
This item was submitted to [Loughborough's Research Repository](#) by the author.
Items in Figshare are protected by copyright, with all rights reserved, unless otherwise indicated.

Cybertarian flexibility - when prosumers join the cognitariat, all that is scholarship melts into air

PLEASE CITE THE PUBLISHED VERSION

<https://doi.org/10.1525/luminos.10>

PUBLISHER

University of California Press © The Author

VERSION

VoR (Version of Record)

PUBLISHER STATEMENT

This work is made available according to the conditions of the Creative Commons Attribution 4.0 International (CC BY 4.0) licence. Full details of this licence are available at: <http://creativecommons.org/licenses/by/4.0/>

LICENCE

CC BY-NC-ND 4.0

REPOSITORY RECORD

Miller, Toby. 2019. "Cybertarian Flexibility - When Prosumers Join the Cognitariat, All That Is Scholarship Melts into Air". figshare. <https://hdl.handle.net/2134/38017>.

Cybertarian Flexibility—When Prosumers Join the Cognitariat, All That Is Scholarship Melts into Air

Toby Miller

The prevailing media credo, in domains that matter both a lot (popular, capitalist, and state discourse and action) and a little (communication, cultural, and media studies), is upheaval. The litany goes something like this: Corporate power is challenged. State authority is compromised. Avant-garde art and politics are centered. The young are masters, not victims. Technologies represent freedom, not domination. Revolutions are fomented by Twitter, not theory; by memes, not memos; by Facebook, not Foucault; by phone, not protest.

Political participation is just a click away. Tweets are the new streets and online friends the new vanguard, as 140ism displaces Maoism. Cadres are created and destroyed via BlackBerry. Teens tease technocrats. Hackers undermine hierarchy. Leakers douse the fire of spies and illuminate the shady world of diplomats.

The endless iterations offered by digital reproduction and the immediate exchanges promised by the Internet have turned the world on its head. We are advised that the media in particular are being transformed. Tradition is rent asunder. Newspapers are metaphorically tossed aside. What was once their fate in a literal sense (when we dispensed with print in *poubelles*) is now a figure of speech that refers to their financial decline. Journalists are recycled as public relations people, and readers become the new journalists. Cinema is irrelevant, TV is on the way out, gaming is the future, telephony is timeless, and the entire panoply of scholarship on the political economy of ownership and control is of archaeological interest at best.

This technophilic vision of old and middle-aged media being shunted aside by new media is espoused by a wide variety of actors. The corporate world is signed up: Netflix proudly proclaims that “Internet TV is replacing linear TV. Apps are

replacing channels, remote controls are disappearing, and screens are proliferating.”¹ IBM disparages “Massive Passives . . . in the living room . . . a ‘lean back’ mode in which consumers do little more than flip on the remote and scan programming.” By contrast, it valorizes and desires “Gadgetiers and Kool Kids” who “force radical change” because they demand “anywhere, anytime content.”² I wish someone would pay me to come up with lines like those.

The state loves this new world too, despite the risks allegedly posed to its own essence. Let’s drop in on a Pentagon web site to see it share the joy: “Take the world’s most powerful sea, air and land force with you wherever you go with the new America’s Navy iPhone app. Read the latest articles. See the newest pics and videos. And learn more about the Navy—from its vessels and weapons to its global activities. You can do it all right on your iPhone—and then share what you like with friends via your favorite social media venues.”³

Civil society is also excited. The wonderfully named Progress & Freedom Foundation’s “Magna Carta for the Information Age” proposes that the political-economic gains made through democratic action since the thirteenth century have been eclipsed by technological ones: “The central event of the 20th century is the overthrow of matter. In technology, economics, and the politics of nations, wealth—in the form of physical resources—has been losing value and significance. The powers of mind are everywhere ascendant over the brute force of things.”⁴

The foundation has closed its doors, no doubt overtaken by pesky progress, but its discourse of liberty still rings loudly in our ears. Meanwhile, a prominent international environmental organization surveys me about its methods and appeal, asking whether I am prepared to sign petitions and embark on actions under its direction that might lead to my arrest. I prefer cozily comfortable middle-aged clicking to infantile attention-seeking incarceration, but either way, twinning the two is a telling sign of the times—as is doing so via corporate marketing techniques.

Even the bourgeois media take a certain pride in pronouncing their end of days. On the liberal left, the *Guardian* is prey to this beguiling magic: someone called “You” heads its 2013 list of the hundred most important folks in the media, with unknowns like Rupert Murdoch lagging far behind.⁵ *Time* magazine exemplified just such love of a seemingly immaterial world when it chose “You” as “Person of the Year” for 2006 because “You control the Information Age. Welcome to your world.”⁶ For its part, the *New Statesman*, a progressive British weekly, heralds the new epoch in a nationalistic way: “Our economic and political clout wanes,” but “when it comes to culture, we remain a superpower” because popular culture provides “critical tools through which Britain can market itself and its ideas to the world.”⁷

