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Screen Life

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Most popular and significant screen texts (i.e., retail websites, Hollywood films, television programs, press releases redisposed as churnalism, dating sites, and corporate electronic games – not queer collective documentaries, environmental agitprop, Occupy manifestos, alternative news, my Vimeo recordings, or vanguardist *cortometrajes*) are commodities. Their appeal lies in the meanings they incarnate and generate. Perhaps because of this, the majority of cultural writing and speech about screen texts across the *anglo-parlante* world today isn't really about screen texts at all: it's to do with consciousness, specifically the consciousness of audiences. I mean by this that the screen and its texts are subordinated to an implicit and explicit excitation about spectatorship.

This tendency is evident regardless of whether the screens are mobile or static, large or small, networked or not, and across genres – games, sports, drama, news, documentary, and variety. Analysts prone to this discourse include regulators, journalists, pediatricians, police, advertisers, professors, politicians, parents, psychologists, bureaucrats, and anarchists. They veer hysterically between dystopic and utopic polarities, depending on their view of how new technologies either direct or unleash popular energies.

The binaristic cultural assumptions underpinning the discourse of audience consciousness generated by this diverse group include the following seeming antonyms that are logocentrically interdependent:

- large media conglomerates exercise total control over viewers, listeners, and readers, who absorb corporate messages like blank slates waiting to be covered with meaning/ because of new screen technologies and practices of consumption, concentration of media ownership and control no longer matters – information is finally free, thanks to multi-point distribution and destabilized hierarchies
- audiences are passive and align with their social identities as targeted by the media/ consumers are sovereign and can transcend class and other categories
- children are vulnerable to technologies and their messages/young people are liberated from media control
- news and current affairs set the agenda of politics and economics for ordinary people/ journalism is dying, as everyone and their app become sources of both news and reporting, simultaneously subjects and writers

A Companion to Critical and Cultural Theory, First Edition. Edited by Imre Szeman, Sarah Blacker and Justin Sully.

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- a political-economic oligarchy runs the social order and minimizes newness in order to diminish risk/the creative destruction of economic innovation ushers out the old and burnishes the new
- corporate and state power classify and manage the tastes and beliefs of audiences/Marxist political economy and ideology critique deny the power of consumers and users and the irrelevance of boundaries
- former colonial powers and the United States dominate other cultures through the export of their media texts and the force of their companies/cultural-imperialism critique misses the creativity and resilience of national and subnational forms of life against industrial products; and
- violence and educational failure correlate with heavy use of the screen/media effects are inconsequential/audiences outwit corporate plans and psy-function norms

What is left out of these pessimistic and optimistic, popular and powerful perspectives? What else should we think about when we confront screen texts as screen life – in other words, as moments of production, meaning, consumption, and refuse? Is there anything beyond these stubborn binary oppositions, which seem to be as ineradicable as they are incommensurate?

A counter-list might include:

- citizenship rights and responsibilities in the context of concentrated ownership, weak regulation, and technological reach and convergence
- the ecological impact of the media
- the media beyond the confines of the global North, in places where, for example, newspapers continue to expand
- life outside consumption, untouched by multinational markets – without an electricity grid or potable water
- the continued resonance of cultural-imperialism critique for populations and activists; and
- the fantasies that media organizations have spread for a century – casting themselves as vulnerable to the young, susceptible to consumer rebellion, and hapless in the face of new technology laying waste to established power

This counter-discourse is largely absent from contemporary screen studies, whose best friends today are likely to be narratologists, aesthetes, *littérateurs*, academic fans, and creative-industries ideologues rather than political economists, ratings mavens, social-movement advocates, or environmentalists. More and more textual, generic, and fan-based analysis and less and less materialist work on the screen are being done. How might materialist approaches reassert themselves in a way that acknowledges the importance of meaning, but goes beyond the weightless idealism I have identified?

To respond to this question, we need to view the screen, whether it is a stupid phone or a smart film, through twin theoretical prisms. On the one hand, the screen is a component of sovereignty that relates to territory, language, history, and schooling. On the other, it is a cluster of culture industries. In each case, it is subject to the rent-seeking practices, exclusionary representational protocols, and environmental destructiveness that generally characterize liaisons between state and capital at the same time as it is animated by people at particular sites. To comprehend screen life, we therefore need to examine it at a structural and experiential level.

