the academy were curious about the ideas generated within it. Like them, we wanted to read pieces that were erudite without being esoteric, by authorities who could make cutting-edge ideas interesting to nonspecialists without talking down to them.

We decided to be the change we wanted to see in our corner of the world, and the idea for *Public Books* was born. Our mission was simple: to create an open-access online magazine that would invite readers everywhere to delve into cutting-edge essays about important ideas. Our credo: anything properly understood can be explained to anyone. Our ground rules for authors: no jargon; no unexplained allusions; never take the reader's interest and attention for granted. We don't all know what "free indirect discourse" means, what the "ontological turn" might be, or why "prospect theory" has been revolutionary. But all of us could understand those concepts if someone broke them down for us. Once we understand them, those ideas just might change how we see the world.

To fulfill the *Public Books* mission, we set about creating a new cohort of scholarly writers. We brainstormed about all the

academics and deeply knowledgeable artists, activists, and thinkers we knew who could write smart, engaging essays about contemporary ideas and politics. We drafted a list of potential contributors and came up with names of people young, old, and all over the map in terms of race, gender, and sexuality. At that point, few of them had been tapped to write for a broad public.

Our authors draw on expertise they've honed for years, sometimes decades. Our writers have spent years immersed in a topic; they know the evidence, collect the data, unearth new primary sources. They use that knowledge to examine today's most pressing social, political, and cultural developments. In the process, they turn academic expertise into public scholarship and engage readers who become public scholars by engaging seriously with ideas. Our writers and readers venerate research and use it to raise questions about why we think we know what we do and how we can understand what we don't. We use knowledge to confront the world and to provide direction for where we should go next.

Like all good research, public scholarship aims to be timeless. But public scholars also aim to be timely, to take up important issues of the day. *Public Books* contributors do this by discussing recently published books. But unlike ordinary book reviewers, our authors draw on knowledge and interpretative techniques that have evolved over centuries and that they have dedicated their careers to mastering.

Scholarly values undergird everything we do at *Public Books*. Our magazine's mission is to invite contributors and readers to view current problems through the lens of academic ideas that have not yet entered the mainstream. To take only a few examples from the forty-five pieces anthologized here: Destin Jenkins shows us that we can't blame the twentieth century's housing segregation on either racism or the government but instead on a wholly distinct force—racial capitalism. Lily Irani argues that we must recognize the human labor hidden within artificial intelligence. Imani Perry investigates how "black memoirs" speak to the contradictions of the Obama era. And Haruo Shirane examines a book concerned with centuries-old literary writing in Japan to critique and rethink English's current global dominance.

In these and in all our *Public Books* pieces, we've asked our writers to reckon with the world and to showcase leading-edge developments in research and theory. Making scholarship public matters because we are all part of the same society. When

academics separate themselves from the realities of their fellows thousands of miles or only a few blocks away, scholarship is impoverished, and any gains won by knowledge a mirage. When general readers lose access to experts who devote their lives to mastering disciplines, they are deprived of a perspective that could offer more than sound bites. When these worlds are kept separate, we all suffer.

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Books can be vehicles of exploration, reexamination, and resistance. That's why *Public Books* is devoted to books and why it is now here, for the first time, manifested as a book for you.

This book—our first—brings together some of the most cherished, ambitious, and far-ranging articles of our first six years of life. This collection is a monument to that period's achievements and to its anxieties, loves, fears, and hopes. Taken singly, each of the pieces collected here offers a chance to learn from a brilliant thinker about a compelling work. Taken together, they provide a compact introduction to some of the most exciting academic thinking guiding recent debates about our culture, politics, and economy. We hope that this anthology, along with future books in this series, will serve as a handbook for those who engage with public scholarship, both as readers and as writers. Each of these essays offers an exemplary model for how to communicate complex ideas; how to cherish what is worthy in a book, film, or television series; and how to fight and dream for a more just and beautiful world by stepping out of the towers and into the public square.

The book is divided into three parts. Part 1, "Ask in Public," contains essays on major debates about technology, climate change, race, money, cities, historical memory, morality, religion, and geopolitics. Part 2, "Think in Public," draws on one of the most inspiring features of academic life: the space that it affords people to reflect on thought itself. This section contains interviews with and essays by scholars about how they got their start and about how artists and activists—including the former Black Panther Lynn French, the artist Ramiro Gomez, and the novelists James Hannaham and Ursula K. Le Guin—use images, words, and stories to think about power, labor, and freedom. Finally, part 3, "Read in Public," offers thoughtful, nimble takes on contemporary literature. You will find essays here on such major

authors of the twenty-first century as Roberto Bolaño, Elena Ferrante, Anne Carson, and Marilynne Robinson.

We hope that these essays will allow readers to experience what all scholarship offers at its best: the joy of discovering ideas, making connections, communing with great minds, and pondering questions with no easy answers. If you find yourself craving more, you can find it for free at www.publicbooks.org. Read on!

