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DIGITAL POLITICAL THOUGHT AND THE REWRITABLE USER

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In December 2014, a couple in Twin Falls, Idaho made a surprising discovery after their oldest child came home from school in a sad mood. “We asked her what was wrong and she said she had been reading a book during library time and it had a few swear words in it. She really liked the book but not the swear words.”¹ The tech savvy parents, wanting to protect their child from future encounters from swear words, imagined there must be an app for that, but when they discovered there was not such app in the Google Play Store for Android devices or in the iTunes store for Apple devices, they decided to build one. A few months later, the couple issued a press release announcing “Clean Reader,” an app which “delivers the opportunity of reading any book without being exposed to profanity” and gives users the ability to select “how clean they want their books to appear,” so that “readers are presented the content of a book without offensive words and phrases.” The innovative feature, the press release announces, is that Clean Reader gives users the ability “To preserve the context of the book, an alternative word with the same general meaning is available for each instance where a word is blocked from display.”² The press release also excitedly announced that “Clean Reader has already attracted users in over 70 countries and nearly every state in the United States.”³ News of the app spread quickly, being featured on popular news sites like *Forbes*, several articles and critical op-eds written by book

¹ “Clean Reader: FAQs,” *Clean Reader*, accessed March 30, 2015, <http://www.cleanreaderapp.com/faqs/>.

² “New Mobile App Hides Swear Words in eBooks,” accessed March 30, 2015, <http://www.prnewswire.com/news-releases/new-mobile-app-hides-swear-words-in-ebooks-300044753.html>.

³ Ibid.

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authors⁴ in *The Guardian*, and celebratory review in *The Christian Science Monitor*.⁵ And yet, after a month of availability, Google reports that the app has only been installed “500-1000” times and Apple ranks it among its least popular apps. Despite very few installs, the app on Google Play has thousands of reviews such as “Sick of Parenting? There’s an app for that” and “An iniquitous app, promoting censorship and solving a problem which doesn’t exist. All lovers of free speech should avoid this app at all costs.”⁶ The iTunes store has similar reviews, some more detailed than others, but the review currently ranked as “the most helpful” by visitors declares, “This app is utterly reprehensible: not only is it a disturbing form of automated censorship, but worse, a MISOGYNIST form of censorship. Their definition of what count as ‘bad words’ is disgustingly sexist, replacing any and every mention female anatomy, be it slang OR appropriate medical terminology with one single word: ‘bottom’... according to the creators of this app: we’re all just smooth ‘bottomed’ plastic Barbie Dolls, our physical reality is too ‘icky’ to think about... Grow up, Clean Readers, and realize that people, all people, are HUMAN BEINGS, and that you cannot simply erase their existence by erasing the words used to describe them.”⁷

Is this censorship? The developers of Clean Reader argue it is not censorship when they write, in response to the “surprising” reviews of the app, that users have “paid good money for the book, they can consume it how they want.”⁸ If I don’t like my Android keyboard, I can download a different one. While Apple only recently allowed third-party keyboards, there are hundreds of alternative keyboards for Android I can choose from. Clean Reader gives users the freedom to install the app or not, select the level of language they would like it to clean (“Clean,” “Cleaner,” and “Squeaky Clean”), and Android gives me the freedom to use an alternative. A recent update for the Android handset even gives me the freedom to turn off the default “Block offensive words” setting for the built-in voice search function. I have the freedom to choose and therefore, argues Clean Reader (and many other tech companies), my freedom of expression is being preserved—maybe even enhanced since technical tools are able to help me express myself better by correcting my spelling and grammar or allowing even those who might be offended by my language to still hear what I have to say. Apple already showed us, as it promised in its

⁴ Alison Flood, “Books without Swearwords? There’s an App for That,” *The Guardian*, accessed March 30, 2015, <http://www.theguardian.com/books/booksblog/2015/mar/16/ebooks-app-clean-reader-replace-swearwords>; Alison Flood, “Authors: End to Censored Versions of Books Is ‘Victory for the World of Dirt,’” *The Guardian*, accessed March 30, 2015, <http://www.theguardian.com/books/2015/mar/27/clean-reader-books-app-censorship-victory-authors-celebrate>; Alison Flood, “Joanne Harris: App Replacing Swearwords in Novels Is Toxic,” *The Guardian*, accessed March 30, 2015, <http://www.theguardian.com/books/2015/mar/25/joanne-harris-condemns-clean-reader-app-replacing-swearwords>; Cory Doctorow, “Allow Clean Reader to Swap ‘Bad’ Words in Books – It’s a Matter of Free Speech,” *The Guardian*, accessed March 30, 2015, <http://www.theguardian.com/technology/2015/mar/30/allow-clean-reader-swap-bad-words-books-free-speech>; Sam Leith, “Clean Reader Is a Freaking Silly Idea, but in the End You Can’t Stop Your Audience Being Philistines,” *The Guardian*, Saturday 2015, <http://www.theguardian.com/commentisfree/2015/mar/28/clean-reader-is-freaking-silly>.

⁵ Molly Driscoll, “App Removes Profanity from Books – Is It a Good Idea?,” *Christian Science Monitor*, March 6, 2015, <http://www.csmonitor.com/Books/chapter-and-verse/2015/0306/App-removes-profanity-from-books-is-it-a-good-idea>.

⁶ “Clean Reader-Android Apps on Google Play,” accessed March 30, 2015, <https://play.google.com/store/apps/details?id=com.inktera.cleanreader>.

⁷ “Clean Reader,” *App Store*, accessed March 30, 2015, <https://itunes.apple.com/us/app/clean-reader/id942159952>.

⁸ Clean Reader, “Chefs and Authors,” *Clean Reader*, March 7, 2015, <http://www.cleanreaderapp.com/blog/>.

famous 1983 Super Bowl commercial introducing the Macintosh personal computer, “why 1984 won’t be like *Nineteen Eighty-Four*.”