What to Do

Some useful precedents are available from a wee review of the literature of cultural materialism. Endless moral panics about the screen, to do with learning, lust, and lawlessness, have meant that technologies, audiences, and regulations have long been necessary components of cultural analysis. While those anxious origins may be rather dubious, their unintended consequences have left us ready to deal with media-effects medics, state censors, and propaganda people, because political economists and media historians, unlike others, have tended to look at the screen institutionally as well as textually and psychologically.

A materialist theory of the screen offers a place beyond the frontiers of dominant discourse by circumventing the theoretical traps that characterize cultural theory's current morass. The historian Roger Chartier is a helpful guide. Chartier seeks to establish and comprehend the contingent meanings of texts in three ways:

- a) reconstructing "the diversity of older readings from their sparse and multiple traces"
- b) focusing on "the text itself, the object that conveys it, and the act that grasps it"; and
- c) identifying "the strategies by which authors and publishers tried to impose an orthodoxy or a prescribed reading on the text" (Chartier 1989, 157, 161–163, 166).

This grid turns away from reflectionism, which argues that a text's key meaning lies in its overt or covert capacity to capture the *Zeitgeist*; it rejects formalism's claim that a close reading of sound and image cues can secure a definitive meaning; and it eschews the use of amateur-hour humanities psychoanalysis or rat-catching sadism (aka psychology) to unlock what is inside people's heads. Instead, Chartier looks at the passage of texts through space and time, noting how they accrete and attenuate meanings on their travels as they rub up against, trope, and are themselves troped by other fictional and social texts. Chartier's method traces screen life as a set of meanings moving through time and space.

Néstor García Canclini's notions of hybrid identity and interculturalism (1989, 2004; García Canclini and Miller 2014) and Bruno Latour's (1993, 2004) reconceptualization of hybridity locate screen life in broader contexts, while remaining tightly tied to materialist methods. Canclini notes three paradoxes in his account of contemporary culture. First, globalization also deglobalizes, because its dynamic and impact are not only about transport and exchange, but about disconnectedness and exclusion. Second, minority communities emerge at transnational levels, due to massive migration by people who share languages, through which they continue to communicate, work, and consume, albeit often via innovative code-switching or kitchen *argot* blended with the languages they master as migrants. Third, distinct demographic groups within sovereign-states may not form new and local cultural identities if they prefer textual imports from their places of origin dispatched through the culture industries. Amongst anthropologists we can also learn from Laura Nader's renowned call for a critical ethnography of the powerful as well as the oppressed (1972) and George Marcus's multi-sited account of where and how commodity signs begin, live, and expire (1995).

For his part, Latour allocates equal and overlapping significance to natural phenomena, social forces, and textual production. Just as objects of knowledge come to us in hybrid forms that are coevally affected by society and culture, so the latter two domains

are themselves affected by the natural world. He notes that “every type of politics has been defined by its relation to nature, whose every feature, property, and function depends on the polemical will to limit, reform, establish, short-circuit, or enlighten public life” (Latour 2004, 1). From plutocracy to patriarchy, appeals to channel, govern, or protect nature are crucial to political hegemony (33). The screen is no exception, as we shall see.

The screen is not just a series of texts to be read, coefficients of political and economic power to be exposed, or industrial objects to be analyzed. Rather, it is all these things: a hybrid monster, coevally subject to rhetoric, status, and technology – to meaning, power, and science (Latour 1993) – operating under the sign of intercultural globalization. Understanding the screen therefore requires studying it up, down, and sideways. That means researching production and distribution, cross-subsidy and monopoly profit, national and international public policy, press coverage, and environmental impact, *inter alia*, in ways that are largely unknown to disciplinary hegemony.

Futurity

For decades, developments in screen technologies have been compared to a new Industrial Revolution or the Civil and Cold Wars touted as a route to economic development as well as cultural and political expression. In the 1950s and 1960s, Fritz Machlup, a neoclassical prophet of the knowledge society, famously announced that the current and future success of the U.S. economy relied on high levels of education, research, and development. The nation needed a workforce that renewed itself by learning in harmony with advances in technology (1962).