PART I

Ask in Public

ON ACCELERATIONISM

FRED TURNER

What is to be done? In 1901, when Lenin posed this now-canonical question, the answer was a communist revolution. Today, twenty-five years since the internet went public, the answer has come to seem to many on the Left to be a technological one. In the 1990s, it was right-wing libertarians such as John Perry Barlow who claimed to know what to do with the information system. In the future, they wrote, we would leave our bodies behind and dive headlong into a glorious pool of universal mind called cyberspace. In the early 2000s, the builders of social media, some of whom subscribed to the tech-left ideals of open-source software and copyleft reproduction rights, sold the public a new utopia. But instead of the world of technology-enabled interpersonal intimacy they promised, social media have become a series of commercially sponsored stages on which to preen for selfies and spin off data to be mined by states and corporations. During the Arab Spring uprisings of 2011, pundits on the Right and the Left even declared that cell phones and the internet were becoming tools of political revolution. Yet today the authoritarian leaders of Egypt are if anything more entrenched than their predecessors were.

In their new book, *Inventing the Future: Postcapitalism and a World Without Work*, based on their widely circulated 2013 “Manifesto for an Accelerationist Politics,” British cultural theorists Nick Srnicek and Alex Williams argue that all of this needs to change. At a time when the future seems to belong to Chicago-school economists and the internet to Google and the NSA, Srnicek and Williams have courageously drafted a call to reimagine left politics from top to bottom. Nonetheless, the

alternative vision of the Left they propose in fact owes a great deal to the neoliberal imagination it aims to challenge. Srnicek and Williams believe that emerging technologies have laid the foundation for the kind of egalitarian social world once promised by Lenin himself. To bring that world into being, they argue, we need not to resist but to *accelerate* the development of new technologies and the spread of capitalism. And they are not alone. In the last two years, a vigorous debate has bubbled up in England, where Srnicek and Williams live, and spilled over into the tech-savvy enclaves of the United States. To visit that debate may be to catch a glimpse of a new New Left emerging—or, in the view of some of the movement's more strident critics, the final triumph of techno-libertarianism.

One thing that Srnicek and Williams make abundantly clear is that the tactics the Left has inherited from the social movements of the 1960s and 1970s no longer work. The antiglobalization actions of the 1990s, various student uprisings in Europe and North Africa, and, above all, the Occupy Movement in the United States—Srnicek and Williams argue that all have failed because of the Left's preoccupation with what they call, with the hint of a sneer, "folk politics." This mode emerged in the late 1960s and early 1970s, they write, from roots in anarchism, autonomism, and various forms of communism. In their view, the last fifty years have seen "the collapse of the traditional organizations of the left, and the simultaneous rise of an alternative new left predicated upon critiques of bureaucracy, verticality, exclusion and institutionalization." This new New Left loathes all forms of top-down power, revels in consensus decision making, and believes in direct action. Above all, it hopes that its own local democratic processes might be a model for a new, more democratic social order at scale.

As Srnicek and Williams note, such an ethos has produced relatively little in the way of lasting change—at least in social structure. The case of Occupy is particularly instructive. Many participants have described how gathering together in public squares, debating public issues, and shouting together in the Human Megaphone made them feel politically powerful, often for the first time. And few would deny that the Occupier's famous phrase—"We are the 99 percent!"—shaped public debate for months to come. But where are the structural changes that Occupy has wrought? What congressmen are beholden to the Occupiers in the way that so many are to the Tea Party?

According to Srnicek and Williams, the logic of folk politics has

prevented movements like Occupy from evolving into something more than a string of ephemeral protests. A faith in horizontal organizations, local action, and the transformative potential of immediacy is all well and good, they write, but almost by definition, it prevents the emergence of large-scale, well-organized forces that claim and hold institutional and financial territory. Folk politics also reflects a failure to accept a series of truths about capitalism and modernity, they argue. The first of these is that capitalism is omnivorous. Srnicek and Williams note that, as Marx pointed out, capitalism devours almost all social forms in its way. This means that efforts to create local enclaves of, say, ethical consumerism or horizontal, extramarket social relations are ultimately bound to fail. For all their emphasis on bottom-up reform, such efforts can do little to prevent the commodification of experience, the expansion of inequality, and the ever-extended need to turn social life toward financially profitable ends.

Anyone who has visited the cheese boutiques of San Francisco will recognize the truth of this critique. Even as the city hosts an ever-growing flock of charcuteries, hipster barbershops, and artisanal groceries, the rich young technologists who use them have been steadily pushing the poor out of their apartments. But this is where Srnicek and Williams take an unexpected turn. Rather than try to resist the forces of technology and capitalism, they urge us to embrace them. Or, more specifically, they argue that in fact the only way to escape the maw of the consumer society is to accelerate the engines driving it. The Left must do what the neoliberal Right has done: it must celebrate the liberating tendencies of capitalism; it must take advantage of the ever-more-social affordances of new technologies; and it must help the world imagine both as sources of social improvement.