This project examines technical interventions into the conditions of possibility for alternative expressions and modes of thinking. In order to show how digital technologies are enabling these preventative interventions, I begin with the assumption that “expressions” and “thought” are as much about how technologies express ideas and think as it is what they talk or think about. Beginning with this assumption is a useful strategy for understanding emerging techniques for regulating discourse and thought because it resists reproducing the binary of free expression vs. censorship which, while useful for explaining 19th and 20th century language regulation, cannot adequately account for digital language governance or the potential for managing a users’ political thinking digital technologies enable. Additionally, this paper uses case studies dealing with the regulation of bad, taboo, and dangerous language because these expressions have tended to excite exaggerated institutional attempts to govern language and develop regulatory technologies. This paper begins with a brief survey of historical interventions into digital language, specifically the development and deployment of digital filters designed to keep children safe online. I then turn to the more difficult study of digital language control by examining technical interventions into the conditions under which expressions can be made, “pre-speech” and interventions into the “choice architecture” of digital interfaces. Deleuze’s concept of the “dividual” is useful for explaining how users are managed with choice architectures. Robert Williams explains that dividuuls, as compared to individuals, are human subjects which can be made “endlessly divisible and reducible to data representations via modern technologies of control”⁹ such that information about *ourselves* is separated from us and used in ways we cannot control. As Williams puts it, “the data gathered on us through the new technologies did not necessarily manifest our irreducible uniqueness. Rather, the very way that the data can be gathered about us and then used for and against us marks us as dividuuls.”¹⁰ The paper concludes that new techniques for managing digital discourse focus on control and consensus, rather than prohibition and moral discipline, for separating discourse from noise and determining the political eligibility of speaking subjects (“users”). Understanding these new techniques is urgent because they have the potential to radically depoliticize language regulation and diffuse resistance to cultural governance, monopolizing the creativity needed to imagine and enact alternatives.

Overcoding Internet Freedom and Filtering Keywords

In 1994, the U.S. government decided to take the military and research network it had sponsored public—by privatizing its backbone and allowing telecommunications companies to begin building their own backbones.¹¹ This decision not only allowed the Supreme Court and other government agencies to think of the Internet as a privately owned, but publicly accessible medium, it also encouraged many people to imagine the Internet as the “cyberspace” described

⁹ Robert Williams, “Politics and Self in the Age of Digital Re(pro)ducibility,” *Fast Capitalism*, January 1, 2005, http://www.uta.edu/huma/agger/fastcapitalism/1_1/williams.html.

¹⁰ Ibid.

¹¹ Wendy Hui Kyong Chun, *Control and Freedom: Power and Paranoia in the Age of Fiber Optics* (Cambridge, Mass.: The MIT Press, 2008), 38.

by William Gibson in *Neuromancer*¹² eleven years before the first web browser was developed.¹³ Tim Berners-Lee, while working at the CERN laboratory in Switzerland, had developed three important components of what would become the World Wide Web; Hypertext Markup Language (HTML) which allowed documents to be published and linked, Uniform Resource Identifier (URI) which gave an address to each document, and Hypertext Transfer Protocol (HTTP) which allowed for links to be retrieved across the Web.¹⁴ The privatization of the Internet made it open to interested programmers willing to devise new applications for it and, as Jonathan Zittrain has carefully detailed, allowed users to produce their own content without requiring permission from Internet Service Providers (ISPs).¹⁵ Before the World Wide Web, the Internet users had been capable of transmitting text and images to each other on Usenet groups or peer-to-peer connections, including “ASCII” art,¹⁶ pictures composed of 95 keyboard characters to form a text-based visual composition. However, with the introduction of the Web in 1991 and the privatization of the Internet in 1994, the wide variety of content available on the Internet became a problem for states like Saudi Arabia, who forced all Internet traffic through one gateway it managed,¹⁷ and for parents alarmed at what they imagined their children could access without supervision.

In the wake of recurring moral panics over the “dangers” of cyberporn, Congress passed the 1996 Communications Decency Act (CDA) to regulate Internet content in much the same way the Federal Communications Commission regulates radio and television, using many of the same arguments about the need to protect children, and criminalized nearly all “indecent” or “patently offensive” online communications. Several content providers and free speech activists immediately challenged the act in court, but this time the Court decided to preserve indecency. In striking down the CDA, Judge Stewart Dalzell argued that indecency proves diversity and is necessary for a healthy democracy, finding that “Speech on the Internet can be unfiltered, unpolished, and unconventional, even emotionally charged, sexually explicit, and vulgar—in a word, ‘indecent’ in many communities” but added that without indecency “the Internet would ultimately come to mirror broadcasting and print, with messages tailored to a mainstream society from speakers who could be sure that their message was likely decent in every community in the country.”¹⁸ Citing Oliver Wendell Holmes’ famous argument that “the best test of truth is power of the thought to get itself accepted in the competition of markets,”¹⁹ Dalzell described the presence of indecency as evidence of a well-functioning democracy. Congress responded to the CDA decision by passing the 1998 Child Online Protection Act (COPA). Like the CDA, COPA was brought to the Court, but this time the Act’s definition of “free” sites as those which consumers did not pay to access was interpreted as commercial

¹² William Gibson, *Neuromancer*, 1st edition (New York: Ace, 1986).

¹³ Chun, *Control and Freedom*, 41.

¹⁴ “History of the Web,” *World Wide Web Foundation*, accessed January 22, 2015, <http://webfoundation.org/about/vision/history-of-the-web/>.

¹⁵ Jonathan Zittrain, *The Future of the Internet-And How to Stop It* (Yale University Press, 2008).

¹⁶ Annalee Newitz, “On-the-Go Porn,” accessed January 22, 2015, http://www.salon.com/2001/06/04/handheld_pr0n/.

¹⁷ Jonathan L. Zittrain et al., eds., *Access Denied: The Practice and Policy of Global Internet Filtering* (The MIT Press, 2008), 32.

Alexander R. Galloway, *The Interface Effect*, 1st ed. (Polity, 2012), 36.

¹⁸ Cited in Chun, *Control and Freedom*, 115–116.

