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Does Information Want to Be Free? Hactivism and the Democratization of Information

Ashley Gorham

It was at the first Hackers' Conference in 1984 that Stewart Brand coined the phrase "information wants to be free."ⁱ There are many ways to interpret this statement, but the most prevalent one is the "deterministic" interpretation. According to this reading, information is understood as possessing an innate tendency toward freedom—what it "wants," it gets. Information is seen as self-moving and progressive. Implicit in this understanding is the belief that information will promote equality and democracy as it grows. The deterministic interpretation's strongest proponents are the three W's: Wonks, Writers, and the Wired. Politicians, political advisors, media members and technological enthusiasts are some of the most ardent and vocal supporters of this view. In this essay, this dominant view is critiqued and an alternative "democratic" view of information is offered. According to this interpretation, information may "want" to be free, but the wish is unfulfilled. In place of freedom, the democratic interpretation defines the salient characteristic of information as growth. While the two ideas are similar, they are not the same. The promise of freedom is liberatory, while growth is more neutral and can easily lead to the multiplication of existing inequalities and asymmetries. While democracy is the inevitable result of the deterministic interpretation, it is the site of struggle in the democratic interpretation. Such an understanding of information is enacted in the work of hactivists who seek to democratize information by subjecting it to democratic authority and in so doing reveal the ambiguous relationship between information and democracy.

Information is a concept whose time has come. For most of political history, information has played an ancillary role; only recently has it become revolutionary. Information is defined as the "imparting of knowledge in general."ⁱⁱ The definition of the term contains many subheadings that develop this general understanding, including "Knowledge communicated concerning some particular fact, subject, or event; that of which one is apprised or told; intelligence, news."ⁱⁱⁱ Information then is a kind of knowledge that is conveyed. What is still unclear from this definition is just what *it* is. There are many different kinds of information, ranging from personal details to empirical studies. This seems to be the understanding of information reflected in the saying "information wants to be free," with information being as diverse and numerous as the panoply of content available online—the primary site of the "information revolution."

Those most convinced of the revolutionary potential of information argue that "information wants to be free" by nature, and irresistibly so, a view that reveals a kind of technological determinism, or what Evgeny Morozov calls "cyber-utopian" thinking. According to Morozov, cyber-utopians possess a "naïve belief in the emancipatory nature of online communication that rests on a stubborn refusal to acknowledge its downside."^{iv} It is the kind of thinking Morozov labels "iPod Liberalism," essentially it is the belief that "connectivity x devices = democracy."^v Such thinking is not new. Marshall McLuhan predicted electronic media would encourage a participatory "global village" and the radio, television, and camcorder were all initially viewed as revolutionary devices (interestingly, they have also been viewed as potentially totalitarian devices as well). Cyber-utopianism was especially prevalent in the 1990's, Morozov himself admits to being "intoxicated with cyber-utopianism until recently."^{vi} Most of the arguments during this time concerned theories that suggested that the Internet would revitalize democracy through the increase in communication and

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information capabilities.^{vii} The path to progress seemed both imminent and natural, but practice soon dampened this optimism.^{viii} The disillusionment with cyber-utopian thinking has been particularly evident among academics.

This has largely not been the case among the WWW; as politicians and their advisors, members of the media, and technological developers continue to maintain a faith in the liberating quality of information. Perhaps the most dramatic statement of this view comes from Ronald Reagan, who said, “Information is the oxygen of the modern age...It seeps through the world's barbed wire, it wafts across the electrified boobytrapped borders...The Goliath of totalitarian control will rapidly be brought down by the David of the microchip.”^{ix} Subscribers to the deterministic understanding of information understand the Internet as naturally undermining authoritarianism by encouraging the spread of information. Former Under Secretary of State for Public Diplomacy and Public Affairs, James K. Glassman sums up the sentiment well in relation to extremism and Web 2.0, saying, “This new virtual world is democratic. It is an agora. It is not a place for a death cult that counts on keeping its ideology sealed off from criticism.”^x Faith in the potential of the Internet led former vice president Al Gore to proclaim, “individuals empowered by this new communications infrastructure will be able to reclaim their birthrights as free citizens and redeem the promise of representative democracy.”^{xi} For determinists, the information revolution is seen as both undermining authoritarianism and extremism, and enhancing democracy.

The media's hyperbole has been no more restrained. The belief in the march of progress with the spread of information is the same sentiment found in the media coverage of the so-called Twitter and Facebook Revolutions in articles like “The Revolution Will Be Twitted,” “How Social Media Accelerated Tunisia's Revolution: An Inside View,” and “A Nobel Peace Prize for Twitter?”^{xii} In “Despots Beware: 140 Characters Can Spark a Revolution,” Adam LeBor writes, “the internet provides ever more efficient ways to communicate, organise and channel years of pent-up fury. This convergence of popular anger, globalised information and decentralised, spontaneous networks with access to modern technology is unstoppable. For dictators across the world, ultimately, it's game over.”^{xiii} The cyber-utopianism of such claims is highlighted by the increasingly diminished role social media is being allocated in academic explanations of these revolutionary activities.^{xiv}

For the Wired, information freedom is inherent in the structure of the Internet. According to John Gilmore, founding member of the Electronic Frontier Foundation, “The Net interprets censorship as damage and routes around it.”^{xv} Computing's “Johnny Appleseed,” J. C. R. Licklider, articulated the political implications of this tendency suggesting, “The information revolution is bringing with it a key that may open the door to a new era of involvement and participation.”^{xvi} And co-founder of MIT's Media Lab, Nicholas Negroponte, in a paradigmatic statement of the deterministic understanding, has said, “The real question is, ‘Does the Internet overtly help causes like democracy, freedom, the elimination of poverty, and world peace?’ My answer is: It does these things naturally and inherently.”^{xvii}

Recently, some of the most prominent members of the WWW have offered accounts of the future of technology that offer insights into their understanding of information. These works include Kevin Kelly's *What Technology Wants*, Eric Schmidt and Jared Cohen's *The New Digital Age*, and Al Gore's *The Future*, in declining order of determinism. The authors are quintessential members of the WWW: Kelly is the founding executive editor of *Wired* and a former editor of the *Whole Earth*

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Review, Eric Schmidt is the executive chairman of Google, Jared Cohen is the director of Google Ideas and a former advisor to both Condoleezza Rice and Hillary Clinton, and finally Al Gore is the former vice president of the United States. In all three accounts, technology is seen as advancing evolutionarily and varying degrees of agency are allotted to humans who are seen as largely reacting to this advance. While strict deterministic explanations are often eschewed for their reductionism, even those that formally disavow “technological determinism” are guilty of thinking that technology, and particularly the Internet, promotes information freedom, which in turn promotes democracy and progress. Despite explanations that offer nods to complexity and social forces, the overarching narrative is one that speaks to the deterministic understanding of information.