Given the failures of conventional left movements in recent years, Srnicek and Williams's call to imitate the tactics of the far more successful New Right makes a certain amount of sense. As they note, capitalism is a complex global phenomenon, a creature of banks and states, digitized financial flows, global transportation networks, and transcontinental media systems, all defended by border police of various kinds. Thanks largely to the work of the Mont Pelerin Society, a network of economists and fellow travelers first convened by Friedrich Hayek in 1947, the neoliberal Right has built a coherent ideological framework that takes into account the full range of capitalist activity. In other words, they explain, neoliberalism *scales*. In the hands of neoliberal

ideologues, for instance, Schumpeter's notion of "creative destruction" becomes something that individuals can do (as entrepreneurs), that companies can do (through innovation), and that even whole economies experience (in cycles of growth and recession). Neoliberalism seems to "work" at every level of individual and collective experience. To match its power, Srnicek and Williams argue, the Left will need to build its own version of the Mont Pelerin group and spread its own alternative vision of the future.

Imitating neoliberal tactics is one thing; arguing that commerce and technology will bring about utopia is another. Srnicek and Williams want both. And they don't think conventional politics is the way to get it. Instead, they hope to build "a post-work society" by "fully automating the economy, reducing the working week, implementing a universal basic income, and achieving a cultural shift in the understanding of work." For Srnicek and Williams, the central problem with capitalism is not the inequality it produces nor the ways it intersects with longstanding patterns of racism and nationalism but rather the hoary problem of labor. For generations, they write, the Left has "sought to liberate humanity from the drudgery of work, the dependence on wage labor, and submission of our lives to a boss." New technologies allow us to build "a postcapitalist and post-work platform upon which multiple ways of living could emerge and flourish."

Here Srnicek and Williams resurrect the ancient ghost of romanticism and marry it to a Marxist critique of labor in a way that would be quite familiar to the American counterculture of the 1960s. First, they describe virtually all labor as a species of spiritual subjection. We have authentic selves, they argue, and to work for wages, we must leave our authentic desires at home. Such a view also animated the American communards of the 1960s. After all, the point of a commune was to bridge work and home so as to make it possible to be "authentic" at all times. Second, Srnicek and Williams misinterpret an important aspect of contemporary labor. They note that a 2013 Gallup poll showed that only 13 percent of workers worldwide find their work "engaging." In their view, the survey provides evidence of global alienation. Yet Gallup conducted the survey for a group of CEOs who were quite likely seeking to make work more engaging precisely so as to draw out and monetize ever more of their workers' inner selves. Today, levels of engagement at work measure not so much workers' ability to achieve psychological authenticity on the job as they do the ability of employers to

integrate the psychological needs of employees into the work process. Employers *want* their employees to be authentic at work. The more work feels like home, the more and better work employees will do.

Oddly enough, Srnicek and Williams seem quite comfortable with top-down management. In one of their book's strangest passages, they invoke the computerized management system known as "Cybersyn" as an emblem of the future they hope for. Cybersyn was designed and partially built for Salvador Allende's socialist government in Chile in the early 1970s.[1] It featured a command center that resembled the bridge of the Star Trek *Enterprise*. Like Captain Kirk and his officers, leaders were to sit together watching information stream in from around the nation and to act on what they saw. Srnicek and Williams see today's digital technologies as tools with similar potential. In order to free our individual desires, they claim, we need to automate all the work we can, manage that automation together using systems like Cybersyn, and so build a flexible postcapitalist economy in which we work when we want to, love when we want to, and, all in all, "create new modes of being."

If this sounds more than a little like a marketing campaign for Uber, it should. This is the same logic that drives the rhetoric of the sharing economy. And that should make us nervous. New digital platforms really are making work patterns more flexible and automation really is replacing (some) drudgery. Yet, marketers' claims notwithstanding, they have hardly brought us a new era of social sharing. Instead, they've marketized ever smaller segments of time and transformed formerly private resources (such as your car) into potential sources of profit. You of course bear the responsibility for capitalizing those resources (buying and maintaining the car) and getting the training to use them (learning to drive). For all their vaunted computer power, companies like Uber, Airbnb, and TaskRabbit are essentially traditional service brokers. And the vision of sharing that underlies them belongs more to the legacy of Friedrich Hayek than of Karl Marx.

Srnicek and Williams are blinded by their faith in all things digital. To consider automation only in terms of its ability to replace onerous labor is wondrously naive. Who will build the machines? Manage them? Say we succeed in building a new Cybersyn. Who will sit in the armchairs of command? As the current rage for Donald Trump reminds us, leaders need hardly be rational, disinterested public servants. And what will become

of those who never reach the centers of command? Or should I say, what will become of us? How will we speak back to power? Will we become the political equivalent of Uber drivers, communicating with central powers only through the data our work throws off?