¹⁹ *Ibid.*, 116.

speech not open to regulation by the First Amendment. On this basis, Third Circuit Court of Appeals judge Lowell A. Reed Jr. determined that “community standards,” which had featured so prominently in the trial of Lenny Bruce and several FCC rulings, were overly broad “Because material posted on the Web is accessible by all Internet users worldwide, and because current technology does not permit a Web publisher to restrict access to its site based on the geographic locale of each particular Internet user, COPA essentially requires that every Web publisher subject to the statute abide by the most restrictive and conservative state’s community standards in order to avoid criminal liability.”²⁰ The problem the Court identified was one of identification which, in the hate speech initiatives was also a problem, but here the issue is not who is present in a total speech situation. Reed refers to the inability of content publishers to identify their users. The CDA and COPA both included provisions for putting content “harmful to children” behind walls and, since the instrument the legislators identified as appropriate for verifying a person’s age was a credit card, that wall soon became a paywall. However, because websites could not identify a user by their geographic location, Reed asserted the content producers could not regulate content according to the “community standards” rule set out by *Roth v. United States*.²¹ Reed’s decision, therefore, makes measuring and taking account of “community standards” the issue where Brennan in *Roth* simply imagined a community standard and then applied it. As Reed puts it, “the more liberal community standards of Amsterdam or the more restrictive community standards of Tehran would not impact upon the analysis of whether material is ‘harmful to minors’ under COPA.”²² Thus, he concluded, COPA was unconstitutional because “the interpretation of ‘contemporary community standards’ is not ‘readily susceptible’ to a narrowing construction of ‘adult’ rather than ‘geographic’ standard.”²³ The inability to identify who might access content was, for Reed, the technical barrier which make COPA unconstitutional, but he added (uncharacteristically for judges in decisions), his “firm conviction that developing technology will soon render the ‘community standards’ challenge moot, thereby making congressional regulation to protect minors from harmful materials on the World Wide Web constitutionally practicable.”²⁴

Reed was correct to foresee that laws would be passed to regulate Internet content, but the failure of the CDA also supported the development of filtering technology more quickly, not rendering community standards moot so much as reifying them in code. I have written elsewhere²⁵ that the porn industry has played a dominant role in developing commercial innovations which are now fixed features of the Internet including online payment systems, live chat, pop-ups, geo-location software, spam, and traffic optimization. Penthouse magazine, for example, sponsored the development of broadband by giving away free modems.²⁶ However, early Internet businesses had a difficult time figuring out how to monetize online content, especially content provided by users. The CDA and COPA introduced the use of credit cards for online access, but Reed’s decision to strike down COPA because of the “free nature of cyberspace” and the lack of “geolocation” identification technology to judge “community

²⁰ American Civil Liberties Union v. Reno, 217 F. 3d 162 (Court of Appeals, 3rd Circuit 2000). ²¹ Roth v. United States, 354 US 476 (Supreme Court 1957).

²² American Civil Liberties Union v. Reno, 217 F. 3d 162 (Court of Appeals, 3rd Circuit 2000). ²³ Ibid.

²⁴ Ibid.

²⁵ Rex Troumbley, “Is the Internet for Porn?,” *Internet Monitor*, accessed January 22, 2015, <https://blogs.law.harvard.edu/internetmonitor/2013/07/02/is-the-internet-for-porn/>.

²⁶ Shreya, “Thank You ‘Porn’! ... Says Technology,” *Exhibit Magazine*, September 21, 2012, <http://exhibitmag.com/porn-technology>.

standards” helped spur the development of technologies to collect geographic, and many other, pieces of data in order to target advertisements, such as Ethan Zuckerman’s development of the “popup ad,”²⁷ and later as we will see data collection to target drone strikes. The CDA and COPA were both struck down, but these legislative attempts to regulate what could be seen, said, and done online facilitated the monetization of the Internet and the decisions which struck them down codified in law the Internet as a “space” with content the government should keep its hands off since it was already regulated by “The invisible hand of cyberspace.”²⁸

The first techniques used to block specific words automatically were simple programs installed on a computer designed to identify and prevent users from entering bad keywords, heuristics used to identify and manage content. What exactly constitutes a keyword is still the subject of some debate, but information retrieval systems treat keywords as terms which capture the essence of the topic of a document. In computer science, a keyword is a word that is reserved in programming languages as expressions with special meanings, expressions that cannot be used as variable names, and words which can be commands or parameters for the execution of a program. As a technology of language regulation, the keyword became useful for identifying objectionable and pornographic content or for signaling the presence of dangerous communications. However, censorship based on keywords requires that someone maintain a list of terms to block, a blacklist, which often accidentally also blocked the wrong content or could be easily circumvented, like Shakespeare evading the Master of Revels, by using a euphemism to replace a blocked keyword.

In addition to filtering keywords and packets arriving from unsecured networks, a variety of technologies have been developed by corporations to regulate digital language and help governments censor the Internet. Rebecca MacKinnon and Ronald Deibert have discovered numerous instances of companies based in liberal democracies selling, and developing technology, for authoritarian regimes censoring the Internet—often by repackaging filters originally designed to protect children from pornography. MacKinnon, for example, found that China and several countries in the Middle East “have purchased their censorship solutions right off the shelf from American companies. Companies including the California-based Websense, Blue Coat and Palo Alto Networks, Intel’s McAfee SmartFilter, and the Canadian Netsweeper all market products that were originally developed to help households and schools shield children from age-inappropriate content.”²⁹ Indeed, Cisco Systems produced Chinese-language brochures advertising the censorship and surveillance features of its routers and suggested their use in helping the CCP manage online content related to the banned Falun Gong religious group.³⁰ In the U.S., technology companies intervening in users’ communications enjoy considerable legal protection. Deibert details in *Black Code* how an update provided by Cisco for one of its most popular wireless routers required users to agree to a new terms of service agreement which included the requirement that their router not be used to access or share “obscene, pornographic,

²⁷ Ethan Zuckerman, “The Internet’s Original Sin,” *The Atlantic*, August 14, 2014, http://www.theatlantic.com/technology/archive/2014/08/advertising-is-the-internets-original-sin/376041/?single_page=true.

²⁸ Lawrence Lessig, *Code: And Other Laws of Cyberspace, Version 2.0* (Basic Books, 2006), 6.

²⁹ Rebecca MacKinnon, *Consent of the Networked: The Worldwide Struggle For Internet Freedom*, First Trade Paper Edition (Basic Books, 2013), 60.

³⁰ *Ibid.*, 170.

or offensive,” and which could “infringe another’s rights, including but not limited to any intellectual property rights.”³¹

Similarly, in 2010, T-Mobile was sued for blocking text messages sent by a legal marijuana dispensary service, but the case was dismissed because while U.S. law prohibits phone companies from blocking calls using their networks, it does not prohibit blocking data sent through their networks.³² As part of an agreement with the Special Olympics campaign to

“spread the word to end the word,” Blizzard Entertainment (the company responsible for the hugely popular massively multiplayer online game World of Warcraft and StarCraft) began replacing the word *retarded* with *r****** in gameplay chats between users.³³

Blizzard maintains it can censor these terms, and other offensive words like *homosexual* and *transsexual*, because by installing or using Blizzard’s software, users agree to refrain from abusing its services and one another. Corporations, sometimes sponsored by governments and sometimes for their own interests, have developed a wide array of content filtering technologies including packet filtering, deep packet inspection which looks inside packets for bad messages, IP address blocking, DNS filtering and redirection, several methods for cutting off routers and hardware remotely, portal censorship removing links or visibility, denial-of-service attacks which deface websites or overload a server with repeated connection requests, and bandwidth shaping techniques which purposefully intervene in a users’ ability to access specific online content or services.