In Kelly’s *What Technology Wants*, the “technium,” defined by Kelly as “the greater, global, massively interconnected system of technology vibrating around us,” is portrayed as an autonomous network of processes, over which people think they have control because it is man-made, but according to Kelly, “systems—all systems—generate their own momentum,” and “the technium has its own wants.”^{xxviii} Technology’s “imperative” is a kind of “momentum” which, because it accounts for interaction and reciprocity, falls short of hard determinism but still represents a robust theory of technology’s influence, over which the most we can hope to do is “steer.”^{xxix} And while Kelly does not deny free will to humans, he does go so far as to attribute it to technology as well. Ultimately it is a progressive story for Kelly, who concludes that while there are good and bad sides to technological development, “on average and over time, the new solutions outweigh the new problems.”^{xxx} Essentially the technium promotes human betterment by increasing choices, which ultimately promotes progress.^{xxxi} And just as more means progress, more information, the “dominant force in our world,” also means better political decisions.^{xxii}

Kelly acknowledges the influence of external forces as well as the possible drawbacks of technological innovation; however, Schmidt and Cohen go further to present a more nuanced account of development, while maintaining the basic understanding that technology increases information, which is inherently emancipatory. While distancing themselves from those who interpret the phrase “information wants to be free” in the manner of WikiLeaks, the authors believe “information, like water, will always find a way through.”^{xxiii} The book may be a more balanced account of technology, with its constant stress of “trade-offs,” and even its share of doomsday scenarios (including “large-scale hacking into the air-traffic-control system”), but the overall view of technology’s potential is optimistic, “a new wave of human creativity and potential is rising” with power shifting from institutions to people.^{xxiv} Like Kelly, Schmidt and Cohen believe that technology is progressing according to a kind of evolution.^{xxv} They also stress the importance of steering, or the “guiding human hand,” in the face of these developments.^{xxvi} And like Kelly, they argue that more is better.^{xxvii} More choices are better and more information promotes democracy by preventing governments from lying and by empowering citizens.^{xxviii} And while at one point they label technology an “equal opportunity enabler,” the authors consistently stress that technology favors the individual in the long run.^{xxix} The impression the reader is left with is that because of technology “citizens will have more power than at any other time in history,” but with potentially high costs in “privacy and security.”^{xxx} Overall, technological change is both inevitable and progressive.

By far the least deterministic account, in fact it is probably not deterministic at all, is Al Gore’s *The Future*. The work is included here because it features many of the concepts typical of the deterministic view, while differing from it in its allocation of a significant amount of agency to human

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action. Gore's work offers a sober assessment of the current situation that both celebrates technological progress and is deeply critical of its shortcomings. Here technology is again presented as a kind of evolutionary force, but the potential for political solutions is stressed throughout. Again, people are called to "steer," but here the choice is presented as the difference between going on and being taken on a journey.^{xxxix} Yet, while the determinism is reduced, Gore is clearly a cyber-optimist. The solution to the "hacked" democracy is consistently the Internet.^{xxxii} In the battle between the economic realities Gore labels "Earth Inc.," and the Internet connected people he labels the "Global Mind," Gore maintains that the embrace of the Internet and its facilitation of improved collective decision-making can help tip the balance. Although largely eschewing technological determinism, the basic deterministic understanding of the Internet as increasing information, which in turn promotes democracy, reappears here. It is the Internet that is the greatest potential savior of democracy for Gore.^{xxxiii}

The deterministic interpretation defines information's dominant tendency as freedom, however such an articulation misunderstands the nature of information. More than wanting to be free, information wants to multiply. Although not given primacy of place, this aspect of information is noted in all three accounts. Kelly stresses that among the technium's many wants, a central one is to "perpetuate" or grow; it is in his words "selfish."^{xxxiv} It is also "self-amplifying," a quality which Moore's Law gives a measure of insight into. Moore's Law "predicts that computing chips will shrink by half in size and cost every 18 to 24 months."^{xxxv} Kelly suggests there are many Moore-like relationships with technology, which displays an "inevitability" of amplification.^{xxxvi} According to Kelly, "we are adding 400 exabytes of new information to the technium each year, so the rate of our technological evolution is a billion billion times as fast as the evolution of DNA. As humans it takes us less than a second to process the same amount of information that our DNA took a billion years to process."^{xxxvii} Eric Schmidt and Jared Cohen also remark on the "exponential growth of technology," noting how information in particular is subject to this form of development. According to Schmidt and Cohen, "Every two days we create as much digital content as we did from the dawn of civilization until 2003—that's about five exabytes of information."^{xxxviii} Gore makes a similar observation, writing, "The annual production and storage of digital data by companies and individuals is 60,000 times more than the total amount of information contained in the Library of Congress. By 2011, the amount of information created and replicated had grown by a factor of nine in just five years."^{xxxix}

This massive increase in information has generally been regarded as a good thing for democracy. Yet, while such growth can have democratic effects, it is by no means inherent in the nature of information itself. With the proliferation of information has come a proliferation in surveillance and in the means of information collection and storage. Much of this information is not publicly available and is centralized among a few organizations. This point is largely ignored by Kelly, who instead muses on how "We'll use [technology's] growing smartness for all kinds of humdrum chores—data mining, memory archive, simultaneous forecasting, pattern matching"; without probing any of the darker implications of such developments.^{xl} In a throwaway line, Kelly admits, "we might be repulsed by the alien nature of many of the most powerful types of intelligences. For instance, the ability to remember *everything* can be scary," but goes no further.^{xli} By contrast, a concern with privacy greatly informs the discussion of both Cohen and Schmidt and Gore's books and they are wary of technology's potential for surveillance and data mining. Yet, these concerns are subsumed under the assumption that eventually information naturally promotes democracy. This

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conclusion downplays the dramatic degree to which the multiplication of information exacerbates information inequalities rather than improves them.