Some of Srnicek and Williams's future is indeed enticing, particularly the notion of a universal basic income. And their willingness to crack open the door of left theory to embrace the sometimes liberating power of capitalism does offer an alternative to the folk politics they rightly critique. Yet, as two other important volumes point out, that door has been opened before, and not always with liberating results.

Robin Mackay and Armen Avanessian's *#Accelerate* reprints two dozen essays and book sections written between the mid-nineteenth century and today. In a wide-ranging introduction, the editors make the case that contemporary accelerationists belong to a long-neglected left intellectual tradition. "Accelerationism is a political heresy," they write. "The insistence that the only radical political response to capitalism is … to accelerate its uprooting, alienating, decoding, abstractive tendencies" would seem, they suggest, to violate the founding principles of left politics. But that would be wrong, according to Mackay and Avanessian, who cite and reprint Marx's "Fragment on Machines" from the *Grundrisse* in reply. There Marx describes a process by which capital, embodied in the machines of production, draws the living labor of workers into itself. In Marx's account, automated machines work on behalf of capital to turn men into mere prostheses. Mackay and Avanessian take this to be a good thing. For Mackay and Avanessian, the best way to supersede capitalism is to become one with its machines.

The "Fragment on Machines" notwithstanding, Marx might well have taken issue with their view. In *Das Kapital* he argues that the centralization of capital and of production will come into conflict with the social relations that support them and capitalism will crumble from there.[2] In the Marx of *Das Kapital*, conflicts among men, machines, and money pave the road for revolution; in Mackay and Avanessian's introduction, the fusion of men and machines into something new *is* the revolution. In many ways Mackay and Avanessian's vision of accelerationism's postcapitalist effects derives from the readings of two bodies of philosophy. The first emerged in France in the early 1970s, when theorists like Deleuze and Guattari and Lyotard aimed to synthesize Marx and Freud. These critics sought to escape

Marxist dialectics and to suggest that, in Mackay and Avanessian's words, "emancipation from capitalism be sought … by way of the polymorphous perversion set free by the capitalist machine itself." The machine, these critics wrote, would free us to create what Mackay and Avanessian call "a new fluid social body."

As Mackay and Avanessian note, such work helped set the stage for Donna Haraway's celebration of the feminist cyborg in the United States and for the autonomist Marxism of Antonio Negri and Tiziana Terranova in Italy. But it also helped give rise to the reveries of Nick Land and the Cybernetic Culture Research Unit (CCRU) at the University of Warwick in England, which Land founded with cybertheorist Sadie Plant. In the mid-1990s, Land and Plant played an ecstatic prose accompaniment to the rise of the public internet. A random sample, from the CCRU collective's essay "Swarmachines," which Mackay and Avanessian reprint: "Jungle rewinds and reloads conventional time into silicon blips of speed and slowness that combust the slag-heaps of historical carbon-dating."

This was the kind of thing that seemed to make sense about the time *Wired* magazine first appeared on corporate coffee tables. It was also quite right wing. "The past is passed," wrote the CCRU collective. "The eternally deferred eschatologies of the left are consigned to the white trash-can of the future and leave a present tense with synthetic possibilities." Clumsy wordplay aside, the writers of the CCRU saw in the emerging digital matrix much what John Perry Barlow did: a new frontier on which they could leave their fleshy bodies and even politics itself behind. They dismissed not only folk politics but all left politics. They embraced the logic of creative destruction—not only as an economic project but as an aesthetic and, in raves at least, as a lifestyle too.

To British cultural theorist Benjamin Noys, the members of the CCRU had fallen under the spell of "Deleuzian Thatcherism." Noys is widely credited with having coined the term "accelerationism" in his 2010 volume of critical philosophy, *The Persistence of the Negative*. His recent *Malign Velocities* presents a sustained and stinging rereading of the history mapped out by Mackay and Avanessian. Like them, Noys points to nineteenth- and early-twentieth-century Marxism and Futurism and to early 1970s French philosophy as key sources of accelerationist ideals. Yet he reads both very differently. He reminds us that Lenin himself embraced the management

theories of Frederick Taylor and dreamed of a world in which productivity gains would free workers to relax. Noys notes that such policies resulted not in universal leisure but in the Kafkaesque machinations of Soviet bureaucracy. Returning to the reveries of the Italian Futurists, their love of speed and the automobile, Noys reminds his readers of their deep misogyny and their affection for fascism.

As Noys points out, these first accelerationists did much more than fail to spark a populist revolution; they actually helped legitimate the technologies of domination in place today. Noys saves his harshest criticism for the French theorists of the 1970s and for the CCRU. In the social unrest of 1968, he argues, the French Left saw its hopes for an anticapitalist revolution raised and dashed. In response, thinkers such as Baudrillard, Lyotard, and Deleuze and Guattari turned their frustration into celebration. They not only accepted their inability to escape capitalism; they reveled in it. They dreamed of individuals who could melt into the libidinal slipstream of media spectacles and consumer delights. Like the Marx of the "Fragment on Machines," they dreamed of human beings who could become one with their tools.