States also sponsor the development of circumvention technologies to allow users to bypass or frustrate attempts at overt censorship by states or state-sponsored corporations to regulate digital language. A striking example of the influence of social structures in determining which technologies are developed is the U.S-sponsored creation of circumvention technology for use by activists in authoritarian countries to promote Internet freedom. In 2009, as a result of the Green Revolution, Congress passed the Victims of Iranian Censorship (VOICE) Act and the National Defense Authorization Act for Fiscal Year 2010 authorized the appropriation of “\$20 million for a new ‘Iranian Electronic Education, Exchange, and Media Fund’” which would develop anti-censorship technology.³⁴ To mark the passage for the bill, Secretary of State Hilary Clinton gave a now famous speech “On Internet Freedom” which argued “Today, we find an urgent need to protect these freedoms on the digital frontiers of the 21st century...the internet is a network that magnifies the power and potential of all others. And that’s why we believe it’s critical that its users are assured certain basic freedoms. Freedom of expression is first among them.”³⁵ However, as part of the Congressional debate, it was agreed that the U.S. should assist Iranians in circumventing online political censorship, but not other content like pornography and many voiced concerns that if the new technology enabled access to pornography, Iranians would

³¹ Ronald J. Deibert, *Black Code: Inside the Battle for Cyberspace* (Plattsburgh, NY: McClelland & Stewart, 2014), 34.

³² MacKinnon, *Consent of the Networked*, 117.

³³ Fox Van Allen, “Profanity Filters, Homophobic Slurs, and Blizzard’s Shaky Relationship with the LGBT Community,” *WoW Insider*, accessed December 14, 2012, <http://wow.joystiq.com/2012/01/25/profanity-filters-homophobic-slurs-and-blizzards-shaky-relati/>.

³⁴ Ike Skelton, “H.R.2647 - 111th Congress (2009-2010): National Defense Authorization Act for Fiscal Year 2010,” legislation, (October 28, 2009), <https://www.congress.gov/bill/111th-congress/house-bill/2647>.

³⁵ Bureau of Public Affairs Department Of State. The Office of Website Management, “Remarks on Internet Freedom,” Remarks|Remarks, *U.S. Department of State*, (January 21, 2010), <http://www.state.gov/secretary/rm/2010/01/135519.htm>.

be less inclined to use it.³⁶ A compromise was made that the circumvention technology would include a blacklist of prohibited words in English and in Farsi. The technology was developed, and deployed in Iran, but the blacklist filter had unintended consequences, blocking for example the U.S. Department of State's online portal for its overseas missions because the URL, usembassy.state.gov, includes the prohibited word *ass*.³⁷ It was not "the more restrictive community standards of Tehran" which led to the site being blocked, as Reed's COPA decision might have it, but the deployment of American cultural standards technologized as circumvention technology to promote Internet freedom in Iran with contradictory results.

Writing with Computers

As manipulators of signs following pre-determined "grammatical" rules, computers are indifferent to what they are processing and also threatened by the "bad grammar" of conflicting or incomplete programming and the "bad language" of user input or errors. In an operating system, errors are managed by techniques designed to prevent a systemic crash or "exception handling." Deleuze and Galloway both describe computers as systems within which ideas, and ideologies, can be modeled, tested, and deployed. In the case of grammar and spelling, computers do not attempt to correct the writer's behavior, or discipline their writing. Spellcheck in Microsoft Word, for example, throws bad language back to the writer with pre-programmed solutions to choose from or gives the writer the option to ignore the error and continue processing the rest of the document in much the same way Microsoft Windows handles an error "by passing it from one section of code—one object, often—to another, and ultimately to a block of code dedicated to exception handling."³⁸ In other words, rather than intervene in the grammar, or "architectural" structures, of an operating system or allowing the system to crash, exception handling intervenes in the flow of program execution. However, exception handling is not simply something which happens "inside" the computer but extends into other processes of the "real-world," for example preventing a crash in the "workflow" of the user or breaking the flow of word-processing. Exception handling will be explored again later, but here I only want to note that bad inputs from users, or user error, is managed by a system of control (checks, dialog boxes, prompts) which intervenes in the wordprocessing or language flows of a user rather than the structures (Word does not rewrite itself) which mediate their expression.

Computer-mediated communication then is also involved in shaping the conditions of possible expressions not because they control language in order to control what can be thought about, the way for example George Orwell imagined, this also means that digital technologies cannot manage or transport information without some kind of distortion. Much as dictionaries remove words from their sentences and treat them as autonomous objects, making some always bad or offensive and putting them into a kind of circulation, the translation of language into information allows computers to treat words as "strings" and bundle them into autonomous objects, or "packets," which can be put into circulation and exchanged between devices using transmission protocols. This is not simply a translation, as Zittrain argues,³⁹ but a warping of language into information which is further distorted in order to be sent through a

³⁶ Skelton, "H.R.2647 - 111th Congress (2009-2010)."

³⁷ Zittrain, *The Future of the Internet-And How to Stop It*, 115.

³⁸ Matthew Fuller and Andrew Goffey, *Evil Media* (Cambridge, Mass.: MIT Press, 2012), 119. ³⁹ Zittrain, *The Future of the Internet-And How to Stop It*.

communications network as a packet. The idea that the architecture of the Internet, or the ability to view the “source code” layered on top of that architecture, prevents control is what Latour calls the “Double Click” or acting “as though technology, too, transports mere information, mere forms, without deformation”⁴⁰ so that language can be treated as discrete packets of content.