Perhaps the greatest benefactors of information multiplication are the government and businesses. Information has grown so rapidly for the U.S. government that it has had to undertake the massive construction of a nearly \$2 billion center. The Utah Data Center for the National Security Agency is aimed at monitoring and collecting “all forms of communication, including the complete contents of private emails, cell phone calls, and Google searches, as well as all sorts of personal data trails—parking receipts, travel itineraries, bookstore purchases, and other digital ‘pocket litter.’”^{xlii} *Wired* quotes one official as saying the guiding assumption of the facility is that “Everybody’s a target; everybody with communication is a target.”^{xliii} The structure ranges 1 million square feet and requires a massive amount of energy, which “comes with a mammoth price tag—about \$40 million a year, according to one estimate.”^{xliv} The article’s author concludes, “Given the facility’s scale and the fact that a terabyte of data can now be stored on a flash drive the size of a man’s pinky, the potential amount of information that could be housed in Bluffdale is truly staggering.”^{xlv} Simultaneously, the development of the Global Information Grid represents another government project aimed at managing massive amounts of data.^{xlvi} The data is reportedly on the scale of yottabytes (10^{24}), or “a septillion bytes—so large that no one has yet coined a term for the next higher magnitude.”^{xlvii}

The business world has enjoyed a similar explosion in consumer data. In fact, businesses have arisen with the sole purpose of monitoring consumer activity online. According to a *New York Times* article,

Few consumers have ever heard of Acxiom. But analysts say it has amassed the world’s largest commercial database on consumers — and that it wants to know much, much more. Its servers process more than 50 trillion data “transactions” a year. Company executives have said its database contains information about 500 million active consumers worldwide, with about 1,500 data points per person. That includes a majority of adults in the United States.^{xlviii}

Acxiom uses all of that data to enhance consumer marketing.^{xlix} The company has been referred to as “Big Brother in Arkansas.”^l

If information seeks to multiply and not necessarily to be free, then those who are interested in information freedom cannot rely on information’s natural flow. This is where hackers come in, a rebellious subset of the *Wired*, they use computers to alter, view, distribute and/or block the flow of information. Information asymmetries directly conflict with the “hacker ethic,” as it is defined by Steven Levy as the belief in information freedom and open access to computers, a mistrust of authority and cultivation of decentralization, support for meritocracy, and faith in the artistic and progressive potential of computers.^{li} And with Gabriella Coleman’s definition of the hacker core values as freedom, privacy, and access, a formulation that acknowledges the diversity of hacker beliefs.^{lii}

Different kinds of hackers deal with different kinds of information in different ways. The hacker ideal of information freedom is refracted among the many different hacker practices. For example, InfoSec, or information security hackers, advocate restrictions on information, while Free and Open Source hackers promote the sharing of computer code. The hacker underground directly

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undermines information monopolies through “secrecy and spectacle.”^{liii} Hacktivists are politically motivated hackers who seek to free information by *democratizing* it. This is not to say that all hacktivists understand themselves as engaging in democratic acts. Hacktivists possess diverse ideologies and many profess a kind of techno-libertarianism, but in *practice* the actions of hacktivists are distinctly democratic.

Hactivism is a relatively new phenomenon. The term was coined in 1996, by Cult of the Dead Cow (cDc) hacker Omega.^{liv} Since then, many definitions have been offered for the practice, but none has become definitive. Paul Taylor defines hactivism as “the combination of hacking techniques with political activism.”^{lv} Sandor Vegh articulates the phenomenon in more technical terms as “a politically motivated single-incident online action, or a campaign thereof, taken by nonstate actors in retaliation to express disapproval or to call attention to an issue advocated by the activists.”^{lvi} However, perhaps the most useful definition is that of Alexandra Samuel, who elegantly defines hactivism as “the nonviolent use of illegal or legally ambiguous digital tools in pursuit of political ends.”^{lvii} In Samuel’s words, “hactivism combines the transgressive politics of civil disobedience with the technologies and techniques of computer hackers.”^{lviii} Hactivist tools include “web site defacements, redirects, denial-of-service attacks, information theft, web site parodies, virtual sit-ins, virtual sabotage, and software development.”^{lix} Samuel goes on to identify three forms of hactivism: “political cracking, which consists of illegal actions like web site defacements and redirects, performative hactivism, which consists of legally nebulous actions like virtual sit-ins and web site parodies; and political coding, which consists of political software development.”^{lx} Samuel’s classification system has been challenged by the advent of hacking groups like Anonymous, which combine methods and practices from all three categories. However, her prescient account of the phenomenon still represents an excellent survey of the early evolution of the practice.

For hactivists, information freedom is not a kind of freedom from “constraint,” instead it refers to “not being subject to despotic or autocratic control.”^{lxi} Often applied to individuals, this concept of freedom suggests not a total lack of restriction, but the existence of legitimate government. The difference between these two kinds of freedom can be illustrated with an example. Among the many corporate accumulators of information, Google is perhaps the largest and certainly the most famous. The extent of Google’s information silo is unknown, but their tracking mechanisms most obviously include their search engine, Gmail, Google Chrome, YouTube, Android, Google Analytics, and Google Maps. Those who advocate the total liberation of information would probably argue that the collection of such data should either be outlawed or available to all. They would most certainly argue against the for-profit hoarding of such information. By contrast, democratic information would make the very act of collection subject to debate. Opposed to the notions of despotism and autocracy is the freedom of democratic choice. This does not necessarily preclude the activities of Google or the asymmetries of information that are necessary to their business model, but it does require that the decision to allow, limit or deny the collection and dissemination of information be a democratic one. It should involve all those who are affected by the decision and not only those who stand to profit from it.

The hactivist understanding of information freedom as democratic choice is perhaps best exemplified by the much-publicized hactivism of Anonymous. While their hacks are numerous and varied, taken as a whole they can be seen as improving democratic choice through their pursuit of accountability, transparency, and privacy, surprisingly earnest pursuits for a group that started out as a

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bunch of online “trolls” (Internet bullies) united only by their pleasure in making fun of things. The first project that moved the group from online message boards and the “ultra-coordinated motherfuckery” of “raids” was “Project Chanology,” which journalist Quinn Norton suggests “arguably marked both the birth of political consciousness for Anonymous, and the development of its methods of taking mass action.”^{lxii} True to the spirit of the group, the project began with the discovery of a bizarre Scientology recruitment video featuring Tom Cruise, which most “Anons” became interested in because they found it hilarious. Anons were at first annoyed and then outraged by Scientology’s efforts to suppress the video. Anonymous DDoS’d their servers (a “distributed denial-of-service” attack is a kind of digital sit-in that clogs a server and stops it from working) and engaged in a variety of pranks on them.^{lxiii} From there, Anonymous moved to disseminating private information that highlighted both their censorship and exploitative membership practices.^{lxiv} On February 10, 2008, Anonymous held a global day of protest against Scientology.^{lxv} Anons showed up in droves carrying signs and wearing Guy Fawkes masks.^{lxvi} The moment was formative for the group that would go from trolling the Church of Scientology to a wide variety of online hacktivism. In this early campaign, Anonymous showed their ability to promote the accountability of organizations by attacking their systems of operation and by making their practices increasingly transparent.