In the 1990s, Nick Land and Sadie Plant promoted the same dreams, writes Noys, this time to a techno beat. Noys is not content to attack accelerationism as a philosophy. He also takes its aesthetics to task. Land and Plant wrote at the same moment that Kraftwerk and Detroit techno could be heard from London to Berlin. Such artists seduced listeners into a fantasy of becoming one with machine systems, of giving over their agency and taking pleasure in complete submission, argues Noys. Like the essays of the CCRU, the music appeared to herald an "exit from feeling and consciousness," and this, writes Noys, is the true promise underpinning accelerationism. For all its talk of a technology-enabled socialist utopia, accelerationism actually offers little more than a steep dive down a nihilist rabbit hole.

Here Noys picks up on an essential paradox of accelerationism and in fact of many ostensibly left-leaning, technology-embracing social movements. The same devices that are slowly choking off our ability to act in the world without their help have also offered us extraordinary pleasures. With our iPhones in our pockets, we can find out almost anything, instantly. We can summon the sounds of Muddy Waters and Django Reinhardt alongside Devo and Talking Heads. We see pictures of places whose names we've only just heard. And we can send them to people we've only just met. Much as the Italian Futurists did when they first

drove off in cars, we have every reason to marvel at the new speed in the world.

Yet as the Futurists themselves have taught us, the dream of machines that will speed us away from everyday life can just as easily open the road to fascism as to democracy. In their rush to celebrate the benefits of automation, Srnicek and Williams have forgotten this history. Lenin may have turned to Taylorism to ease the lives of peasants, and the founders of the CCRU may have embraced Schumpeterian creative destruction in order to experience a technocentric form of ecstasy. Yet neither approach substantially improved the prospects for a more egalitarian social world. On the contrary, one set the stage for Stalin, and the other helped legitimate Margaret Thatcher.

To their credit, Srnicek and Williams do not ask us to dissolve into digital ones and zeros, as John Perry Barlow once did. Their call for a universal basic income makes a kind of grounded sense that has eluded earlier accelerationists. So too does their critique of folk politics. Yet the problem of politics writ large remains. How can we build a more just, more egalitarian society when our devices already surround us with so many of the personalized delights we might want such a society to offer? Meetings are boring. Talking to people unlike ourselves is hard. How can we turn away from the mediasphere long enough to rediscover the pleasures of that difficult work? And how can we sustain it when we do?

To these kinds of questions, the accelerationists have no answers.

NOTES

1. See Eden Medina, *Cybernetic Revolutionaries: Technology and Politics in Allende's Chile* (Cambridge, MA: MIT Press, 2011).
2. Karl Marx, *Das Kapital*, chap. 32, quoted in Steven Shaviro, *No Speed Limit: Three Essays on Accelerationism* (Minneapolis: University of Minnesota Press, 2015), 43.

JUSTICE FOR DATA JANITORS

LILLY IRANI

Science fiction author Arthur C. Clarke famously declared that any sufficiently advanced technology becomes indistinguishable from magic. Today, the likes of Google, Amazon, and Facebook appear determined to sell us the dream that machines—drones, self-driving cars, and one-click shopping services—can almost miraculously fulfill users' desires. But what is at stake in hiding the delivery people, stockroom workers, content moderators, and call-center operators laboring to produce the automated experience?

Between 2003 and 2007, I worked as a "user experience designer" at Google, a company celebrated for being a creative, perk-filled information factory. Once, as I worked in my cubicle, an Oprah camera crew rolled by, filming my stickered laptop and whiteboards covered with scribbles. Every so often, company founders Larry Page and Sergey Brin would lead policy makers, including Bill Clinton and Colin Powell, around the campus, conjuring visions of Silicon plenty and showing off the engineers, designers, and product managers who would build them.

Another Google presented itself after hours, at the edges of campus, in the marginalia of product talks, and beyond journalists' and policy makers' view. Watching a "tech talk," I saw an engineer present a machine for turning the pages of rare books under a scanning camera. The patented machine housed a worker who flipped the pages in time to a rhythm-regulated soundtrack. Later, I worked on an advertising project to partially automate the process of sanitizing Google ad results. Indian

workers I never met checked ads to filter out porn, alcohol, and violence. The partial automation reduced their work but could not replace it completely.

These moderators and scan workers never showed up in the lavish, celebrated spaces where Googlers drank, ate, and brainstormed. They didn't ride the Google shuttle, eat the Google food, or attend beer-filled all-hands Friday meetings. In fact, Google's abundantly productive, nonhierarchical, and playful workplace seemed to rely on hidden layers of human data work: subcontractors who were off the books, out of sight, and safely away from both central campus and technological entrepreneurship's gleaming promise of job creation.

The human-fueled automations I saw at Google are also largely out of sight in current international debates about the relationship between digital technology and the future of work. Will technology produce new jobs, new industries, and new forms of comparative advantage? Or will technology take away jobs and concentrate wealth among those who own the machines? As the United States and Europe grapple with austerity policies, the threat to employment is deepened by the boom in machine learning, robotics, and drones, as two recent books show.