Making spoken language into a graphic language, using an alphabet, or some other “channel” as Kittler describes it,⁴¹ also involves a deformation, but proponents of “Internet freedom” who describe freedom of expression online as unfettered communication guaranteed by its architecture ignore the numerous deformations which must occur as spoken language is translated into written language. Digital writing involves a series of deformations as a communication is entered into computer language, treated by programs, transmitted by protocols, and displayed on an interface. The content first entered into a computer thus comes to mean and do different things depending upon how it is used or, as will be discussed later, tied to a user so their future language can be predicted. In *Nineteen Eighty-Four*, Orwell describes a world of language control still modeled on what Deleuze calls the “old societies of sovereignty [which] made use of simple machines—levers, pulleys, clocks” where language is regulated by an authoritarian institution and therefore finds it appropriate to have his main character exploit “the passive danger of entropy and the active danger of sabotage”⁴² in order to avoid “Newspeak” or control by the “Thinkpol” thought police.⁴³ Deleuze contrasts the societies of sovereignty, or discipline societies, with “societies of control” which “operate with machines of a third type, computers”⁴⁴ and “controls are a *modulation*, like a self-deforming case that will continuously change from one moment to the other.”⁴⁵

However, writing media and writing technologies also condition or prevent different kinds of thinking because we think *through* these technologies. Ong has pointed out, for example, that “Deconstruction is tied to typography,”⁴⁶ not only because it is based on textual analysis, but also because deconstructionists “specialize in texts marked by the late typographic point of view developed in the Age of Romanticism, on the verge of the electronic age.”⁴⁷ Similarly, Galloway points out, post-structuralism and post-structuralist buildings like the Strata Center at MIT designed by Frank Gehry “are unthinkable without the computer.”⁴⁸ And yet the computer, and the computer network, does not fully explain these new techniques of language control. Lessig, for example, might concede that computers deform expressions, but argue that as long as the code—which for him is law since that is where decisions once made by legislators and judges are being made—can be viewed and checked for overt and nefarious attempts to interfere with communications we can evade control. However, as Chun explores in detail, “control and freedom are not opposites but different sides of the same coin: just as discipline

⁴⁰ Bruno Latour, *An Inquiry into Modes of Existence: An Anthropology of the Moderns*, trans. Catherine Porter, 2013, 218.

⁴¹ Friedrich Kittler, *Gramophone, Film, Typewriter*, trans. Geoffrey Winthrop-Young and Michael Wutz (Stanford, Calif: Stanford University Press, 1999), 124.

⁴² Gilles Deleuze, “Postscript on the Societies of Control,” *October* 59 (January 1, 1992): 6.

⁴³ George Orwell and Erich Fromm, *1984* (Charlotte Hall, MD: Signet Classic, 1950).

⁴⁴ Deleuze, “Postscript on the Societies of Control,” 6.

⁴⁵ *Ibid.*, 4.

⁴⁶ Walter J. Ong, *Orality and Literacy: The Technologizing of the Word*, 3rd ed. (Routledge, 2012), 127.

⁴⁷ *Ibid.*, 160.

⁴⁸ Alexander R. Galloway, *The Interface Effect*, 1st ed. (Polity, 2012), 96.

served as a grid on which liberty was established, control is the matrix that enables freedom as openness.”⁴⁹

As MacKinnon points out, the U.S. Department of State regularly sponsors the development of circumvention technology while U.S. companies produce much of the censorship technology available to states today.⁵⁰ While it cannot be denied that China and Iran regularly censor the Internet, the Internet has always been an object of control and in the U.S. is managed by a variety of increasingly sophisticated control mechanisms. Following Chun’s assertion that “Users are created by ‘using’ in a similar manner to the way drug users are created by the drugs they (ab)use,”⁵¹ we can say that language control is far more successful at framing users’ fears and desires than language regulation which focuses on prohibiting or moralizing those fears and desires. Digital language control tracks each person’s language—good, bad, and taboo—without needing to identify that person as an individual subject whose expressions are noise or speech. Instead, digital language control simply counts every expression made by every user and, as Deleuze puts it, “substitutes for the individual or numerical body the code of a ‘dividual’ material to be controlled.”⁵² This data does not necessarily make us unique, but it is used in ways which are beyond our control. The use of taboo language is sometimes a problem, something to be regulated by language filters and terms of service agreements, but in computational systems of control all expressions are counted as a matter of preference. Thus, the keyboard on my Android phone will eventually allow me to use *fuck* without changing it to *duck* once my use of *fuck* is counted as part of my language preference. My keyboard, and the predictive algorithm it uses, treats me as a human subject, but the data it collects about me separates my preference from myself in ways I cannot control and my preferences are not used to identify me as irreducibly unique. Reformulating Shapiro’s observation that “preferences have people,”⁵³ in this case it is more accurate to say that preferences have dividuals. To see how preferences gather dividuals, it is useful to see how what is important enough to count determines what is important enough to temporarily separate information from the noise of collected data.

Nudging Users toward Pre-Dictability

In 2002, the Defense Advanced Research Projects Agency formed the Information Awareness Office and launched the Total Information Awareness (TMA) program to “revolutionize the ability of the United States to detect, classify and identify foreign terrorists” which, though defunded in 2003, still managed to develop data mining software used in other government agencies.⁵⁴ After the Snowden PRISM revelations, it became clear that TMA had not disappeared, but became part of the NSA, FBI, and CIA. A detailed study of PRISM is beyond the scope of this project,⁵⁵ but what is significant in terms of controlling digital language

⁴⁹ Chun, *Control and Freedom*, 71.

⁵⁰ MacKinnon, *Consent of the Networked*, 106.

⁵¹ Chun, *Control and Freedom*, 249.

⁵² Deleuze, “Postscript on the Societies of Control,” 7.

⁵³ Michael J. Shapiro, *Methods and Nations: Cultural Governance and the Indigenous Subject*, New edition (Routledge, 2003), 23.

⁵⁴ Evgeny Morozov, *The Net Delusion: The Dark Side of Internet Freedom*, Reprint (PublicAffairs, 2012), 16.

⁵⁵ A detailed survey of the mass surveillance project can be found in Glenn Greenwald, *No Place to Hide: Edward Snowden, the NSA, and the U.S. Surveillance State*, 1ST edition (New York, NY: Metropolitan Books, 2014).

is that the NSA had the ability to collect data directly from the nine biggest technology companies—Google, Facebook, Microsoft, Apple, Yahoo, AOL, Skype, PalTalk, and YouTube.⁵⁶ This was possible only because over the past decade Internet companies had managed to centralize and monopolize the decentralized networks of communications and broad array of services people used online. Indeed, since the NSA documents revealing these data collection sources Google has purchased YouTube, Microsoft has purchased Skype, and AOL merged with Time Warner. Surveillance is the business model of the Internet, so it makes sense that the U.S. government would piggyback off the biggest Internet businesses if it wanted to engage in mass surveillance. Greenwald points out that surveillance of foreign heads of state is nothing new, despite the recent controversies over whether or not the NSA had tapped German chancellor Angela Merkel’s cellphone, but that mass surveillance of nearly all communications emanating from specific countries is new.⁵⁷ Competing reports have determined that mass surveillance has likely not foiled any significant terrorist threats—failing to detect Adam Lanza, James Holmes, and the Tsarnaev brothers’ planned attacks—but the programs seem unlikely to be discontinued anytime soon.