In January 2011, Anonymous would engage in a more explicitly political campaign with Operation Tunisia. In OpTunisia, Anonymous increased the accountability and transparency of the country’s government by releasing sensitive documents and by facilitating the flow of information in and out of the country.^{lxvii} They also sought to promote the privacy of the Tunisians by sending a script to them that they could use to protect their web browsers from government surveillance.^{lxviii} Anonymous included with the script the message, “This is *your* revolution. It will neither be Twittered nor televised or [sic] IRC’ed. You *must* hit the streets or you *will* loose [sic] the fight. Always stay safe, once you got [sic] arrested you cannot do anything for yourself or your people. Your government *is* watching you.”^{lxix}

Privacy, like censorship, is a major issue for Anonymous. Besides designing programs to protect privacy, Anonymous often symbolically protests the abuse of privacy with “data dumps.” Data dumps involve the accessing of large amounts of private stored data and the subsequent release of that information online. In February 2013, Anonymous released 14 gigabytes of information in order to expose what Anonymous maintains is the “contracting [of] other companies to spy and collect information on private citizens” by Bank of America.^{lxx} Anonymous stipulated that the act was not “a hack... because it was stored on a misconfigured server and basically open for grabs.”^{lxxi} They went on to say, “We release the received files in full to raise awareness to this issue and to send a signal to corporations and Governments that this is unacceptable.”^{lxxii}

Opposition to censorship and support for privacy are the two issues that mark a tentative unity between Anonymous’ Project Chanology, OpTunisia, the campaign against Bank of America and many of their hacks including Operation Payback, Avenge Assange, Bradical, Operation Sony, Operation Megaupload, Occupy Wall Street, and H.B. Gary Federal, among others. In their fight against censorship and through their efforts to protect privacy, Anonymous acknowledges the non-deterministic relationship between information and freedom, while simultaneously offering a definition of information freedom that goes beyond the “absence of constraint.” Hacktivists like Anonymous democratize information by opening it up to legitimate rule in the form of democratic choice. Accountability empowers choice, transparency improves it, and privacy defends it. Yet, there

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is another dimension of democratic information embedded in the concept of choice that goes beyond concern for accountability, transparency, and privacy. Choice can be understood as both a *selection among alternatives* and as an *expressive articulation*. Transcending utility, Anonymous engages in both elements of democratic choice with their hacks.

Prior to the advent of computers, a “hack” was generally understood as “A tool or implement for breaking or chopping up.”^{lxxiii} Examples of hacks include “agricultural tools” like “the mattock, hoe, and pick-axe”; as well as, “a miner’s pick used for breaking stone” and “a bill for cutting wood.”^{lxxiv} Computer hacking can be defined as “an act of gaining unauthorized access to a computer system.”^{lxxv} A hack then can be characterized as an attempt to cut or break into something in the face of resistance. Such a conceptualization of hacking aligns it with an understanding of political action as a kind of transgressive interruption. According to Hannah Arendt, “It is the function...of all action, as distinguished from mere behavior, to interrupt what otherwise would have proceeded automatically and therefore predictably.”^{lxxvi} In *On Revolution*, Arendt aligns democracy with revolution and discusses the difficulty of enshrining the democratic spirit in institutions after the revolution is over. She praises “the regular emergence and reemergence of the council system since the French Revolution,” the spontaneous and effervescent appearance of democratic spaces sprung from the impulses of the people themselves.^{lxxvii} In his article “Fugitive Democracy,” Sheldon Wolin similarly suggests that that the attempt to conceive of democracy as a form of government rather than as a moment, stifles and suffocates the ideal. Wolin characterizes democracy as “occasional and fugitive.”^{lxxviii} Emphasizing the importance of transgression he writes, “Revolutions activate the demos and destroy boundaries that bar access to political experience. Individuals from the excluded social strata take on responsibilities, deliberate about goals and choices, and share in decisions that have broad consequences and affect unknown and distant others. Thus revolutionary transgression is the means by which the demos makes itself political.”^{lxxix} The concept of transgression is central to Bonnie Honig’s reimagining of Arendt’s concept of action. Honig writes,

What if we treated Arendt’s notion of the public realm not as a specific topos, like the ancient Greek agon, but as a metaphor for a variety of (agonistic) spaces, both topographical and conceptual, that might occasion action? We might be left with a notion of action as an event, an agonistic disruption of the ordinary sequence of things that makes way for novelty and distinction, a site of resistance of the irresistible, a challenge to the normalizing rules that seek to constitute, govern, and control various behaviors. And we might then be in a position to identify sites of political action in a much broader array of contestations, ranging from the self-evident truths of God, nature, technology, and capital to those of identity, of gender, race, and ethnicity. We might then be in a position to *act*—in the private realm.^{lxxx}

For all three thinkers—Arendt, Wolin, and Honig—action is a kind of break, or hack. This is exactly the model of political action displayed by hacktivists who interrupt what for the WWW is a deterministic flow of information in order to engage in a moment of democratic action (the flow of determinism is not unlike Arendt’s “process” and Honig’s “irresistible” and “normalizing” “ordinary sequence of things”).

Central to the aforementioned theories of transgression is the expressive aspect of action; as transgressive acts provide unique opportunities for the political impulses of individuals to be

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exercised. The potential for self-realization, its noninstrumental instrumentality, and its communal nature all align hacktivism with theories of action that stress its expressive element. A strain of thought that begins with Aristotle, resurfaces in the form of Machiavellian virtù, develops in an apolitical form with Nietzsche, is addressed at length by Arendt, and is revisited in the contemporary theories of radical and agonistic democracy of Wolin and Honig among others.

For Anonymous, such transgressive expression is all about the “lulz,” a term that any analyst of Anonymous is quick to bring up. Quinn Norton even titled her study of the group “Anonymous 101: Introduction to the Lulz,” proclaiming in the piece “In the culture of Anonymous, the lulz is the reason for doing.”^{lxxxix} “Lulz” is related to “LOL,” a popular online abbreviation for “laugh out loud.” According to Norton, “The lulz is laughing instead of screaming...It’s not the anesthetic humor that makes days go by easier, it’s humor that heightens contradictions.”^{lxxxii} It is around the “lulz” that the three elements of self-realization, noninstrumental action, and community, crystallize in the form of expressive democratic choice.