Erik Brynjolfsson and Andrew McAfee's *The Second Machine Age* offers a tour through corporate visions of spectacular automation, and well-meaning advice about how to stave off the future inequality such visions might generate. Simon Head's *Mindless* redirects our gaze: business automation has already spread far and wide, he demonstrates, and its dire effects on workers' wages and souls lie in the here and now. In examining computerization futures—whether in terms of abundance or of alienation—neither book recognizes the profits and pleasures of pretending technology is magic. That magic always relies on invisible labors.

The Second Machine Age opens with a roller coaster ride through the promised future of artificial intelligence (AI) and its threat to replace human labor. Once incredulous about AI's reach, the authors have become AI faithful, and here they march out one killer demo after another. They open the book with a ride in Google's self-driving car. The vehicle drives them around the Mountain View campus and surrounding roads with nary a bump or a hard brake. Google has named the driving software Chauffeur. Chauffeur symbolically promises middle-class drivers relief from drudgery and suggests automated access to the lifestyles of the rich and famous. Chauffeur represents just one of

legion labor-replacing automations around the corner, the authors prophesy. Why hire a living person when a learning robot can work quickly, quietly, and without breaks, demands, or opinions?

There are lots of reasons managers won't fully automate workforces. The cost of research and development (R&D) for automations like Chauffeur can be staggering.[1] Far from simply realizing a dream of GoogleLabs, Google's Chauffeur project builds on decades and untold millions of dollars of military investment in research on autonomous cars. The military's on-the-ground autonomous warfare initiatives have produced and shaped an ecology of careers, techniques, infrastructures—including that of Chauffeur leader Sebastian Thrun. Complex automation, then, is not something many companies can develop on their own, even with dedicated effort.

But could AI and robotics companies do the R&D and sell automation technologies to other companies? To the extent that companies constrain their operations to meet robots' limitations, yes. But even still, human labor is necessary to configure, calibrate, and adjust automation technologies to adapt to a changing world, whether those changes are a differently shaped product or a bird that flies into the factory. Brynjolfsson and McAfee lump together a wide swath of AI applications and predict that the successes among them portend the more general expansion of automated work. But in doing so they overlook the enormous amounts of behind-the-scenes, domain-specific labor that makes AI possible in the first place. Google's self-driving car doesn't simply go anywhere its passengers please. For this car to drive "itself," a human worker has to drive around, scan, and map the car's world—including everything from curb heights to intersection angles. Machine-learning algorithms that partially automate data processing still need to be trained for every new form or every new kind of topic the algorithm might deal with. Other robots profiled in *The Second Machine Age* will learn the movements of shop-floor workers and then replace them, until the next tune-up or calibration is necessary. Such work of alignment is not a bug—it is the condition of possibility for keeping humans and automation working in the same world. *The Second Machine Age* leans heavily on the accounts of corporate executives promising fantastic new horizons of tech profit, but it's undeniable that for those pursuing customers and venture capital for automation, there's good money to be had in hiding these headaches.

This care for and feeding of artificial intelligence suggests a

much bigger oversight in Brynjolfsson and McAfee's argument. Automation doesn't replace labor. It displaces it. Historian Ruth Schwartz Cowan famously showed how the invention of the washing machine mainly increased the standards of cleanliness domestic workers (paid and unpaid) had to meet. Shoshana Zuboff's 1988 book *In the Age of the Smart Machine* described how factory automation created text-based labor, displacing workers who smelled and felt wood pulp with those who could read screens and meters and tend to the machines. Hamid Ekbia and Bonnie Nardi call these managerially advantageous human-machine configurations "heteromation."[2]

The emergence of the digital microwork industry to tend artificial intelligence shows how labor displacement generates new kinds of work. As technology enterprises attempt to expand the scope of culture they mediate, they have had to grapple with new kinds of language, images, sounds, and sensor data. These are the kinds of data that flood Facebook, YouTube, and mobile phones—data that digital microworkers are then called on to process and classify. Such microworkers might support algorithms by generating "training data" to teach algorithms to pattern-match like a human in a certain domain. They might also simply process large volumes of cultural data to prepare it to be processed in other ways. These cultural data workers sit at computer terminals, transcribing small audio clips, putting unstructured text into structured database fields, and "content moderating" dick pics and beheadings out of your Facebook feed and Google advertisements.[3]

Computers do not wield the cultural fluencies necessary to interpret this kind of material, but people do.[4] This is the hidden labor that enables companies like Google to develop products around AI, machine learning, and big data. The *New York Times* calls this "janitor work," labeling it the hurdle, rather than the enabling condition, of our big data futures.[5] The second machine age doesn't like to admit it needs help.