Chun theorizes about control and freedom as they relate to paranoia, nothing that “Automatic digital storage and networks enable a postevent traceability that buttresses ‘prevention,’ for a digital mass of information can always be minded for warning signs read in, but not ‘read’ (search terms only become self-evident after an event). Paranoia...thus becomes a way of generating keywords in advance—a human response to an inhuman mass of information that belies rational analysis.”⁵⁸ A good example of dataveillance is used to increase user-predictability by generating keywords in advance and predicting after the event can be seen in the response of the NSA following Boston Marathon Bombings. After the Bombings, an article published in *The Atlantic* accused the NSA and FBI of missing posts on Twitter by Djohar Tsarnaev like “I will die young” two days before bombing the Boston Marathon, “stay safe” the night before, and posted a story about a victim immediately after calling it a “fake.”⁵⁹ When it was discovered that airport security had failed to prevent Tamerlan Tsarnaev from entering the country, after Russian intelligence warned he was a “radical Islamist” and potentially dangerous, because his last name had been misspelled in an interagency security database, the House Homeland Security Committee launched an investigation into the events and compiled a report. The censored report, titled *The Road to Boston: Counterterrorism Challenges and Lessons from the Marathon Bombings*, describes the misspelling incident as a “lesson” to be learned, in much the same way Noah Webster prescribed his Speller as a remedy for bad language in the classroom, and gives a detailed history of the many “early warnings” which indicate the brothers had decided to conduct the attack,⁶⁰ in much the same way 19th and 20th century police detectives or mental health experts found evidence of criminal mentalities by creating biographies of a criminal’s troubled upbringing or irrational system beliefs. The evidence and reasons for the terrorist attack are found after the decision has been made.

⁵⁶ Ibid., 96.

⁵⁷ Ibid., 112.

⁵⁸ Chun, *Control and Freedom*, 257–258.

⁵⁹ Alexander Abad-Santos, “‘I Will Die Young’: The Eerie Subtext of Dzhokhar Tsarnaev on Social Media,” *The Wire*, April 19, 2013, <http://www.theatlanticwire.com/national/2013/04/dzhokhar-tsarnaev-social-media-accounts/64400/>.

⁶⁰ “Report: The Road to Boston: Counterterrorism Challenges and Lessons from the Marathon Bombings,” accessed January 26, 2015, <http://homeland.house.gov/boston-bombings-report>.

In this case, the report found that dataveillance revealed evidence of an imminent terrorist attack and information about childhood experiences revealed evidence of terrorist intentions, supporting facts which made the Committee “concerned that officials are asserting that this attack could not have been prevented, without compelling evidence to confirm that this is the case.”⁶¹ Instead of questioning whether analyzing the digital emissions of users’ activities can predict terrorist attacks, the Committee finds evidence that the brothers would carry out an attack and then conclude that the attack was predictable. Just as we saw Victorian moralists and judges regulating language by linking morality with rationality, today we see what Fuller and Goffey identify as a “decision support system”⁶² which complicates Carl Schmitt’s theory of the political as the ability to distinguish between friends and enemies⁶³ since the reasons for a decision are found after the decision has been made and “mythologize decision making” by identifying an agent capable of making sovereign decisions.⁶⁴ Here, the Committee had already assumed terrorist attacks could be predicted and so found evidence to support that assumption, but mythologized the process by creating profiles, making correlations, and compiling with would otherwise be considered circumstantial evidence. The profiling techniques used by the law enforcement and military institutions to identify threats during the Cold War are being augmented with “signature” databases which mark targets for drone strikes based upon their habits and their communicative degrees of separation, known as “hops,” from known terrorists.⁶⁵ The CIA does not always know who it is killing or identify its targets before launching a strike. The content of the potential terrorists’ conversation, much less their mental state or intentionality, is irrelevant when deciding who the signature database marks for death. If innocents are killed, databases can be searched and evidence found to support the decision.⁶⁶

A decision support system is one way to manage unpredictability, but another emerging technique is to encourage users to behave more predictably and speak according to preferred lines of diction. Facebook, for example, collects data about users in order to better message them with tailored advertisements and sells the data they collect to other businesses which do the same. User data is Facebook’s product, which it can only generate by getting users to keep using. One way Facebook does this is by altering its choice architecture in ways which prevent users from leaving, curating posts which are not likely to offend users and make them leave, but also introducing functions like providing a snapshot of a posted article so users seeing the post will not have to leave Facebook in order to see what the article is about. Facebook has recently introduced the ability to buy products and suggests purchasing gifts on friend’s birthdays without having to leave the site. Similarly, Facebook sponsors “addictive” games like FarmVille and

⁶¹ Ibid., 37.

⁶² Fuller and Goffey, *Evil Media*, 137.

⁶³ Carl Schmitt, *The Concept of the Political*, trans. George Schwab, Expanded (University Of Chicago Press, 2007), 27.

⁶⁴ Fuller and Goffey, *Evil Media*, 132–133.

⁶⁵ Richard Engel and Robert Windrem, “CIA Didn’t Always Know Who It Was Killing in Drone Strikes, Classified Documents Show,” *NBC News*, June 5, 2013, http://investigations.nbcnews.com/_news/2013/06/05/18781930-cia-didnt-always-know-who-it-was-killing-in-drone-strikes-classified-documents-show.

⁶⁶ While the number of “signature targets” is classified, the human rights group Reprieve found that 41 men were targeted by name and that, in single strike attacks where some of the men were killed, the drone strike also killed at least 1,147 people as well. The U.S. Department of State classified those killed after the strikes as “enemy combatants.” Spencer Ackerman in New York, “41 Men Targeted but 1,147 People Killed: US Drone Strikes – the Facts on the Ground,” *The Guardian*, accessed March 31, 2015, <http://www.theguardian.com/us-news/2014/nov/24/-sp-us-drone-strikes-kill-1147>.