In the context of Machlup’s findings, a group of highly placed futurists identified “knowledge workers” as vital to an emergent cluster of information-based industries, which would generate productivity gains and competitive markets and draw the middle class into their web (Bar with Simard 2006). Cold Warriors like former National Security Advisor Zbigniew Brzezinski (1969), cultural conservative Daniel Bell (1977), professional anti-Marxist Ithiel de Sola Pool (1983), and lapsed-leftist Reaganite Alvin Toffler (1980, 1983) promulgated a new international division of labor in which agricultural and manufacturing would shift to the global South and the North would embark on structural adjustment, retraining blue-collar workers away from assembly and towards services. The latter’s middle class would continue its merry investment in human capital through higher education. There would be four, largely painless, changes in the global North’s economy from production to services: the preeminence of professionalism and technique, the importance of theory to innovate and generate public policies, the formation of a discourse of the future, and new screen technologies (Mattelart 2003, 77–78).

My fellow white men of 1970s futurism saw a focus on screen technologies displacing grubby manufacturing from the global North to the global South and ramifying U.S. textual and technical power, provided that the blandishments of socialism, and negativity toward global business, did not create class struggle. They promised a world of modernity, of rationality – of the ability to apply reason to problems and seek salvation in the secular via technology. That wish has suited reactionary policy makers and think

tanks ever since, for ideological as well as efficiency reasons. The discourse has been hegemonic for nigh on fifty years, and most amusingly (for something so invested in prediction yet invested in repetition) it is constantly reinvented by amnesiac cybertarians, from *Wired* magazine in the 1990s to *Technology Review* today (Streeter 2005; Barbrook and Cameron 1996).

Consider Ronald Reagan's speech that launched his successful 1966 campaign for the governorship of California, notable for these words: "I propose... 'A Creative Society'... to discover, enlist and mobilize the incredibly rich human resources of California [through] innumerable people of creative talent." Reagan's eager rhetoric publicly birthed today's idea of technology unlocking the creativity that is allegedly lurking, unbidden, in individuals, thereby permitting them to become happy, productive – and without full-time employment. Its prescience derived from the futurists, but could have been uttered by any cybertarian today.

The speech was specifically opposed to the "Great Society," a term that had been coined by the Edwardian Fabian Graham Wallas (1967). Wallas's acolyte Walter Lippmann spoke of "a deep and intricate interdependence" that came with "living in a Great Society." This tendency worked against the militarism and other dehumanizing tendencies of "the incessant and indecisive struggle for domination and survival" (Lippmann 1943, 61, 376). Lippmann influenced Lyndon Johnson's invocation of the "Great Society" and provided a foundational argument for competent, comprehensive social justice through welfarism and other forms of state intervention. That "Great Society" vision was fatally undermined by decades of neoliberalism, under the sign of futurism, Reaganism, and the screen.

In keeping with the futurists' decades-old fantasies and the chorines of neoclassical economics, the International Telecommunication Union gleefully predicts that screens will have connected the Earth's 6.5 billion residents by 2016, enabling everyone to "access information, create information, use information and share information." This development can even "take the world out of financial crisis," thanks to its dynamizing effect on developing markets (Hibberd 2009). For instance, today's *bourgeois* economists argue against state participation in development, maintaining that cell phones have streamlined markets in the global South, enriching individuals in zones where banking and economic information are scarce, thanks to the provision of market data connecting buyers and sellers on mobile screens in ways that facilitate perfect competition. Their claims include "the complete elimination of waste" and massive reductions of poverty and corruption (Jensen 2007).

In similar vein, the Organization for Economic Cooperation and Development says these technologies can play a pivotal role in developing service-based, low-polluting economies in the global South through energy efficiency, adaptation to climate change, mitigation of diminished biodiversity, and diminished pollution (Houghton 2009). In short, the screen is said to obliterate geography, sovereignty, and hierarchy in an alchemy of truth and beauty. Corporate and governmental hegemony are supposedly undermined by innovative creation and distribution, while the economy glides gently into an ever greener post-industrialism. This utopianism has dovetailed with a comprehensive turn in research away from unequal infrastructural and cultural exchange and towards an extended dalliance with screen technology's supposedly innate and inexorable capacity to endow users with transcendence (Ogan et al. 2009).

Prosumer and Cognitarian

In terms of labor, the comparatively cheap and easy access to making and circulating meaning afforded by new screens is thought to have eroded a one-way hold on culture that saw a small segment of the world as producers and the larger segment as consumers, even as it makes for a cleaner economy. The latest screen technologies have supposedly allowed us all to become simultaneously cultural consumers and producers (“prosumers”) – no more factory conditions, no more factory emissions, and no more intermediaries deciding what pops up on our screens (Ritzer and Jurgenson 2010).