Many academics love this new age too, not least because it’s avowedly green: the Australian Council for the Humanities, Arts and Social Sciences informs the country’s Productivity Commission that we dwell in a “post-smokestack era”⁸—a blessed world for workers, consumers, and residents, with residues of code rather than carbon.⁹

The illustrations gathered above—arbitrarily selected but emblematic of profound tendencies across theories, industries, and places—amount to a touching but maddening mythology: cybertarianism, the belief that new media technologies are obliterating geography, sovereignty, and hierarchy in an alchemy of truth and beauty. Cybertarianism promises libertarian ideals and forms of life made real and whole thanks to the innately individualistic and iconoclastic nature of the newer media.¹⁰

In this cybertarian world, corporate and governmental cultural gatekeepers and hegemony are allegedly undermined by innovative possibilities of creation and distribution. The comparatively cheap and easy access to making and circulating meaning afforded by Internet media and genres is thought to have eroded the one-way hold on culture that saw a small segment of the world as producers and the larger one as consumers, even as it makes for a cleaner economy that glides into an ever-greener postindustrialism. Cybertarians celebrate their belief that new technologies allow us all to become simultaneously cultural consumers and producers—no more factory conditions, no more factory emissions.¹¹

Crucial to these fantasies is the idea of the prosumer. This concept was invented by Alvin Toffler, a lapsed leftist and Reaganite signatory to the Progress & Freedom Foundation's "Magna Carta." Toffler was one of a merry band of futurists who emerged in the 1970s. He coined the term *prosumer* in 1980 to describe the vanguard class of a technologized future. (Toffler had a nifty knack for knee-jerk neologisms, as we will see.)¹²

Rather than being entirely new, the prosumer partially represented a return to subsistence, to the period prior to the Industrial Revolution's division of labor—a time when we ate what we grew, built our own shelters, and gave birth without medicine. The specialization of agriculture and manufacturing and the rise of cities put an end to such autarky: the emergence of capitalism distinguished production from consumption via markets. But Toffler discerned a paradoxical latter-day blend of the two seemingly opposed eras, symbolized by the French invention and marketing of home pregnancy tests in the 1970s. These kits relied on the formal knowledge, manufacture, and distribution that typified modern life but permitted customers to make their own diagnoses, cutting out the role of doctors as expert gatekeepers between applied science and the self.

Toffler called this "production for self-use." He saw it at play elsewhere as well: in the vast array of civil society organizations that emerged at the time, the craze for "self-help," the popularity of self-serve gas stations as franchises struggled to survive after the 1973–74 oil crisis, and the proliferation of automatic teller machines as banks sought to reduce their retail labor force.

The argument Toffler made thirty-five years ago—that we are simultaneously cultural consumers and producers, that is, prosumers—is an idea whose time has come, as his fellow reactionary Victor Hugo almost put it.¹³ Readers become authors. Listeners transform into speakers. Viewers emerge as stars. Fans are academics. Zine writers are screenwriters. Bloggers are copywriters. Children are

columnists. Bus riders are journalists. Coca-Cola hires African Americans to drive through the inner city selling soda and playing hip-hop. AT&T pays San Francisco buskers to mention the company in their songs. Urban performance poets rhyme about Nissan cars for cash, simultaneously hawking, entertaining, and researching. Subway's sandwich commercials are marketed as made by teenagers. Cultural studies majors turn into designers. Graduate students in New York and Los Angeles read scripts for producers, then pronounce on whether they tap into the zeitgeist. Internally divided—but happily so—each person is, as Foucault put it forty years ago, “a consumer on the one hand, but . . . also a producer.”¹⁴

Along the way, all that seemed scholarly has melted into the air. Bitcoin and Baudrillard, creativity and carnival, heteroglossia and heterotopia—they're all present but simultaneously theorized and realized by screen-based activists rather than academics. Vapid victims of ideology are now credible creators of meaning, and active audiences are neither active nor audiences—their uses and gratifications come from sitting back and enjoying the career of their own content, not from viewing others'. They resist authority not via aberrant decoding of texts that have been generated by professionals, but by ignoring such things in favor of making and watching their own.

Whether scholars like to attach electrodes to peoples' naughty bits to establish whether porn turns them on or interview afternoon TV viewers to discern progressive political tendencies in their interpretation of courtroom shows, they're yesterday's people. It doesn't matter if they purvey rats and stats and are consummate quantoids, or eschew that in favor of populist authenticity as acafans and credulous qualtooids. Their day has passed. “Media effects” describes what people do to the media, not the other way round.

People in all spheres of scholarship say “my children” enjoy this, that, or the other by way of media use. These choices are held up as predictions of the future. No one says the same about, for example, their children's food preferences, as if abjuring vegetables at age seven will be a lifetime activity. But when it comes to the media, children are mini-Tofflers, forecasters of a world they are also bringing into being.