The anonymity of Anonymous problematizes the traditional concept of self-realization. However, handles are well known within the community and self and collective expression through hacks is central to the spirit of Anonymous. Gabriella Coleman, the foremost academic authority on Anonymous, stresses the Nietzschean elements of their iconoclastic hacktivism. This connection can be pushed further to include both the transgressive and the performative elements of the lulz. Nietzschean overcoming is both a triumph over resistance and the expression of talent or skill and the ideal is not unique to “Enlightenment’s trickster.”^{lxxxiii} With its combination of both transgression and performance, the form of self-actualization enacted by Anonymous partakes in the expressive democratic tradition previously identified with thinkers such as Arendt, Wolin, and Honig. Indebted to both Aristotle and Nietzsche, self-disclosure through action is a consistent and enduring theme throughout Arendt’s work. Wolin, while careful to avoid elitism, stresses the importance of the “self-fashioning of the demos,” and Honig frequently praises “performative freedom” in her “radicalization of Arendt’s account of political action.”^{lxxxiv}

The political significance of lulz is often overlooked in favor of the more serious facets of Anonymous, but fun can be an important motivator. Fun is often tied to the feeling of power. It is unequivocally not fun to feel powerless and ineffectual. One theorist who recognized the significance of fun was Arendt, who in *On Revolution* devoted considerable time to the notion of public happiness and to the Founding Fathers who in the course of their public business found “they were enjoying what they were doing far beyond the call of duty.”^{lxxxv} Arendt suggests that Americans were more cognizant of the thrill of public happiness and ‘the passion for distinction’ than the French, and it for this reason Arendt identifies them as more thoroughly political than their counterparts.^{lxxxvi} In this way, the Americans were more reminiscent of the Ancients, who found leisure to be a burden that kept them from the enjoyments of public life. Unlike political actors of the past, Anons do not present themselves in body and speech, but they do reveal themselves through hacks. The “who” that is revealed is not the “who” of the physical world, but of the online world; it is the “who” of their handles and of “Anonymous.” And like their political forefathers, they have fun doing it. The division between lulz and politics has been exaggerated both outside and inside the Anonymous community. In her work Gabriella Coleman observes this distinction, although she admits the bifurcation of those who hack for the “lulz” and the “moralfags” is blurred in practice. The division appears in Parmy Olson’s *We Are Anonymous* and in the work of Quinn Norton as well. It is a

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cleavage Anons themselves refer to and these ostensibly competing concerns led to a “civil war” within the group or what Anon Pokeanon called a “very fierce clash of ideologies.”^{lxxxvii} However, such a divide obscures the fact that fun is a component of almost every hack. And while fun can be selfish and even anarchist, when it is public-spirited, fun may be the height of politics. It is noninstrumental instrumentality. This is the realization behind the ubiquitous Anonymous rejoinder, “I did it for the lulz.”

The expressive potential of the lulz is largely dependent on a community of co-actors in order to gain significance. In order to be most fully felt, the public expression of the self and the enjoyment of showing off demand an audience. Although hacking is ostensibly an isolated pursuit, hackers create a new kind of community online (and sometimes in person).^{lxxxviii} The development of a hacker community preceded the development of Anonymous and grew out of a shared culture. One locus of hacker culture is the website 4chan where people share random pictures, phrases, and memes. Most of the posts come under the random /b/ board. The /b/ posts are both anonymous and unarchived; they are all about the lulz. The culture on /b/ board often appears xenophobic, racist, and sexist, yet, the frequent repetition of words like “nigger” and “faggot” can be seen as “heads on pikes” to warn the uninitiated to keep out.^{lxxxix} As Anons moved from the /b/ board to Project Chanology and onto subsequent coordinated actions, they moved into other forms of communication like IRC (Internet Relay Chat), often getting to know one another by their handles.

The novel form of political action represented by the hacktivism of Anonymous should not be dismissed as juvenile lulz. Involving self-realization, noninstrumental action, and a community, the expressive democratic action of Anonymous should be seen as partaking in the tradition of radical and agonistic politics. Anonymous disrupts the flow of information in order to democratize it. This democratization occurs directly through their hacks, and indirectly through their submission of information to democratic choice. The former speaks to the understanding of choice as an *expression*, while the latter is more closely related to the understanding of choice as a *selection*. The second sense is “indirect” in that it is not the immediate result of their actions, but entails a longer process of reception and translation. Such a conception of democratic choice is primarily embodied in the act of voting. And while voting does involve some sense of expression, it lacks any notion of self-presentation. Devoid of existential content, such a model of democratic action faces a serious assault from the standard of correctness. If democracy is primarily understood as a kind of selection, then the most important criterion is the correctness of the decision. And if this is the case, then it seems that the closer a system could come to certainty, the less compelling democratic participation would be. Direct action avoids this danger by claiming an alternative standard of legitimacy in self-expression.

The assumption that information democratizes obscures the reality that information must be democratized, and in the absence of such action, information freedom may turn out to be one of democracy’s greatest threats. It is conceivable that a government with access to “perfect” information, or as near to perfect as Big Data will allow, could obviate the need for democracy. Systems modeling can have formidable predictive power and many models are already making their way into governance. To take a mundane example, New York City’s “311” service aggregates and analyzes data in order to increase government efficiency in service provision and in the *prediction* of future needs and concerns. According to Accenture, the company involved in the creation of the 311 program, “Analysis of call patterns...allows the city to respond proactively to issues—such as dispatching extra workers to deal with potholes or helping police target illegal social clubs—after 311

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showed a connection between certain locations and public drinking complaints.”^{xc} Democracy is a government of fallibility, suited to neither gods nor beasts, but a government that could assume a God’s eye perspective would be above the law.^{xcii} In this way imperfect information is a safeguard for democracy and while it may involve a trade-off in efficiency, the maintenance of popular government and the rule of law is worth it. Arendt wrote of totalitarianism, “Total abolition of legality is safe only under the condition of perfect information, or at least a degree of knowledge of private and intimate details which evokes the illusion of perfect.”^{xciii} Today, technology allows for a closer approximation to perfect information than ever before.