Mafia Wars, and provides API access for several other games, because they open users to continuous mining. The Facebook mobile phone and tablet app, and the now separate Facebook Messenger app, not only keeps mobile users open to mining, but the terms of service agreement also allows Facebook to download stored text messages, phone logs, stored contacts, lists of accounts for other services, and other data from the devices.⁶⁷ The reason is, as Deleuze puts it, that “disciplinary man was a discontinuous producer” the “man of control is undulatory, in orbit, in a continuous network” and always producing⁶⁸ or as Fuller and Goffey write “The *regularization* of expression, by contrast, is a broader tendency evident in practices of the organization of people and things as and *for* data in computational culture, following the general principle that structured data are more tractable to processing than unstructured data.”⁶⁹ The intent of all these features is to provide Facebook its product, but the choice architecture Facebook has engineered also hopes to make users more predictable by framing their fears and enthusiasm, providing an outlet for “Nervousness, time wasting, irritation, the ability to draw out or to dither the moment when unwanted but obligatory activities start, to combine idleness with something partially purposive...turning lives of clickwork into a yield”⁷⁰ and nudging users towards behaviors or modes of communication Facebook can sell. Presuming that users are self-interested and rational shapes the legal and social institutions which rely upon Facebook or purchase their services. If users do not behave or express themselves in a self-interested and rational way, they can be nudged into doing so using techniques of language control, making neo-liberalism seem like the only option and monopolizing creativity. When companies like Google and Facebook are the supporters of Internet freedom, and expression is mediated through their services, the question then becomes (again following Chamber’s reading of Rancière): what is the possibility for a confrontation between the technical police order that keeps the “user” in their place and the logic of politics which asserts the fundamental equality of subjects “*given* these existing discourses?”⁷¹

Expressing Alternative Digital Politics

Aristotle based his theory of politics on the distinction between animals capable of speech and animals capable of only making noise. In *The Politics* he argues that Nature “has endowed man alone among the animals with the power of speech. Speech is something different from voice, which is used by them to express pain our pleasure... Speech, on the other hand, serves to indicate what is useful and what is harmful... humans alone have perception of good and evil.”⁷² In his genealogy of morality, Nietzsche determined that the development of the “conscience” was conditioned by the need “To breed an animal *with the right to make promises*,”⁷³ and the “bad conscience” conditioned by feeling responsible for breaking promises.

⁶⁷ Caitlin Dewey, “Yes, the Facebook Messenger App Requests Creepy, Invasive Permissions. But so Does Every Other App.,” *The Washington Post*, August 4, 2014, <http://www.washingtonpost.com/news/the-intersect/wp/2014/08/04/yes-the-facebook-messenger-app-requests-creepy-invasive-permissions-but-so-does-every-other-app/>.

⁶⁸ Deleuze, “Postscript on the Societies of Control,” 5–6.

⁶⁹ Fuller and Goffey, *Evil Media*, 111.

⁷⁰ *Ibid.*, 67.

⁷¹ Samuel A. Chambers, *The Lessons of Ranciere* (Place of publication not identified: Oxford University Press, 2014), 119.

⁷² Aristotle, *The Politics*, trans. T.A. Sinclair (Harmondsworth, England; New York, N.Y.: Penguin, 1992), 207.

⁷³ Friedrich Wilhelm Nietzsche, *Basic Writings of Nietzsche*, Modern Library ed (New York: Modern Library, 2000), 493.

For Nietzsche, morality required that “Man himself must first of all have become *calculable, regular, necessary*, even in his own image of himself, if he is able to stand security for *his own future*... in general be able to be calculable and compute.”⁷⁴ Punishment was a means of creating “a memory for the human animal” the best mnemonic technique was pain.⁷⁵ In order to be free to make promises, the human animal had to become “master of a *free will*”⁷⁶ and the criminal deserving of “punishment *because* he could have acted differently.”⁷⁷ Similarly, in his genealogy of prisons and discipline, Foucault found “That punishment looks towards the future, and that at least one of its major functions is to prevent crime had, for centuries, been one of the current justifications of the right to punish”⁷⁸ and that punishment was in the 18th century was dependent upon a series of calculations by the criminal—the advantages one might procure from committing a crime and the disadvantages one might prevent by committing a crime—and the judge’s calculation for how much pain/punishment would fit the crime and how much the punishment might hurt others than the criminal.⁷⁹

For Foucault, the networked power-relations of discipline conditioned the possibility for escaping them because power-relations depend “on a multiplicity of points of resistance: these play the role of adversary, target, support, or handle in power relations... And it is doubtless the strategic codification of these points of resistance that makes a revolution possible, somewhat similar to the way in which the state relies on the institutional integration of power relationships.”⁸⁰ William Burroughs, grandson of the inventor of the Burroughs Adding Machine and the theorist who inspired Deleuze’s conception of the control society, argued that words “do not stem from the need to communicate but rather the need to control animals capable of resistance.”⁸¹ Burroughs, and Norbert Wiener, conceived of language as commands or what we would now call code. To explain his “scientific study of control and communication in the animal and the machine,”⁸² Wiener modified the ancient Greek words for *kybernetike* (or to govern) and *kybernao* (to steer, navigate or govern) to come up with “cybernetics.” Wiener’s science was aimed at describing self-organizing systems and designing human institutions or machines which incorporated mechanisms for feedback and learning to govern and steer society.⁸³ Deleuze’s control society is the cybernetic society, one which steers society and also governs resistance.

For Deleuze, resistance is simply incorporated into the control society and thereby diffused, especially after the collapse of communism seemed to end alternatives to capitalism. As he put it in an interview with Antonio Negri, “You ask whether control or communication societies will lead to forms of resistance that might reopen the way for a communism understood as the ‘transversal organization of free individuals.’ Maybe, I don’t know. But it would be

⁷⁴ Ibid., 494.

⁷⁵ Ibid., 496–497.

⁷⁶ Ibid., 495.

⁷⁷ Ibid., 499.

⁷⁸ Michel Foucault, *Discipline & Punish: The Birth of the Prison*, 2nd Edition (Vintage, 1995), 93.

⁷⁹ Ibid., 94–97.

⁸⁰ Michel Foucault, *The History of Sexuality, Vol. 1: An Introduction*, trans. Robert Hurley, Reissue edition (New York: Vintage, 1990), 96.

⁸¹ Chun, *Control and Freedom*, 272.

⁸² Norbert Wiener, *Cybernetics: Or, Control and Communication in the Animal and the Machine* (Cambridge, Mass.: M.I.T. Press, 1965).