Like Toffler all those decades ago, cybertarian discourse buys into individualistic fantasies of reader, audience, consumer, and player autonomy—the neoliberal intellectual's wet dream of music, movies, television, and everything else converging under the sign of empowered and creative fans. The New Right of communication and cultural studies invests with unparalleled gusto in Schumpeterian entrepreneurs, evolutionary economics, and creative industries. It's never seen an “app” it didn't like or a socialist idea it did. Faith in devolved media-making amounts to a secular religion, offering transcendence in the here and now via a “literature of the eighth day, the day after Genesis.”¹⁵ This is narcissography at work, with the critic's persona a guarantor of assumed audience revelry and Dionysian joy. Welcome to “Readers' Liberation Movement” media studies.¹⁶

This strong utopian line about digital technologies and the Internet is appealing in its totality, its tonality, its claims, its cadres, its populism, its popularity, its happiness, and its hopefulness. But such utopianism has seen a comprehensive turn away from addressing unequal infrastructural and cultural exchange, toward an extended dalliance with new technology and its supposedly innate capacity to endow users with transcendence.¹⁷ In 2011, the cost of broadband in the Global South was 40.3 percent of the average individual gross national income (GNI). Across the Global North, by comparison, the price was less than 5 percent of GNI per capita.¹⁸ Within Latin America, for example, there are major disparities in pricing. One megabit a second in Mexico costs US\$9, or 1 percent of average monthly income; in Bolivia, it is US\$63, or 31 percent. Access is also structured unequally in terms of race, occupation, and region: indigenous people represent a third of rural workers in Latin America, and over half in some countries are essentially disconnected. The digital divide between indigenous people and the rest of the population in Mexico is 0.3, in Panama 0.7, and Venezuela 0.6.¹⁹ Rather than seeing new communications technologies as magical agents that can produce market equilibrium and hence individual and collective happiness, we should note their continued exclusivity.

It is also worth noting that there are anticybertarian skeptics aplenty in both public intellectual and cloistered worlds and the third sector. They offer ways of thinking that differ from the dominant ones. Consider Evgeny Morozov's striking journalistic critiques, which have resonated powerfully in their refusal of technocentric claims for social change.²⁰ On more scholarly tracks, many authors have done ethnographic and political-economic work on the labor conditions experienced by people in the prosumer world as well as policy explorations of digital capitalism and the state.²¹ Case studies of WikiLeaks, for instance, show the ambivalent and ambiguous sides to a phenomenon that has been uncritically welcomed by cybertarians, while we now know the extent of corporate surveillance enabled by their embrace of Facebook and friends.²² Beyond the Global North, thick descriptions of technocentric, cybertarian exploitation and mystification proliferate as the reality of successive liberatory "springs" supposedly unleashed by social media networks is exposed.²³ And nongovernment organizations raise the flag against crass celebrations of new media technologies that damage workers and the environment.²⁴ This array of work provides a sturdy counterdiscourse to the admittedly still dominant cybertarian position.

TELEVISION AND THE ENVIRONMENT

Drawing on that more skeptical outlook, let's investigate in greater depth the claims made for these technologies with reference to television and the environment, before moving to discuss the world of work in greater depth. We'll see that for now, at least, cybertarian rhetoric in these areas fails on its own terms.

Consider the bold assertions made above by Netflix and IBM. The evidence for television's demise is as sparse and thin as the rhetoric about it is copious and thick. Historically, most new media have supplanted earlier ones as central organs of authority or pleasure: books versus speeches, films versus plays, singles versus sheet music. TV blended them. A warehouse of contemporary culture, it merged what had come before, and now it is merging with personal computers (which were modeled on it) to do the same.²⁵ The *New York Times* presciently announced this tendency over thirty years ago with the headline "Television Marries Computer."²⁶

Television's robust resilience is especially salient when it comes to current affairs: 94 percent of the U.S. population watches TV news, which has long been its principal resource for understanding both global events and council politics. During the 2004 U.S. presidential election, 78 percent of the population followed the campaign on television, up from 70 percent in 2000.²⁷ Political operatives pay heed to this reality. Between the 2002 and 2006 midterm elections and across that 2004 campaign, TV expenditure on political advertising grew from \$995.5 million to \$1.7 billion—at a time of minimal inflation. That amounted to 80 percent of the growth in broadcasters' revenue in 2003–2004. The 2002 election saw \$947 million spent on television advertising; 2004, \$1.55 billion; and 2006, \$1.72 billion. The correlative numbers for the Internet were \$5 million in 2002; \$29 million in 2004; and \$40 million in 2006. The vast majority of electronic electoral campaigning takes place on local TV—95 percent in 2007.²⁸

We might examine the famous Barack Obama campaign of 2008 and its much-vaunted use of the Internet. Here's the deal: Obama's organization spent the vast bulk of its energy and money on television. The Internet was there to raise funds and communicate with supporters. The U.S. presidency cycles with the summer Olympics. Few candidates commit funds to commercials in prime time during this epic of capitalist excess, where the classic homologues of competition vie for screen time—athletic contests versus corporate hype. Obama, however, took a multimillion-dollar package across the stations then owned by General Electric: NBC (Anglo broadcast), CNBC (business-leech cable), MSNBC (news cable), USA (entertainment cable), Oxygen (women's cable), and Telemundo (Spanish broadcast). TV was on the march, not in retreat: on election night 2008, CNN gained 109 percent more viewers than the equivalent evening four years earlier. The 2012 U.S. presidential election was again a televisual one. How many U.S. residents who watched the debates between Mitt Romney and Obama preferred the Internet to TV as their source? Three percent. How many watched on both TV and the Internet? Eleven percent. How many people shared their reactions online? Eight percent.²⁹