These cultural data workers are central to the political economy of computing, from the free labor of AOL chat-room moderators to the organized but invisible labor of paid content moderators.[6] Since the early 2000s, Google has relied on data workers to tune and train its algorithms. The company constantly refines its search algorithms in a war for higher rankings with other search optimizers and spammers. How do Google engineers figure out if their new algorithm produces high-quality results? They have to rely on workers called "raters"—contractors

often working from home—to judge the search result pages and rate them; workers can label resulting pages as “vital,” “useful,” “slightly relevant,” or even “maybe spam.”[7] Google engineers then feed these worker-generated ratings back into their algorithm so the algorithm can learn to see more like the rating workers.

Twitter also relies on cultural data workers to help its search engine cope with breaking news and instances of sudden linguistic change. Think of when Mitt Romney impressed the nation with his diversity strategies, including “binders full of women.” The gaffe set Twitter afire with satire, but Twitter’s algorithms didn’t know the difference between “binders full of women” and binders on sale at Office Depot for ninety-nine cents. Such differences matter for Twitter’s search results, for its ad placements, and for its famed trend detection. Because terms like these spike and go away very quickly, Twitter engineers can’t train algorithms fast enough. To fill the gap, Twitter deploys an army of cultural data workers to sort and classify tweets in real time.[8]

In response to demand for this cultural labor, several companies have sprung up to match workers to engineers who need them. The most famous of these is Amazon Mechanical Turk (AMT), the data-work clearinghouse that Twitter relied on to power the search engine described above. Amazon launched AMT to allow programmers to issue data-processing calls directly from their computer code. Rather than other code answering the call, thousands of workers wait at their computers, ready to perform cognitive piecework on demand. AMT workers choose among tasks like transcription, content moderation, and image classification, getting paid per piece of data processed. They might work for ten employers in the span of a day. Amazon sends the data work to the employer, structures the market that enables the microcontracts, and, should the employer choose to pay, transmits payment to the worker.

Work conditions for these data workers are what “the market,” or workers, will tolerate. As contractors, AMT workers are excluded from the protections of minimum-wage laws. Amazon also allows employers to decide whether or not they want to pay. The intention is to let employers set standards. The effect is that unscrupulous AMT users steal wages. Although workers share information to avoid these thieves, they report that Amazon will very rarely step in to arbitrate disputes when an employer and worker disagree about work quality or where the fault lies for bad work.

New companies, and even a subfield of computer science, have sprung up to develop research and applications around algorithmically managed "human computation." History repeats itself. Originally, "computers," until their calculations were automated in the mid-twentieth century, were women.[9] Today's hierarchy of data labor echoes older gendered, classed, and raced technology hierarchies. What's new is the way AMT and similar crowdsourcing platforms democratize outsourcing to any employer with a computer and credit card.

Such necessary and low-paid data work has no place in *The Second Machine Age*. McAfee and Brynjolfsson readily admit that AI will not replace all jobs. They quote Steven Pinker: "The main lesson of thirty-five years of AI research is that the hard problems are easy and the easy problems are hard.… [I]t will be the stock analysts and petrochemical engineers and parole board members who are in danger of being replaced by machines. The gardeners, receptionists, and cooks are secure in their jobs for decades to come." First, this all depends on how one defines "secure," since those irreplaceable workers often earn little and work on precarious terms. Second, McAfee and Brynjolfsson ignore the labor of cultural data workers, as if algorithms trained, tuned, and augmented themselves, like magic.

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Undazzled by AI fantasies, journalist Simon Head looks closely at the semiautomated work we've been living with for decades. In particular, Head details how computing business systems (CBSs) have shaped work conditions at warehouses, banks, and call centers. CBSs are massive networked data-management systems that underpin the operations of most very large financialized organizations, from Goldman Sachs to public universities. The systems are built, sold, and maintained by high-tech behemoths, some famous, some that operate below the radar: IBM, PeopleSoft, SalesForce, and SAP, just to name a few. Head, citing Brynjolfsson and McAfee's earlier research, points out that enterprise resource-planning systems—systems that automate and control organizational data processing—comprised 75 percent of all U.S. corporate IT investment in 2001.

These routine technologies rarely make the nightly news, but, unheralded, they allow managers tight control over workers. Managers use algorithms to steer employee workflows. They can

track workers' typing at their keyboards and their movements through body-worn GPS. They can monitor fulfillment rates or success at sales and cut workers who cannot meet targets. By manipulating information screens, managers never have to confront workers, who might push back, or observe workers' circumstances.

Head describes Amazon's warehouses as a prime example of such grueling, semiautomated management. Amazon's algorithms take incoming orders and develop scripts to direct a worker around the warehouse. The worker has to follow the script, gathering items into carts and meeting travel times set at management whim. Like with AMT, employers set the script and workers have to meet it or leave. Warehouse workers are hired on as temps, so management can let go those who cannot keep the pace: older workers, sick workers, or just tired workers.