Journalist Mat Honan recently imagined an informational dystopia in his satirical piece “Welcome to Google Island.” In the article Honan imagines waking up after “a four-hour Google I/O keynote liveblogging session” to a greeting from Larry Page,

Welcome to Google Island. I hope my nudity doesn’t bother you. We’re completely committed to openness here. Search history. Health data. Your genetic blueprint. One way to express this is by removing clothes to foster experimentation. It’s something I learned at Burning Man...Here, drink this. You’re slightly dehydrated, and your blood sugar is low. This is a blend of water, electrolytes, and glucose.^{xciii}

On Google Island, total transparency and perfect information is the rule, “Our laws— or lack thereof— apply here. By boarding our self-driving boat you granted us the right to all feedback you provide during your journey. This includes the chemical composition of your sweat.”^{xciv} Google’s massive stores of information have given birth to a new kind of existence on Google Island, “Google Being.” Page describes this evolution,

Unified logins let us get to know our audience in ways we never could before. They gave us their locations so that we might better tell them if it was raining outside. They told us where they lived and where they wanted to go so that we could deliver a more immersive map that better anticipated what they wanted to do— it let us very literally tell people what they should do today. As people began to see how very useful Google Now was, they began to give us even more information. They told us to dig through their email for their boarding passes— Imagine if you had to find it on your own!— they finally gave us permission to track and store their search and web history so that we could give them better and better Cards. And then there is the imaging. They gave us tens of thousands of pictures of themselves so that we could pick the best ones— yes we appealed to their vanity to do this: *We’ll make you look better and assure you present a smiling, wrinkle-free face to the world*— but it allowed us to also stitch together three-dimensional representations. Hangout chats let us know who everybody’s friends were, and what they had to say to them. Verbal searches gave us our users’ voices. These were intermediary steps. But it let us know where people were at all times, what they thought, what they said, and of course how they looked. Sure, Google Now could tell you what to do. But Google Being will literally do it for you.

My Google Being anticipates everything I would think, everything I would want to say or do or feel...Everywhere I would go. Years of research have gone into this. It is in every way the same as me. So much so that my physical form is no longer necessary. It

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was just getting in the way, so we removed it. Keep in mind that for now at least, Google Being is just a developer product.^{xcv}

After exploring Google’s teleportation system, self-driving cars, “Google Health,” Google drones, and “Google Spiders,” Page explains his political views,

Governments are too focused on democracy and rule of law. On Google Island, we’ve found those things to be distractions. If democracy worked so well, if a majority public opinion made something right, we would still have Jim Crow laws and Google Reader. We believe we can fix the world’s problems with better math. We can tear down the old and rebuild it with the new. Imagine Minecraft. Now imagine it photorealistic, and now imagine yourself living there, or at least, your Google Being living there. We already have the information. All we need is an invitation. This is the inevitable and logical end point of Google Island: a new Google Earth.^{xcvi}

While Google Island may seem fanciful, even ridiculous, it points to a key reality: information is not growing freely, but is multiplying in ways that greatly empower a few large companies and this growth may pose a serious threat to our democracy, particularly if most people continue to naively believe “information wants to be free.” In 1958, Arendt began *The Human Condition* with a discussion of Sputnik as a symbol of the furthest point of flight from the human condition as it had been known for thousands of years. Ultimately this flight may not end up in outer space, but right here on Google Island.

However, we have learned from Foucault that no domination is complete and it is a fact of computer networks that with increased size comes increased complexity and connection. The multiplication of information entails these effects. After human error, complexity and connection are two of the most common reasons for network vulnerabilities and they are endemic to the Information Age. This relationship can be understood as “the Appian Effect.” The Appian Way was the earliest and one of the most strategically important Roman roads. It was named for Appius Claudius Caecus, “the blind,” who was a Roman patrician responsible for the construction of the road that bears his name. It is a truism that roads go both ways, and saying that “all roads lead to Rome,” reflects both a position of strength and of exposure. The same road that was used to expand Roman power later eased the efforts of invaders. The same road the Romans executed slaves from the Spartacus rebellion on was pillaged by the barbarians. Perhaps it is not a coincidence that the word “raid” is “Originally a Scots variant of road.”^{xcvii} The parasitic resistance of hackers exploits the relationship between size and vulnerability. It is a truth perhaps Appius understood: an increase in what you can see is also an increase in the unseen.

It is for this reason that hacktivists give us hope. Hacktivists move through the Internet’s Appian Way, exploiting vulnerabilities and exposing information asymmetries. Their transgressions undermine the WWW’s interpretation of the phrase “information wants to be free,” a narrative that obscures the tense relationship between information and democracy. Far from “wanting to be free,” the natural expansiveness of information has been shown to exacerbate inequalities of information. These inequalities are countered by the work of hacktivists. Yet, while accountability, transparency, and privacy are important democratic virtues, perhaps the most valuable contribution of groups like Anonymous is the way in which they remind citizens of the possibility of action. “Steering” is not enough. If democracy is to resist being swallowed up by the technocratic standard of correctness,

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information must be contested, not accepted. While not innately democratic, information can be made to serve democratic purposes.

ⁱ In its original context the phrase referred to “free” as in “without charge,” but over time the quote has come to refer to a more general freedom from constraint as well.

ⁱⁱ *OED Online*, 3rd ed., n. “information,” first sense, accessed September 9, 2013,
<http://www.oed.com/view/Entry/95568?redirectedFrom=information#eid>.

ⁱⁱⁱ *Ibid.*, second sense.

^{iv} Evgeny Morozov, *The Net Delusion: The Dark Side of Internet Freedom* (New York: Public Affairs, 2011), xiii.

^v Evgeny Morozov, “How the Net Aids Dictatorships,” filmed July 2009, Ted Video, 11:54, posted September 2009,
http://www.ted.com/talks/evgeny_morozov_is_the_internet_what_orwell_feared.html.

^{vi} Morozov, *The Net Delusion*, xiv.

^{vii} See for example: Benjamin Barber, *Strong Democracy: Participatory Politics for a New Age* (Berkeley: University of California Press, 1984); Theodore Lewis Becker and Christa Daryl Slaton, *The Future of Teledemocracy* (Westport, CT: Praeger, 2000); Majid Behrouzi, *Democracy as the Political Empowerment of the Citizen: Direct-Deliberative e-Democracy* (Lanham, MD: Lexington Books, 2005); Lawrence K. Grossman, *The Electronic Republic: Reshaping American Democracy for the Information Age* (New York: Penguin Books, 1996); *How Big-Money Lobbyists and the Media are Losing Their Influence, and the Internet is Giving Power to the People* (Los Angeles: Renaissance Books, 1999).

^{viii} See for example: Benjamin Barber, “The New Telecommunications Technology: Endless Frontier or the End of Democracy?” *Constellations* 4, no. 2 (1997): 208-228; Cass R. Sunstein, *Republic.com 2.0* (Princeton University Press, 2007); Richard Davis, *The Web of Politics: The Internet's Impact on the American Political System* (New York: Oxford University Press, 1999); Richard Davis and Diana Owen, *New Media in American Politics* (New York: Oxford University Press, 1998); Anthony G. Wilhelm, *Democracy in the Digital Age* (New York: Routledge, 2000); Michael Margolis and David Resnick, *Politics as Usual: The Cyberspace “Revolution”* (Thousand Oaks, CA: Sage Publications, 2000); Matthew Hindman, *The Myth of Digital Democracy* (Princeton University Press, 2009).