In Europe as well as the United States, TV rules the roost by a long way when viewers seek news. Worldwide, owners of tablets like iPads are the keenest consumers of television news. These gadgets are adjuncts, partners, to the main source. If anything, they stimulate people to watch more television.³⁰

The green qualities of new media technologies are as dubious as claims for their hegemony over TV. The Political Economy Research Institute's 2013 "Misfortune 100: Top Corporate Air Polluters in the United States" placed half a dozen media owners in the first fifty.³¹ Cultural production relies on the exorbitant water use of computer technology, while making semiconductors requires hazardous chemicals, including carcinogens. At current levels, residential energy use of electronic equipment will rise to 30 percent of the overall global demand for power by 2022, and 45 percent by 2030, thanks to server farms and data centers and the increasing time people around the world spend watching and adding to screens.³²

COGNITARIAT

And labor? The Entertainment & Leisure Software Publishers Association celebrates women and video games, ignoring women's part in their manufacture and disposal. Britain's report on harm to children from games neglects children whose forced labor makes and deconstructs them. And a study prepared for capital and the state entitled *Working in Australia's Digital Games Industry* does not refer to mining rare earth metals, making games, or handling electronic waste—all of which should fall under "working in Australia's digital games industry."³³ Such research privileges the consciousness of play and the productivity of industry. Materiality is forgotten, as if it were not part of feelings, thoughts, experiences, careers—or money, oddly. By and large, the people who actually make media technologies are therefore excluded from the dominant discourses of high technology. It is as if telecommunications, cell phones, tablets, televisions, cameras, computers, and so on sprang magically from a green meritocracy of creativity.

Then there is the question of "you," this dominant, imperialistic figure of prosumption. Audience members spy on fellow spectators in theaters to see how they respond to coming attractions. Opportunities to vote in the Eurovision Song Contest or a reality program disclose the profiles and practices of viewers, who can be monitored and wooed in the future. End-user licensing agreements ensure that online players of corporate games sign over their cultural moves and perspectives to the very companies they are paying to participate.³⁴

More than that, Silicon Valley, Alley, Roundabout, and other hopeful variants speak mystically of "the Singularity." If it comes—current messianic predictions estimate between 2030 and 2045—then "you" will be rendered very secondary indeed. For the Singularity is "the last machine."³⁵ It will allegedly permit us "in the fairly near future [to] create or become creatures of more than human intelligence . . . ushering in a posthuman epoch . . . beyond human ken . . . intrinsically unintelligible."³⁶ The "us" will no longer be the masters of our technological world, no longer all-powerful prosumers, but one more cog in a wheel that is not even capitalist or socialist—a fleshy cog of HAL, the totalitarian computer from *2001* (1968).³⁷

Such proletarianization is already upon us. Back in 1980, Toffler acknowledged the crucial role of corporations in constructing prosumption—they were there from the first, cutting costs and relying on labor undertaken by customers to externalize costs through what he termed “willing seduction.” This was coeval with, and just as important as, the devolution of authority that would emerge from the new freedoms.³⁸ Most of the exciting new activities I have mentioned involve getting customers to do unpaid work, even as they purchase goods and services.

Just as Toffler imagined prosumers emerging from technological changes to the nature and interaction of consumption and production, he anticipated that these transformations would forge new relationships between proletarians and more educated workers. At the same time as he coined the term *prosumer*, Toffler introduced the idea of the “cognitariat”: people undertaking casualized cultural work who have heady educational backgrounds yet live at the uncertain interstices of capital, qualifications, and government in a post-Fordist era of mass unemployment, chronic underemployment, zero-time contracts, limited-term work, interminable internships, and occupational insecurity. Drawing on his early childhood experiences with Marxism, Toffler welcomed this development as an end to alienation, reification, and exploitation, because the cognitariat held the means of production in its sinuous mind rather than its burly grasp. The former could not be owned and directed as per the latter’s industrial fate.³⁹

Cognitarians are sometimes complicit with these circumstances, because their identities are shrouded in autotelic modes of being: work is pleasure and vice versa; labor becomes its own reward. Dreams of autonomous identity formation find them joining a gentry poor dedicated to the life of the mind that supposedly fulfills them and may one day deliver a labor market of plenty.⁴⁰ But they also confront inevitable contradictions, “the glamour as well as the gloom of the working environment of the creative economy.”⁴¹

From jazz musicians to street artists, cultural workers have long labored without regular compensation and security. That models the expectations we are *all* supposed to have today, rather than our parents’ or grandparents’ assumptions about lifelong—or at least steady—employment. Cultural production shows that all workers can move from security to insecurity, certainty to uncertainty, salary to wage, firm to project, and profession to precarity—and with smiles on their faces.⁴² Contemporary business leeches love it because they crave flexibility in the people they employ, the technologies they use, the places where they do business, and the amounts they pay—and *inflexibility* of ownership and control.⁴³