Toffler coined the term “prosumer” three decades ago. It was conceived as 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 shelter, and gave birth without medicine. The specialization of agriculture and manufacturing and the rise of cities put paid to that, as the emergence of capitalism distinguished production from consumption via markets. Toffler identified a blend of the two eras in the 1970s, when the French invented and marketed home-pregnancy tests. 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 gatekeepers between applied science and the self (Toffler 1980, 266). Toffler called this “production for self-use.” He discerned an identical tendency in the vast array of civil-society organizations that emerged at the time in the name of “self-help”; the popularity of self-serve gas stations when franchises struggled to survive after the 1973–1974 oil crisis; and the emergence of automatic teller machines, which proliferated as banks sought to reduce their labor force (269–270).

Both instances involved getting customers to do unpaid work in addition to paying for goods and services. In this sense, Toffler acknowledged the crucial role of corporations in constructing presumption – they were there from the first, cutting costs and relying on (unpaid) 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 emerged from the new freedoms of identity and mobility (275).

Today’s technological era is marked by the interoperable capacity of screens to create and transmit meaning. Suddenly readers become writers, listeners transform into speakers, viewers emerge as stars, fans are academics, and vice versa. Zine writers are screenwriters. Bloggers are copywriters. Children are columnists. Bus riders are journalists. And think of the job prospects that follow! Urban performance poets rhyme about Nissan cars for cash, simultaneously hawking, entertaining, and researching. Coca-Cola hires African Americans to drive through the inner city selling soda and playing hip-hop. Subway’s sandwich commercials are marketed as made by teenagers. AT&T pays San Francisco buskers to mention the company in their songs. As for universities, why, screen-studies majors become designers and graduate students in New York and Los Angeles film schools read scripts for producers and pronounce on whether they tap into the *Zeitgeist* (Maxwell and Miller 2012; Miller 2007).

But there’s another side. Opportunities to vote on the outcome of the Eurovision Song Contest or reality programs disclose the profiles and practices of viewers, who can be monitored and wooed more efficiently in the future. End-user licensing agreements ensure that players of corporate games online sign over their cultural moves and perspectives to the very companies they are patronizing in order to participate. YouTube streaming allows gullible cybertarians’ ages, races, genders, expenditures, and preferences to be sold by

corporations as market intelligence. And roommates spy on each other's extra-legal streaming in return for payment by copyright claimants (Maxwell and Miller 2012; Miller 2007).

Target was exposed in 2012 for analyzing women's purchasing patterns to determine whether they were pregnant, then proceeded to advertise related products through direct mailing to their homes. That risked disclosing their potential, past, or present pregnancies to people from whom they might wish to keep such matters private, be they parents, grandparents, children, lovers, or lodgers (Duhigg 2012). Toffler's wonderful French testing kits had best be bought with cash rather than cards and taking steps to avoid leaving traces of deoxyribonucleic acid (<http://www.wikihow.com/Avoid-Leaving-DNA-at-a-Scene>). Despite such outrages, U.S. citizens are largely ignorant of the extent and impact of corporate surveillance (Madden et al. 2013).

The revolutionary screen-based society has not only empowered corporate spying on consumers and citizens. It has also disempowered the very people around whom it was built: the educated middle class. From jazz musicians to street artists, cultural workers have long labored without regular compensation and security. The history of live performance in this informal cultural sector, as opposed to grand theatrical or dance companies, showed that all workers could move from security to insecurity, certainty to uncertainty, salary to wage, firm to project, and profession to precarity – with smiles on their faces (Ross 2009). Screen society distributes that systematic insecurity across industries. Contemporary business wants flexibility in the people it employs, the technologies they use, the places they occupy, and the amounts they are paid – and *inflexibility* of ownership and control (Mosco 2014, 155–174).

The philosopher Antonio Negri (2007) has redeployed the concept of the *cognitariat*, another of Toffler's (1983) inventions, to account for this phenomenon. The term refers to people with heady educational backgrounds undertaking casualized cultural work at the uncertain interstices of capital, education, and government in a post-Fordist era of mass unemployment, limited-term work, and occupational insecurity. Members of the *cognitariat* are sometimes complicit with these circumstances, because their identities are shrouded in autotelic modes of being: work is pleasure and vice versa, so labor becomes its own reward (Gorz 2004).