^{ix} Karin Davies, “Reagan Pays Tribute to Chinese Demonstrators,” *United Press International*, June 13, 1989, accessed August 10, 2013, LexisNexis, <http://proxy.library.upenn.edu:2063/hottopics/lnacademic/?verb=sr&csi=138620>.

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- ^x *The Future of U.S. Public Diplomacy: Hearing Before the Subcommittee on International Operations and Organizations, Human Rights, Democracy, and Global Women's Issues of the Committee on Foreign Relations*, 111th Congress (March 10, 2010), <http://www.gpo.gov/fdsys/pkg/CHRG-111shrg63020/html/CHRG-111shrg63020.htm>.
- ^{xi} Matthew Weaver, "Al Gore: US Democracy Has Been Hacked," *The Guardian*, February 3, 2013, <http://www.theguardian.com/world/2013/feb/03/al-gore-us-democracy-hacked>.
- ^{xii} Andrew Sullivan, "The Revolution Will Be Twittered," *The Atlantic*, June 13, 2009, <http://www.theatlantic.com/daily-dish/archive/2009/06/the-revolution-will-be-twittered/200478/>; Colin Delany, "How Social Media Accelerated Tunisia's Revolution: An Inside View," *Huffington Post*, February 13, 2011, updated May 25, 2011, http://www.huffingtonpost.com/colin-delany/how-social-media-accelera_b_821497.html; Mark Pfeifle, "A Nobel Peace Prize for Twitter?" *Christian Science Monitor*, July 6, 2009, accessed September 20, 2013, <http://www.csmonitor.com/Commentary/Opinion/2009/0706/p09s02-coop.html>. See also: Robert F. Worth, "Twitter Gives Saudi Arabia A Revolution Of Its Own," *The New York Times*, October 20, 2012, <http://www.nytimes.com/2012/10/21/world/middleeast/twitter-gives-saudi-arabia-a-revolution-of-its-own.html>.
- ^{xiii} Adam LeBor, "Despots Beware: 140 Characters Can Spark a Revolution," *The Times*, January 17, 2011, accessed September 20, 2013, <http://www.thetimes.co.uk/tto/opinion/thunderer/article2876811.ece>.
- ^{xiv} See for example: Magdalena Wojcieszak and Briar Smith, "Will Politics Be Tweeted? New Media Use by Iranian Youth in 2011," *New Media & Society* (March 25, 2013): 1-19, accessed September 5, 2013, doi: 10.1177/1461444813479594.
- ^{xv} Philip Elmer-Dewitt, "First Nation in Cyberspace," *Time International*, December 6, 1993.
- ^{xvi} J. C. R. Licklider, "Computers and Government," in *The Computer Age: A Twenty-Year View*, ed. Michael L. Dertouzos and Joel Moses (Cambridge, Massachusetts: The MIT Press, 1979), 126.
- ^{xvii} Nicholas Negroponte, "Wiring Democracy," *Foreign Policy*, June 15, 2010, accessed September 19, 2013, http://www.foreignpolicy.com/articles/2010/06/21/wiring_democracy.
- ^{xviii} Kevin Kelly, *What Technology Wants* (New York: Viking, 2010) 11, 15.
- ^{xix} *Ibid.*, 188.
- ^{xx} *Ibid.*, 74.
- ^{xxi} *Ibid.*, 348.

^{xxii} Ibid., 64, 317. In a recent talk Kelly made this point explicit, arguing that as the planetary “superorganism” moves towards global governance, collective intelligence and artificial intelligence will combine to solve previously intractable global problems. Although Kelly highlights the need to create a form of representative democracy that is compatible with global governance, nondemocratic elements are inevitable. According to Kelly, “We need to have a mind that’s actually bigger than ourselves. We need to have as many different minds as possible because some of the problems that we’re engaged with cannot be solved by our minds alone. That’s one of the reasons why we want A.I., it’s not so much that they’re smarter than us, it’s that they think differently than us. So we need to have a different kind of thinking, planetary thinking, in order to solve some of the problems that we have.” See Kevin Kelly, “Technium Unbound,” filmed Wednesday November 12, 2014, The Long Now Foundation, 93:33, <http://longnow.org/seminars/02014/nov/12/techniumunbound/>.

^{xxiii} Eric Schmidt and Jared Cohen, *The New Digital Age: Reshaping the Future of People, Nations and Business* (New York: Knopf, 2013), 254.

^{xxiv} Ibid., 155, 4.

^{xxv} Ibid., 254.

^{xxvi} Ibid., 11.

^{xxvii} Ibid., 34.

^{xxviii} Ibid., 34, 75.

^{xxix} Ibid., 151.

^{xxx} Ibid., 255.

^{xxxi} Al Gore, *The Future: Six Drivers of Global Change* (New York: Random House, 2013), 368, 361.

^{xxxii} Ibid., 104; see for example: xxvi, 41.

^{xxxiii} Ibid., 369.

^{xxxiv} Kelly, *What Technology Wants*, 15, 187.

^{xxxv} Ibid.

^{xxxvi} Ibid., 167, 173.

^{xxxvii} Ibid., 334.

^{xxxviii} Schmidt and Cohen, *The New Digital Age*, 253.

^{xxxix} Gore, *The Future*, 53.

^{xl} Kelly, *What Technology Wants*, 331.

^{xli} Ibid., 333.

^{xlii} James Bamford, “The NSA Is Building the Country’s Biggest Spy Center (Watch What You Say),” *Wired*, March 15, 2012, accessed September 20, 2013, http://www.wired.com/threatlevel/2012/03/ff_nsadatacenter/.

^{xliii} Ibid.

^{xliv} Ibid.

^{xlv} Ibid.

^{xlvi} Ibid.

^{xlvii} Ibid.

^{xlviii} Natasha Singer, “Mapping, and Sharing, the Consumer Genome,” *New York Times*, June 16, 2012, accessed September 20, 2013, <http://www.nytimes.com/2012/06/17/technology/acxiom-the-quiet-giant-of-consumer-database-marketing.html>.

^{xlix} Ibid.

ⁱ Ibid.

ⁱⁱ Steven Levy, *Hackers: Heroes of the Computer Revolution* (Sebastopol, CA: O’Reilly Media, 2010), 27-38.

ⁱⁱⁱ Gabriella Coleman, “Hacker,” *The Johns Hopkins Encyclopedia of Digital Textuality* (Baltimore: The Johns Hopkins University Press, Forthcoming), <http://gabriellacoleman.org/doc/Coleman-Hacker-John-Hopkins-Draft.pdf>.

ⁱⁱⁱⁱ Ibid.