When I migrated to New York City in 1993, interviewers for broadcast stations’ news shows would come to my apartment as a team: a full complement of sound recordist, camera operator, lighting technician, and journalist. Now they are rolled into one person. More content must be produced from fewer resources, and more and more multiskilling and multitasking are required. In my example,

the journalist has taken over the other tasks. The job of the editor is also being scooped up into the new concept of the “preditor,” who must perform the functions of producer and editor. And if journalists work for companies like NBC, they often write copy for several web sites *and* provide different edited versions of the original story for MSNBC, CNBC, CNBC Africa, CNBC Europe, and CNBC Asia.

This precariousness also sees new entrants to such labor markets undermining established workers’ wages and conditions. Consider the advertising agency Poptent, which undercuts big competitors in sales to major clients by exploiting prosumers’ labor in the name of “empowerment.” That empowerment takes the following form: Poptent pays the creators of homemade commercials \$7,500; it receives a management fee of \$40,000; and the buyer saves about \$300,000 on the usual price.⁴⁴

Because this volume is concerned more with fictional than factual screen genres, it’s worth recalling that such examples also apply wherever labor is not organized in strong unions (the cable versus broadcast TV labor process is a notorious instance). For example, thousands of small firms with unorganized workforces are dotted across the hinterland of California. They produce DVD film commentaries, music for electronic games, and reality TV shows⁴⁵ and are increasingly looking for opportunities in visual effects, animation, and video game development.⁴⁶ They might also be making programs for YouTube’s hundred new channels, the fruit of Google’s hundred-million-dollar production (and two-hundred-million-dollar marketing) wager that five-minute online shows will kill off TV. Explosions were routinely filmed for these channels near my late lamented loft in downtown Los Angeles. The workers blowing things up were paid \$15 an hour.⁴⁷

Clearly, cultural labor incarnates this latter-day loss of lifelong employment and relative income security among the Global North’s industrial proletarian and professional-managerial classes. A rarefied if exploitative mode of work—that of the artist and artisan in the field of culture—has become a shadow-setter for conditions of labor elsewhere in the economy. Even reactionary bodies like the U.S. National Governors Association recognize the reality: “Routine tasks that once characterized middle class work have either been eliminated by technological change or are now conducted by low-wage but highly skilled workers.”⁴⁸

This new division of labor is becoming as global as the manufacturing one that preceded it. For alongside a casualization of middle-class jobs within the Global North, there is also a New International Division of Cultural Labor. By the 1980s, as culture became increasingly commodified and governmentalized and drew closer to the center of the world economy, it fell subject to the same pressures as secondary industries. Hence the success of Mindworks Global Media, a company outside New Delhi that provides Indian-based journalists and copy editors to newspapers whose reporters are supposedly in the United States and Europe. It promises 35–40 percent cost savings by contrast with workers at the outlets in question.⁴⁹

CONCLUSION

Cybertarian mythology not only rests on a flawed, albeit touching, account of the person as a ratiocinative, atomistic individual who can exist outside politics and society. It equally assumes that the Internet—which in reality was born of warfare consultancies and “big science,” has spread through large institutions, and is rapidly moving toward comprehensive corporate control—can be claimed for the wild children of geekdom. In place of this sweet-natured technophilic dreaming, activists, citizens, and scholars alike need fewer smiley faces; they must be displaced by quizzical ones that will turn their and our heads in the direction of our real material conditions of existence.

Despite the technocentric projections of both Cold War futurists and contemporary web dreamers, the wider culture industries largely remain controlled by media and communications conglomerates, which frequently seek to impose artist-like conditions on their workforces. They gobble up smaller companies that invent products and services, “recycling audio-visual cultural material created by the grassroots genius, exploiting their intellectual property and generating a standardized business sector that excludes, and even distorts, its very source of business,” to quote the *Hindu*.⁵⁰ In other words, the cognitariat—interns, volunteers, contestants, and so on—creates “cool stuff” whose primary beneficiaries are corporations.⁵¹

There is some very competent research into the lived conditions of folks setting up alternative forms of collaborative work inside the cognitariat that have the potential for a more exciting way forward than the tired cybertarian rhetoric that so unthinkingly repeats and repeats and repeats ideas that belong to Reaganite dreamers.⁵² When linked to the political-economic and ethnographic work outlined earlier, and the equally path-breaking research undertaken by nongovernment organizations, the future can be reinterpreted and remade by a realistic analytic frame that takes its inspiration from lived experience, in opposition to futuristic fantasy. Then the scholarship melting into air will have served its cybertarian time. Good riddance.

NOTES

Thanks to the editors for their helpful comments.

1. Netflix, “Netflix’s View: Internate TV Is Replacing Linear TV,” July 15, 2015, <http://ir.netflix.com/long-term-view.cfm>.