The situation of these workers is amplified by the harsh realities of work today. Despite the technocentric projections of both Cold War futurists and contemporary web dreamers, the wider culture industries remain largely controlled by media and communications conglomerates, which frequently seek to impose artist-like conditions on their workforces (the cable versus broadcast TV labor process in the United States is a notorious instance). 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* (Ramanathan 2006). In other words, the *cognitariat* – interns, volunteers, contestants, and so on – creates “cool stuff” whose primary beneficiaries are corporations (Ross 2009).

Consider the advertising agency Poptent, which undercuts big competitors in sales to major clients by exploiting prosumer artists' labor in the name of “empowerment.” That empowerment takes the following form: Poptent pays the creators of homemade commercials US\$7,500; it receives a management fee of US\$40,000; and the buyer saves about US\$300,000 on the usual price (Chmielewski 2012). Enter the discourse of the creative industries.

Creative Industries

As per Reagan's doctrine, many U.S. municipal, regional, state, and national funding agencies have dropped venerable administrative categories like arts and crafts, replacing them with the discourse of the creative industries and the power of the screen. Barack Obama's presidential Committee on Arts and the Humanities welcomed the "Creative Economy," focusing

on the power of the arts and humanities as an economic driver, sustaining critical cultural resources and fostering civic investment in cultural assets and infrastructure. These efforts help speed innovation and expand markets and consumers, directly benefiting local economies. (President's Committee on the Arts and Humanities n.d.)

This discourse of culture as a resource has proliferated globally (Yúdice 2002). In Britain and Australia, it became a central plank of governmental industry policy from the mid-1990s. Rwanda convened a global conference on the "Creative Economy" in 2006 that was designed to draw upon the social healing allegedly engendered by culture and commodify/govern it. Brazil houses the United Nations Conference on Trade and Development and the United Nations Development Program's International Forum for Creative Industries, which decrees that "[c]reativity, more than labor and capital, or even traditional technologies, is deeply embedded in every country's cultural context" (United Nations Conference on Trade and Development 2004, 3). The United Nations Educational, Scientific and Cultural Organization's Global Alliance for Cultural Diversity (2002) heralds the creative industries as a portmanteau term that covers the cultural sector and goes further, beyond output and into the favored neoliberal canard of process.

India's venerable last sensible gasp/grasp of Nehruvianism, its Planning Commission, convened a committee for creative industries (Ramanathan 2006) and China has shifted "from an older, state-dominated focus on cultural industries ... towards a more market-oriented pattern of creative industries" (Keane 2006). Japan, Hong Kong, Singapore, and South Korea follow similar strategies (Peichi 2008; Cunningham 2009b) and the British Council has exported its bizarrely credulous policies on the topic to bizarrely credulous Chilean and Colombian culturecrats (personal communication).

The high priest of creative industries, the much-heralded, much-maligned economic geographer-cum-business professor Richard Florida (2002), speaks of a "creative class" that is revitalizing post-industrial towns in the global North that were devastated by the relocation of manufacturing to places with cheaper labor pools. He argues that the revival of such cities is driven by a magic elixir of tolerance, technology, and talent, as measured by same-sex households, broadband connections, and higher degrees respectively. Florida has even trademarked the concept: his claim to own the "creative class" is asserted with the U.S. Patent and Trademark Office via registration number 3298801 (<http://tess2.uspto.gov>).

New screen technologies bind this discourse together. True believers claim an efflorescence of creativity, cultural difference, import substitution, and national and regional pride and influence, thanks to screen technologies and firms (Cunningham 2009a). In the words of the former Marxist cultural theorist and inaugural president of the

European Bank for Reconstruction and Development, Jacques Attali, a new “mercantile order forms wherever a creative class masters a key innovation from navigation to accounting or, in our own time, where services are most efficiently mass produced, thus generating enormous wealth” (Attali 2008, 31). For the house intellectuals of coin-operated think tanks,¹ this gives rise to an “aristocracy of talent” (Kotkin 2001, 22): mercurial meritocrats luxuriate in court society thanks to their ever-changing techniques, technologies, and networks. Labor is acknowledged by its intermediaries in this brave newness, provided that it is abstracted from physical, dirty work (Mattelart 2002). This is in accord with Toffler, Bell, de Sola Pool, and Brzezinski’s prescriptions all those years ago for the magic sold on-screen today by Facebook, which promises peace on earth and a “world of friends” (<https://www.facebook.com/peace/>) and Twitter, which hubristically describes itself as a “triumph of humanity” (“A Cyber-House” 2010).