^{liv} Alexandra Samuel, “Hacktivism and the Future of Political Participation” (PhD diss., Harvard University, 2004), 89, <http://www.alexandrasamuel.com/dissertation/pdfs/Samuel-Hacktivism-entire.pdf>.

^{lv} Paul A. Taylor, “From Hackers to Hacktivists: Speed Bumps on the Global Superhighway?” *New Media & Society* 7, no. 5 (October 2005): 626, accessed September 16, 2013, doi: 10.1177/1461444805056009.

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- ^{lvii} Samuel, “Hacktivism and the Future of Political Participation,” iii.
- ^{lviii} *Ibid.*, 1-2.
- ^{lix} *Ibid.*, iii.
- ^{lx} *Ibid.*, iii.
- ^{lxi} *OED Online*, 3rd ed., n. “freedom,” first and third senses, accessed September 9, 2013, <http://www.oed.com/view/Entry/74395?rskey=UuiuQA&result=1&isAdvanced=false#eid>.
- ^{lxii} Gabriella Coleman, “Our Weirdness is Free,” *Triple Canopy* 15 (2012): 87; Quinn Norton, “Anonymous 101: Introduction to the Lulz,” *Wired*, November 8, 2011, accessed September 8, 2013, <http://www.wired.com/threatlevel/2011/11/anonymous-101/4/>.
- ^{lxiii} Norton, “Anonymous 101”; Coleman, “Our Weirdness is Free,” 88; Parmy Olson, *We Are Anonymous: Inside the Hacker World of LulzSec, Anonymous, and the global Cyber Insurgency* (New York: Little Brown and Company, 2012), 65-70. The comparison of a DDoS attack to a digital sit-in breaks down when botnets are used.
- ^{lxiv} “Anonymous Press Release,” YouTube video, 6:24, posted by “ANONPressRelease,” February 9, 2008, <https://www.youtube.com/watch?v=SQKbHBqDwSI>.
- ^{lxv} Norton, “Anonymous 101”; Olson, *We Are Anonymous*, 90-91; Coleman, “Our Weirdness is Free,” 88.
- ^{lxvi} Norton, “Anonymous 101”; Coleman, “Our Weirdness is Free,” 88.
- ^{lxvii} Olson, *We Are Anonymous*, 142; Quinn Norton, “2011: The Year Anonymous Took On Cops, Dictators and Existential Dread,” *Wired*, January 11, 2012, accessed September 8, 2013, <http://www.wired.com/threatlevel/2012/01/anonymous-dictators-existential-dread/>; Coleman, “Our Weirdness is Free,” 89.
- ^{lxviii} Olson, *We Are Anonymous*, 142; Norton, “2011”; Coleman, “Our Weirdness is Free,” 89.
- ^{lxix} Norton, “2011”; see also: Coleman, “Our Weirdness is Free,” 89.
- ^{lxx} Natasha Lennard, “Anonymous Group Claims to Show B of A Monitored Hackers, Activists,” *Salon*, February 27, 2013, accessed September 16, 2013, http://www.salon.com/2013/02/27/anonymous_group_claims_to_show_bofa_monitored_hackers_activists/.

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- ^{lxxiii} *OED Online*, 3rd ed., n.1 “hack,” first sense, accessed September 20, 2013, <http://proxy.library.upenn.edu:2266/view/Entry/83025?rskey=jrPJPz&result=1&isAdvanced=false#eid>.
- ^{lxxiv} Ibid., senses 1a, 1c, and 1d.
- ^{lxxv} Ibid., sense 7b.
- ^{lxxvi} Hannah Arendt, “On Violence,” in *Crises of the Republic* (New York: Harcourt Brace Jovanovich, 1972), 132-133.
- ^{lxxvii} Hannah Arendt, *On Revolution* (New York: Penguin, 1965), 261-262.
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- ^{lxxix} Ibid., 18.
- ^{lxxx} Bonnie Honig, “Toward an Agonistic Feminism: Hannah Arendt and the Politics of Identity” in *Feminist Interpretations of Hannah Arendt*, ed. Bonnie Honig (University Park, PA: Pennsylvania State University, 1995), 146-147.
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- ^{lxxxiii} Gabriella Coleman, *Hacker, Hoaxer, Whistleblower, Spy* (Brooklyn, New York: Verso, 2014), 273.
- ^{lxxxiv} Sheldon S. Wolin, “The Liberal/Democratic Divide: On Rawls’s *Political Liberalism*,” *Political Theory* 24, no. 1 (1996): 98, accessed August 19, 2013, DOI: 10.1177/0090591796024001006; Bonnie Honig, *Political Theory and the Displacement of Politics* (Ithaca, NY: Cornell University Press, 1993), 124.
- ^{lxxxv} Arendt, *On Revolution*, 33.
- ^{lxxxvi} Ibid., 119.
- ^{lxxxvii} *We are Legion*, director Brian Knappenberger (Venice, CA: Luminant Media, 2012), DVD.
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^{xc} “New York City 311: Public Service Call Center Solution -- Full Text,” Accenture, accessed October 21, 2013,
<http://www.accenture.com/us-en/Pages/success-new-york-city-customer-service-solution.aspx>.

^{xcⁱ} It would also cease to be human. It is for this reason that Kevin Kelly envisions artificial intelligence as the necessary answer to global problems.

^{xcⁱⁱ} Hannah Arendt, *The Origins of Totalitarianism* (New York: Harcourt, Brace and Company, 1951), 410.

^{xcⁱⁱⁱ} Mat Honan, “Welcome to Google Island,” *Wired*, May 17, 2013, accessed September 21, 2013,
<http://www.wired.com/gadgetlab/2013/05/on-google-island/>.

^{xc^{iv}} Ibid.

^{xc^v} Ibid.

^{xc^{vi}} Ibid. For a similar description of dystopia see Julian Assange, “The Banality of ‘Don’t Be Evil,’” *New York Times*, June 1, 2013, accessed September 21, 2013, http://www.nytimes.com/2013/06/02/opinion/sunday/the-banality-of-googles-dont-be-evil.html?pagewanted=1&_r=0. Assange describes Schmidt and Cohen’s *The New Digital Age* as a “startlingly clear and provocative blueprint for technocratic imperialism, from two of its leading witch doctors.” He goes on to say, “Without even understanding how, they have updated and seamlessly implemented George Orwell’s prophecy. If you want a vision of the future, imagine Washington-backed Google Glasses strapped onto vacant human faces — forever.”

^{xc^{vii}} *OED Online*, 3rd ed., n. “raid,” etymology, accessed September 27, 2013,
<http://proxy.library.upenn.edu:2266/view/Entry/157516?rkey=2oNAZg&result=2&isAdvanced=false#eid>.