2. IBM Institute for Business Value, “The End of Television as We Know It,” www-935.ibm.com/services/us/imc/pdf/ge510-6248-end-of-tv-full.pdf.

3. U.S. Navy homepage, www.navy.com.

4. Esther Dyson, George Gilder, George Keyworth, and Alvin Toffler, “Cyberspace and the American Dream: A Magna Carta for the Information Age,” version 1.2 (Progress and Freedom Foundation, 1994), www.pff.org/issues-pubs/futureinsights/fi1.2magnacarta.html.

5. "1. You," *Guardian*, September 1, 2013, www.theguardian.com/media/2013/sep/01/you-them-mediaguardian-100-2013; "MediaGuardian 100," *Guardian*, September 1, 2013, www.theguardian.com/media/series/mediaguardian-100-2013-1-100.
6. Lev Grossman, "Time's Person of the Year: You," *Time*, December 13, 2006, <http://content.time.com/time/magazine/article/0,9171,1570810,00.html>.
7. "Exporting the Doctor," *New Statesman*, August 22–28, 2014, 7.
8. CHASS, "Innovation in a Post-Smokestack Industry Era: Productivity Commission's Study on Science and Innovation," 2006, www.chass.org.au/wp-content/uploads/2015/02/SUB20060807TG.pdf.
9. An astonishing claim from a country that survives on per capita dirty-power exports that make it among the greatest polluters in history—but why spoil a good story? Simon Lauder, "Australians the 'World's Worst Polluters,'" *World Today*, September 11, 2009, www.abc.net.au/news/2009-09-11/australians-the-worlds-worst-polluters/1425986.
10. The first reference I have found to this is Toby Miller, "No More Cybertarians, Please—More Citizens, Thank You," *Television & New Media* 1.2 (2000): 131–134. But then I would say that.
11. Mark Graham, "Warped Geographies of Development: The Internet and Theories of Economic Development," *Geography Compass* 2.3 (2008): 771–789.
12. Alvin Toffler, *The Third Wave* (New York: William Morrow, 1980); George Ritzer and Nathan Jurgenson, "Production, Consumption, Prosumption: The Nature of Capitalism in the Age of the Digital 'Prosumer,'" *Journal of Consumer Culture* 10.1 (2010): 13–36.
13. Hugo wrote, "On résiste à l'invasion des armées; on ne résiste pas à l'invasion des idées," in *Histoire d'un crime: Déposition d'un témoin* (Paris: Nelson, 1907), 554, which is often rendered in English as the cliché I have just used. The next sentence is "La gloire des barbares est d'être conquis par l'humanité; la gloire des sauvages est d'être conquis par la civilisation," which translates as "The glory of barbarians is to be conquered by humanity; the glory of savages is to be conquered by civilization." Thanks for sharing, Vic.
14. Michel Foucault, *The Birth of Biopolitics: Lectures at the Collège de France, 1978–79*, trans. Graham Burchell, ed. Michel Senellart (Houndmills: Palgrave Macmillan, 2008), 226.
15. James W. Carey, "Historical Pragmatism and the Internet," *New Media & Society* 7.4 (2005): 443–455.
16. Meaghan Morris, "The Banality of Cultural Studies," in *Logics of Television: Essays in Cultural Criticism*, ed. Patricia Mellencamp (Bloomington: Indiana University Press, 1990), 14–43; Terry Eagleton, "The Revolt of the Reader," *New Literary History* 13.3 (1982): 449–452.
17. Christine L. Ogan, Manaf Bashir, Lindita Camaj, Yunjuan Luo, Brian Gaddie, Rosemary Pennington, Sonia Rana, and Mohammed Salih, "Development Communication: The State of Research in an Era of ICTs and Globalization," *Gazette* 71.8 (2009): 655–670.
18. International Telecommunication Union, *Measuring the Information Society: Executive Summary* (Geneva: International Telecommunication Union, 2012), 4.
19. Matías Bianchi, "Digital Age Inequality in Latin America," *Democracia Abierta*, June 24, 2015, www.opendemocracy.net/democraciaabierta/mat%C3%ADas-bianchi/digital-age-inequality-in-latin-america.
20. Evgeny Morozov, *The Net Delusion: The Dark Side of Internet Freedom* (New York: PublicAffairs, 2011); and *To Save Everything, Click Here: The Folly of Technological Solutionism* (New York: PublicAffairs, 2013).
21. Andrew Ross, *Nice Work If You Can Get It: Life and Labor in Precarious Times* (New York: New York University Press, 2009); Mark Banks, Rosalind Gill, and Stephanie Taylor, eds., *Theorising Cultural Work: Labour, Continuity and Change in the Cultural and Creative Industries* (London: Routledge, 2013); Marisol Sandoval, *From Corporate to Social Media: Critical Perspectives on Corporate Social Responsibility in Media and Communication Industries* (London: Routledge, 2014); Christian Fuchs, *Social Media: A Critical Introduction* (Los Angeles: Sage, 2014); Geert Lovink and Miriam Rasch, eds.,

Unlike Us Reader: Social Media Monopolies and Their Alternatives (Amsterdam: Institute of Network Cultures, 2013); Dan Schiller, *Digital Depression: Information Technology and Economic Crisis* (Champaign: University of Illinois Press, 2014).