Urbanists, geographers, economists, planners, public intellectuals, think-tank inmates, and policy wonks articulate academic grants, the arts, public policy, and everyday life to capital. Many have shifted their discourse to focus on comparative advantage and competition rather than heritage and aesthetics (screens versus paintings). Neoliberal emphases on unlocking creativity succeed old-school protections of cultural patrimony. The purported capacity of the market to govern everything opens up new lifeworlds. Pragmatic leftists no longer even speak of mixing socialist ideals with reformism. These newly powerful intellectuals, who were once free-floating but socially ineffectual humanities critics, are in thrall to the idea that culture is an endlessly growing resource capable of dynamizing society through the ubiquity of the screen.

Peak bodies parrot their prayers. The Australian Academy for the Humanities calls for “research in the humanities and creative arts” to be tax-exempt based on its contribution to research and development, and subject to the same surveys of “employer demand” as the professions and sciences (2010; also see Cunningham 2007). The Australian Research Council’s former Centre of Excellence for Creative Industries and Innovation solemnly announced during its late pomp an “industryfacing [*sic.*] spin-off from the centre’s mapping work, Creative Business Benchmark” (Cunningham 2011b; also see 2011a).

The British Academy seeks to understand and further the “creative and cultural industries” (2004, viii). In partnership with the Arts and Humanities Research Council, the UK’s National Endowment for Science, Technology and the Arts says, “[t]he arts and humanities have a particularly strong affiliation with the creative industries and provide research that ‘helps to fuel’” them, in turn boosting innovation more broadly (Bakhshi, Schneider, and Walker 2008, 1). In Canada, the presidents of the Universities of Toronto and British Columbia advise that:

[I]ndependent-minded university and college graduates from diverse backgrounds are critical to building creative societies with innovative foundations.

[A] culture of innovation and entrepreneurship should be promoted in all sectors of the economy, not least social agencies, non-profit enterprises, public administration, and postsecondary and health-care institutions. (Naylor and Toope 2010)

Prone to cybertarianism (Miller 2015), these dutiful chorines of digital capitalism and the technological sublime pile out of business class and onto the jet way in three major

groups. Richard Floridians hop a limousine from the airport then ride around town on bicycles to spy on ballet-loving, gay-friendly, multicultural computer geeks who have relocated to deindustrialized, freezing rustbelts. True-believer Australian creationists criticize cultural studies as residually socialistic and textual. And Brussels bureaucrats offer blueprints to cities eager for affluence and ready for reinvention via culture and tolerance. The promise on offer is a makeover “from the rusty coinage of ‘cultural industries’ to newly minted ‘creative industries’” (Ross 2006–2007, 1). For a date with Florida, visit creativeclass.com, which features a coquettish glance from William Jefferson Clinton, a jaundice-spectacled Bono, and the promise of “next-generation researchers” (presumably people who have recently shown up on home-pregnancy test kits) on its home page. If you’d prefer Attali, who also knows how to make use of public money, his Marxism is carefully airbrushed from history in best Politburo fashion at this online profile, which stresses his support for deregulation of industries.² Power-point intellection from these towering cybertarians could come to a town near you. On screen, all the time.

A key working assumption of such intellectuals is that the culture industries’ control over the intersection of art and the public has been overrun by individual creativity. In this Marxist/Godardian fantasy, the screen can obliterate geography, sovereignty, ownership, and hierarchy, alchemizing truth and beauty. People fish, film, fornicate, and finance from morning to midnight, frolicking in a deregulated, individuated world that makes consumers into producers, frees the disabled from confinement, encourages new subjectivities, rewards intellect and competitiveness, links people across cultures, and allows billions of flowers to bloom in a post-political cornucopia. Consumption is privileged, production is discounted, and labor redefined (Dahlström and Hermelin 2007). It becomes both a pleasure and a responsibility to invest in human capital. Signs of a robust civil society and private self are both generated and indexed by latest mobile screens, from the cheapest tablet to the gaudiest watch. Quite apart from the impact on workers I have already described, something is left over – and out – by this heavenly vision.

Waste

Consider the ubiquitous metaphor that explains/mystifies where our screens obtain and store information: “the cloud.” It signifies a place where all good software goes for rest and recuperation, emerging on demand, refreshed and ready to spring into action. Seemingly ephemeral and natural – clouds are benign necessities of life that rain on fields then go away – nothing could be further from the truth when it comes to the power-famished, coal-fired server farms and data centers rendered innocent by this perverse figure of speech (Innovation Hub 2015; Mosco 2014).