Call-center workers, ticket agents, and delivery people all work under similar scripts and under comparable surveillance. The CBS-enabled workplace has become the factory floor of the service economy. CBS control, Head argues, forces people into skill-stripped jobs that satisfy corporate thirst for transparency and control, heightening the effects of earlier strategies of scientific management and assembly-line factory organization. The scripts allow service workers, like their warehouse counterparts, little latitude to express judgment, creatively problem-solve, or leverage their built-up, on-the-job wisdom. Instead, managers retain control so they can swap one worker for another and keep wages low.

CBSs organize the systems we all have to live with as consumers, enabling the production of complex financial instruments, insurance plans, and health-care systems—systems that shape our lives but operate in mysterious, seemingly nonnegotiable ways. Head even argues that the financial crisis is a consequence of CBSs run amok. Banks like Goldman Sachs script their bankers to sell financial products—complex informational commodities—at a speed and scale that prohibits individual, human judgment from interrupting fast capitalism's flow.

For Head, a better digital workplace is possible. The Treuhand workshop in Chemnitz, Germany, presents one possibility. The shop uses advanced machining systems to manufacture components, but strong trade unions facilitate worker control over their labor. Managers send specifications to workers trained in craft-apprentice traditions, and those workers decide how to use

machine tools to design the component. Managers check for quality only just before shipment. The Treuhand workers augment their craft with technology without falling under managerial microcontrol from a distance. We might call this approach *specify and enable*.

Head then compares the German shop with two others that use the same technologies: Caterpillar in Peoria, Illinois, and John Deere in Waterloo, Iowa. In the American shops, managers act as engineers, specifying both parts and process in detail. They plan how to machine a component. Machinists then execute the plan. Little collaboration transpires between machinists, who know the machines intimately, and the managers who detail the work. When machining the materials inevitably reveals design problems, the distance between workers and managers stymies resolution. With their command-and-control structure, the American workshops do not meet the design and quality standards German companies achieve with empowered machinists.

Automation itself is not to blame, Head argues. The problem lies with the ways automation entrenches command-and-control relationships between managers and workers. This is a deep and valuable insight of the book. Such insight could have led Brynjolfsson and McAfee to more productive questions. They might still ask if and how automation may augment productivity, but they should also ask: What exactly is being produced? And, what is its quality? Command-and-control automation strips away the “the human factor,” as Head calls it. Such a wide range of accumulated human ability and wisdom can generate more subtle kinds of value than that which top management can predict. Head’s subtitle, “why smarter machines are making dumber humans,” sounds like catchy technological determinism, and yet the book actually tells a more subtle story about machines and social power.

In fact, Head’s analysis of CBS systems answers a question that effectively haunts Brynjolfsson and McAfee’s book: What are the implications of digital technologies for the growing gap between rich and poor? *The Second Machine Age* notes that wage stagnation parallels another economic trend; its authors argue that owners of physical capital today keep a far larger portion of their profits than in the past five decades. (Their argument assumes but does not demonstrate that businesses more dependent on human capital such as talent or skill distribute profits more equally.) Unwilling to question free-market ideas, the

authors argue that digital bounty replaces some workers' skills; it also creates rock stars, who gather in the lion's share of profit, by delivering their superior talent to bigger markets. This conventional explanation effaces the struggles over control, craftsmanship, and the value of worker labor that Head details so well. Such different diagnoses of inequality lead to starkly differing prescriptions.

Brynjolfsson and McAfee believe machines produce digital abundance; humans, therefore, must become entrepreneurial masters of the machines or peacefully coexist with them. This leads them to personal and policy recommendations that focus on individualized human capital enhancement. They argue, for example, that massive open online courses (MOOCs) and revamped universities can reskill soon-to-be-redundant workforces. Machines, Brynjolfsson and McAfee argue, are great at processing data but can't generate new ideas. To race against the machine, workers should become creative entrepreneurs. Still, they argue, the digital playing field will produce irrationalities and require some forms of redistribution. Brynjolfsson and McAfee advocate for high taxes on top earners, recognizing that those who control platforms or brands often charge more because they can (part of what economists call rent seeking). More radically, the authors suggest funding basic income guarantees (BIG) to sustain lives and consumer demand during capitalism's periodic crises.

Head, on the other hand, would improve the quality of life and work. He calls for a coalition among those squeezed by CBSs—white-collar workers, like middle managers and nonelite professionals, and low-income workers—to press for higher-paying, more highly skilled jobs. CBSs, he argues, should supplement worker expertise rather than replace it. Head calls on governments to reinvest in educational institutions that can prepare workers for these more highly valued jobs. Brynjolfsson and McAfee, on the other hand, take the CEO perspective on the world, assuming that skill and talent concentrate at the top, with mediocrity increasingly predominant as one descends the ladder of success. The authors of both these books agree that the lower rungs of production are low-skill, whether by repression in *Mindless* or absence of need in *The Second Machine Age*. Neither book displays an awareness of how the likes of Google, Twitter, and Amazon already rely on low-status workers' smarts to power the companies' seemingly miraculous algorithms and information systems. Of course, the magic depends on a slight of


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