22. Christian Christensen, ed., "WikiLeaks: From Popular Culture to Political Economy," *International Journal of Communication* 8 (2014), <http://ijoc.org/index.php/ijoc/issue/view/10#more4>; André Jansson and Miyase Christensen, eds., *Media, Surveillance and Identity: Social Perspectives* (New York: Peter Lang, 2014).

23. Néstor García Canclini, *El mundo entero como lugar extraño* (Buenos Aires: Gedisa, 2014); Walter Armbrust, "The Revolution against Neoliberalism," *Jadaliyya*, February 2011, www.jadaliyya.com/pages/index/717/the-revolution-against-neoliberalism-; Rami Zurayk, *Food, Farming and Freedom: Sowing the Arab Spring* (Charlottesville, VA: Just World Books, 2011); Mukadder Çakir, ed. *Yeni Medyaya Eleştirel Yaklaşımlar* (İstanbul: Doğu Kitabevi, 2014).

24. Basel Action Network and Silicon Valley Toxics Coalition, *Exporting Harm: The High-Tech Trashing of Asia* (Seattle: Basel Action Network, 2002); Greenpeace, *How Clean Is Your Cloud?* (2012), www.greenpeace.org/international/en/publications/Campaign-reports/Climate-Reports/How-Clean-is-Your-Cloud/; Centro de Reflexión y Acción Laboral, *New Technology Workers: Report on Working Conditions in the Mexican Electronics Industry* (2006), http://sjsocial.org/fomento/proyectos/plantilla.php?texto=cereal_m.

25. Tom Standage, "Your Television Is Ringing," *Economist*, October 12, 2006, www.economist.com/node/7995312.

26. Howard Gardner, "When Television Marries Computer," *New York Times*, March 27, 1983, www.nytimes.com/1983/03/27/books/when-television-marries-computer-by-howard-gardner.html.

27. Lydia Saad, "TV Is Americans' Main Source of News," *Gallup*, July 8, 2013, www.gallup.com/poll/163412/americans-main-source-news.aspx; "The State of the News Media 2005," *Journalism.org*, <http://stateofthemediamedia.org/2005/>; "Trends 2005," *Pew Research Center*, January 20, 2005, www.pewresearch.org/2005/01/20/trends-2005/.

28. Katrina vanden Heuvel, "America Needs Electoral Reform," *Nation*, July 1, 2008, www.thenation.com/article/america-needs-electoral-reform/; "Voters, MySpace, and YouTube," *Social Science Computer Review* 26 (Fall 2008): 288–300, <http://ssc.sagepub.com/content/26/3/288.full.pdf+html>; "An Analysis of 2007 and 2008 Political, Issue and Advocacy Advertising (TNS)," *Branson Agent*, October 16, 2007, <http://bransonagentnewline.blogspot.co.uk/2007/10/analysis-of-2007-and-2008-political.html>; www.adweek.com/?vnu_content_id=1003658398&tutm_source=feedburner&tutm_medium=feed&tutm_campaign=Feed%253A+Mediaweek-Tv-Radio-Stations-And-Outdoor+%2528Mediaweek+News+-+TV%252C+Radio+Stations+and+Outdoor%2529.

29. Ira Teinowitz, "Olympic Deal Sealed: Obama Makes \$5 Million Buy," *Advertising Age*, July 23, 2008, <http://adage.com/article/news/olympic-deal-sealed-obama-makes-5-million-buy/129853/>; Paul J. Gough, "In '08, Big Headlines for Everybody," *Hollywood Reporter*, December 31, 2008, www.hollywoodreporter.com/news/08-big-headlines-everybody-124988;

"One-in-Ten 'Dual-Screened' the Presidential Debate," *Pew Research Center*, October 11, 2012, www.people-press.org/2012/10/11/one-in-ten-dual-screened-the-presidential-debate/.

30. John Eggerton, "Survey: TV Remains Top News Access Device," *Broadcasting and Cable*, March 17, 2014, www.broadcastingcable.com/news/washington/survey-tv-remains-top-news-access-device/129847; Nic Newman and David A. L. Levy, *Reuters Institute Digital News Report 2014* (Oxford: Reuters Institute, 2014), <https://reutersinstitute.politics.ox.ac.uk/sites/default/files/Reuters%20Institute%20Digital%20News%20Report%202014.pdf>; "BBC World News and BBC.com Release World's Largest Global Study of News Consumption Habits across Multiple Devices," *BBC News*, March 26, 2013, www.bbc.co.uk/mediacentre/worldnews/news-consumption.html.

31. Political Economy Research Institute, "Misfortune 100: Top Corporate Air Polluters in the United States" (2013), www.peri.umass.edu/toxicair_current/.