No-one would wish to piss on this parade, but let’s think about the fact that the U.S. National Mining Association and the American Coalition for Clean Coal Electricity gleefully avow that the “Cloud Begins with Coal,” even boasting that the world’s screen technologies use 1,500 terawatt hours each year. That’s equivalent to Japan and Germany’s overall energy use combined, and 50 percent more than the aviation industry. It amounts to 10 percent of global electricity (Mills 2013).

The Association and the Coalition even quote that slightly dotty old multinational grandparent of dress-up, Greenpeace (2012), on the environmental implications of data

centers, as evidence of “healthy” growth for extractive industries. Big mining and big coal just can’t help themselves, so excited are they by the centrality of their polluting products for the present and future of the cloud. No wonder Google disclosed a carbon footprint in 2011 almost equal to that of Laos, largely due to running the search engines whose results we gaze at endlessly thanks to the cloud (Clark 2011).

And what about when obsolete screen technologies are junked? They become electronic waste (e-waste), the fastest-growing component of municipal cleanups around the global North. E-waste poses serious threats to worker health and safety wherever plastics and wires are burned, monitors smashed and dismantled, and circuit boards grilled or leached with acid, while the toxic chemicals and heavy metals that flow from such practices have perilous implications for local and downstream residents. This accumulation of electronic hardware causes grave environmental and health harm as noxious chemicals, gases, and metals from wealthy nations seep into landfills and water sources across Malaysia, Brazil, South Korea, China, Mexico, Viet Nam, Nigeria, and India, *inter alia*. E-waste ends up there after export and import by “recyclers” who eschew landfills and labor in the global North in order to avoid the higher costs and regulatory oversight in countries that prohibit such risks to the environment and workers. Businesses that forbid dumping e-waste in local landfills as corporate policy readily mail it elsewhere (Maxwell and Miller 2012).

In that “elsewhere,” pre-teen girls pick away without protection at used televisions, telephones, and tablets, recycling and cleaning screen detritus. The appalling morbidity rates of these ragpickers have stimulated a stream of studies that directly associate work in the informal e-waste economy with occupational health and safety risks. It’s significant that much of this research comes from the global South, with distinguished contributions from African, Asian, and Latin American scholars and activists (Nnorom and Osibanjo 2009; Devi, Swamy, and Krishna 2014; de Oliveira, Bernardes, and Gerbase 2012).

Back in the “rich” world, U.S. prisoners work compulsorily for less than anybody else would, doing everything from assembling to recycling screens. The Constitution helpfully guarantees corporations this right as part of the *quid pro quo* for the abandonment of slavery via the 13th Amendment. Imprisoned indentured labor is an attractive option for U.S. firms, because it avoids the transportation costs associated with offshore enterprises and satisfies the longstanding policy of displacing the African American and Latino male working class from education into incarceration, as per structural racism. Screen companies that exploit these opportunities include AT&T, IBM, Intel, Lucent Technologies, Texas Instruments, Dell, and Compaq (LeBaron 2008; Conrad 2011).

That screen we love so much is looking opaque rather than transparent – in fact very murky indeed.

Conclusion

Screen life must be engaged from a multiplicity of perspectives, embodied in the theoretical and methodological work of Chartier, Latour, Canclini, Nader, and Marcus and the specialist research of Ross, Nnorom, Devi, and de Oliveira. Doing less would be gratifyingly neat and tidy – keeping our bottoms as well wiped as screen-studies graduate school, tenure, grants, or discipleship demand. But that would run the risk of

missing the meanings that accrue to screen texts as they move through time and space. After all, at the end of the day, we are surely trying to comprehend the web, film, television, magazines, newspapers, and games – how and why they are made and received and the impact they have. We aren't just obediently trotting out orthodoxies practiced by the self-anointed of visual culture, film theory, art history, literary criticism, communications, and other pleasurable *cordons sanitaires*. Are we?

- see CHAPTER 24 (DIGITAL AND NEW MEDIA): CHAPTER 27 (CULTURAL PRODUCTION)

Notes

- 1 Who doubtless believe what they write and say, given their ideological proclivities.
- 2 See, for example, <https://www.jla.co.uk/conference-speakers/jacques-attali#VfOcEhOqqk>

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