⁸³ Norbert Wiener, *The Human Use of Human Beings: Cybernetics and Society* (New York; London: Da Capo, 1988).

nothing to do with minorities speaking out. Maybe speech and communication have been corrupted. They're thoroughly permeated by money-and not by accident but by their very nature."⁸⁴ The Internet is a channel of communication which is permeated by money, both in terms of access and in terms of its nature being "overcoded" by law and neoliberal fantasies as a self-regulating marketplace of ideas. Computers track both good and bad behavior, good and bad language, and manage resistance by suggesting options which allow one to express oneself without crashing the system (exception handling), steer resistant subjects around bad behavior (nudge), or manage the conditions of possibility for resistance (pre-diction). These systems of control make it seem as though neoliberalism is the only option or, as William Connolly recently put it, the "danger of 'serfdom' today...is the emergence of a regime in which a few corporate overlords monopolize creativity to sustain a bankrupt way of life...to cling to American hegemony in a world unfavorable to it...in which the ideology of freedom is winnowed to a set of consumer choices between preset options."⁸⁵ Google and Facebook, for example, have been enormously successful at monopolizing Internet services and monopolizing creativity. Both companies regularly buy out the competition or leverage their market dominance to undermine alternative innovations, effectively "colonizing the future"⁸⁶ of digital political thought.

The commercialization of the Internet made possible by recurring moral panics related to dangerous expressions, related to cyberporn and terrorism, has given corporations an unprecedented ability to directly and indirectly shape the political subjectivity of users. The belief that people are primarily motivated by rational self-interest, a belief promoted by social scientists explaining behavior using computational models, and the idea that horizontal networks could resist hierarchies were technologized in the hardware, software, and protocols of the Internet. I have suggested here that digital language controls have helped produce self-interested and rational users who made regularized expressions computational treatments of data required. These presumptions and models have been criticized for ignoring the influence of forces like modern capitalism, which help determine why self-interest⁸⁷ is valued and neuro-scientific findings have complicated the very idea of rationality.⁸⁸

Thus far, I have described "the algorithm" primarily as a sorting mechanism, but it is increasingly obvious that the human political animal is no longer the only animal capable of writing or being addressed by writing. In March 2014, following a small earthquake in southern California, an algorithm designed to write news articles faster than a human reporter automatically published a news story in the *Los Angeles Times* less than 20 minutes after the quake registered on U.S. Geological Survey instruments.⁸⁹ In 2012, a marketing professor patented a system for algorithmically compiling data into book form and used that algorithm to

⁸⁴ Deleuze, *Negotiations 1972-1990*, 175.

⁸⁵ William E. Connolly, *The Fragility of Things: Self-Organizing Processes, Neoliberal Fantasies, and Democratic Activism* (Durham: Duke University Press Books, 2013), 79.

⁸⁶ Ziauddin Sardar, "Colonizing the Future: The 'other' Dimension of Futures Studies," *Futures* 25, no. 2 (March 1993): 179-87, doi:10.1016/0016-3287(93)90163-N.

⁸⁷ Duncan K. Foley, *Unholy Trinity: Labor, Capital and Land in the New Economy* (Routledge, 2003).

⁸⁸ William E. Connolly, *Neropolitics: Thinking, Culture, Speed*, 1st ed. (Univ Of Minnesota Press, 2002).

⁸⁹ Gregory Ferenstein, "An Algorithm Wrote The LA Times Story About The City's Earthquake Aftershock Today," *TechCrunch*, accessed March 18, 2014, <http://techcrunch.com/2014/03/17/an-algorithm-wrote-the-la-times-story-about-the-citys-earthquake-aftershock-today/>.

write, and sell on Amazon, over 800,000 books.⁹⁰ Also in 2012, “bot” Internet traffic exceeded human Internet traffic.⁹¹ The company Narrative Science has also developed a book and article writing algorithm call “Quill” and allows anyone to purchase a subscription to their automatic writer.⁹² There has been speculation that Jeff Bezos, the founder of Amazon, plans to use Quill to write for his newly acquired newspaper, *The Washington Post*,⁹³ and one reason devices are being built with a front-facing camera is to track eye movements of readers.⁹⁴ It is not hard to imagine, as Morozov has done,⁹⁵ that Amazon might combine these technologies and rewrite books as users read them—using the front-facing camera to monitor eye movements and modifying the text to sustain the readers interest. Morozov fears this will lead to an end of reading publics, and rightly so, but these developments also open new opportunities for non-human to engage in their own confrontations with the logic of policing, following Rancière, asserting their own fundamental equality to human speaking or writing beings. Today there are numerous agents and forces participating in language regulation. While the dictionary-writer, the moralist, the judge, the mental health expert, the corporation, and the algorithm all participate in determining whose expressions count as discourse and which expressions can be discounted as noise, each also helps condition the possibility for alternative counts, making heard what had no business being heard, and seeding political “conflict over the existence of a common stage and over the existence and status of those present on it.”⁹⁶

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⁹⁰ Grant Bunner and 2012 at 2:29 Pm, “Programmer Creates 800,000 Books Algorithmically, Starts Selling Them on Amazon,” *ExtremeTech*, accessed March 31, 2015, <http://www.extremetech.com/extreme/143382-programmer-creates-800000-books-algorithmically-starts-selling-them-on-amazon>.

⁹¹ Alexis C. Madrigal, “Welcome to the Internet of Thingies: 61.5% of Web Traffic Is Not Human,” *The Atlantic*, December 12, 2013, <http://www.theatlantic.com/technology/archive/2013/12/welcome-to-the-internet-of-thingies-615-of-web-traffic-is-not-human/282309/>.

⁹² “NarrativeScience,” accessed March 31, 2015, <http://www.narrativescience.com/>.

⁹³ “Never Mind Jeff Bezos: ‘Robots’ Almost Took over the Washington Post! | Bleacher Report – The Writers Blog,” accessed March 31, 2015, <http://blog.bleacherreport.com/2013/08/21/never-mind-jeff-bezos-robots-almost-took-over-the-washington-post/>.

⁹⁴ Nate Hoffelder, “Why the Amazon Smartphone Might Need 6 Cameras, Part Two,” *Ink, Bits, & Pixels*, accessed March 31, 2015, <http://the-digital-reader.com/2014/04/13/why-the-amazon-smartphone-might-need-6-cameras-part-two/>.

⁹⁵ Morozov, *To Save Everything, Click Here*, 192.

⁹⁶ Jacques Rancière, *Disagreement: Politics And Philosophy*, 1st ed. (University of Minnesota Press, 2004), 26.

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