32. Jad Mouawad and Kate Galbraith, "Plugged in Age Feeds Hunger for Electricity," *New York Times*, September 20, 2009, A1; International Energy Agency, *Gadgets and Gigawatts: Policies for Energy Efficient Electronics—Executive Summary* (Paris: Organization for Economic Cooperation and Development, 2009), 5, 21; Climate Group, *Smart2020: Enabling the Low Carbon Economy in the Information Age* (London: Global Sustainability Initiative, 2008), 8–23; Simon Hancock, "Iceland New Home of Server Farms?" *BBC News*, October 10, 2009, http://news.bbc.co.uk/go/pr/fr/-/2/hi/programmes/click_online/8297237.stm; Organisation for Economic Co-Operation and Development, *Greener and Smarter: ICTs, the Environment and Climate Change* (Paris: Organisation for Economic Co-Operation and Development, 2010), 19.
33. Entertainment & Leisure Software Publishers Association, *Chicks and Joysticks: An Exploration of Women and Gaming* (London: Entertainment & Leisure Software Publishers Association, 2004); Department for Children, Schools and Families and Department for Culture, Media and Sport, *Safer Children in a Digital World: The Report of the Byron Review* (2008); Australian Research Council Centre of Excellence for Creative Industries and Innovation, Queensland University of Technology, and Games Developers' Association of Australia, *Working in Australia's Digital Games Industry: Consolidation Report* (2011).
34. Richard Maxwell and Toby Miller, "'Warm and Stuffy': The Ecological Impact of Electronic Games," in *The Video Game Industry: Formation, Present State, and Future*, ed. Peter Zackariasson and Timothy Wilson (London: Routledge, 2012), 179–197; Toby Miller, *Cultural Citizenship: Cosmopolitanism, Consumerism, and Television in a Neoliberal Age* (Philadelphia: Temple University Press, 2007).
35. Bryan Appleyard, "The New Luddites," *New Statesman*, August 22–28, 2014, 35.
36. Vernor Vinge, "Signs of the Singularity," *IEEE Spectrum*, June 1, 2008, <http://spectrum.ieee.org/biomedical/ethics/signs-of-the-singularity>.
37. "The Singularity," *IEEE Spectrum*, <http://spectrum.ieee.org/static/singularity>.
38. Toffler, *The Third Wave*, 266, 269–270, 275.
39. Alvin Toffler, *Previews and Premises* (New York: William Morrow, 1983); and *Powershift: Knowledge, Wealth, and Violence at the Edge of the Twenty-First Century* (New York: Bantam, 1990).
40. André Gorz, "Économie de la connaissance, exploitation des savoirs: Entretien réalisé par Yann Moulrier Boutang and Carlo Vercellone," *Multitudes* 15 (2004), <http://multitudes.samizdat.net/Economie-de-la-connaissance>; Ross, *Nice Work If You Can Get It*.
41. Laikwan Pang, "The Labor Factor in the Creative Economy: A Marxist Reading," *Social Text* 99 (2009): 59.
42. Ross, *Nice Work If You Can Get It*.
43. Vincent Mosco, *To the Cloud: Big Data in a Turbulent World* (Boulder, CO: Paradigm, 2014), 155–174.
44. Dawn C. Chmielewski, "Poptent's Amateurs Sell Cheap Commercials to Big Brands," *Los Angeles Times*, May 8, 2012, <http://articles.latimes.com/2012/may/08/business/la-fi-ct-poptent-20120508>; www.poptent.net/.
45. Miranda Banks and Ellen Seiter, "Spoilers at the Digital Utopia Party: The WGA and Students Now," *Flow* 7.4 (2007), <http://flowtv.org/2007/12/spoilers-at-the-digital-utopia-party-the-wga-and-students-now/>.
46. Michael Cieply, "For Film Graduates, an Altered Job Picture," *New York Times*, July 4, 2011, C1.
47. Thielman, Sam, "YouTube Commits \$200 Million in Marketing Support to Channels," *AdWeek*, May 3, 2012, www.adweek.com/news/technology/youtube-commits-200-million-marketing-support-channels-140007.
48. Erin Sparks and Mary Jo Watts, *Degrees for What Jobs? Raising Expectations for Universities and Colleges in a Global Economy* (Washington: National Governors Association Center for Best Practices, 2011), 6.
49. Nandini Lakshman, "Copyediting? Ship the Work Out to India," *Business Week*, July 8, 2008, www.businessweek.com/globalbiz/content/jul2008/gb2008078_678274.htm; Mindworks web site, www.mindworksglobal.com/.

50. Sharada Ramanathan, "The Creativity Mantra," *Hindu*, October 29, 2006, www.hindu.com/mag/2006/10/29/stories/2006102900290700.htm.

51. Andrew Ross, "Nice Work If You Can Get It: The Mercurial Career of Creative Industries Policy," *Work Organisation, Labour & Globalisation* 1.1 (2006–7): 1–19; Carmen Marcus, *Future of Creative Industries: Implications for Research Policy* (Brussels: European Commission Foresight Working Documents Series, 2005).

52. García Canclini, *El mundo entero como lugar extraño*.