User-Generated Censorship: Manipulating The Maps Of Social Media

by

Christopher E. Peterson

B.A., Legal Studies University of Massachusetts at Amherst, 2009

SUBMITTED TO THE PROGRAM IN COMPARATIVE MEDIA STUDIES/WRITING IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF

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Submitted to the Program in Comparative Media Studies / Writing on May 24th, 2013, in Partial Fulfillment of the Requirements for the Degree of Master of Science in Comparative Media Studies

Abstract:

The last decade has seen the rise of new technologies for making information more broadly available and accessible. Variously called 'user-generated content,' 'social media,' 'social news,' 'crowd-curation,' and so on, these design conventions, algorithmic arrangements, and user practices have been widely praised for 'democratizing' media by lowering the barriers to publishing, accrediting, and aggregating information. Intermediary platforms like Facebook, reddit, and Twitter, among others, are generally expected to elicit valuable knowledge through the algorithmic filtering mechanisms broadly distributed among their users.

This thesis investigates *user-generated censorship*: an emergent mode of intervention by which users strategically manipulate social media to suppress speech. It shows that the tools designed to help make information more available have been repurposed and reversed to make it less available. Case studies reveal that these platforms, far from being neutral pipes through which information merely travels, are in fact contingent sociotechnical systems upon and through which users effect their politics through the power of algorithms. By strategically pulling the levers which make links to sites more or less visible, users recompose the representations of the world produced by social media, altering pathways of access and availability and changing the flow of information.

This thesis incorporates insights from media studies, sociology, law and policy, information science, and science-technology studies to study user-generated censorship. It contributes to a broader conversation now emerging across fields which seeks to explore and understand the politics of our developing social media systems.

Thesis Supervisor: Ian Condry

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PREFACE

Biographical Note	4
Acknowledgements	5
I: Introduction	
Suppressing J30Strike	6
Questions, Definitions, Cases	8
Outline	12
II: A Case Study in User-Generated Censorship	
"Bury Until They Change Their Ways": Introducing the Digg Patriots	
"Any Chair In A Bar Fight": Mission, Metrics, & Methods	
"A Rude Wake-Up Call": Reading the Digg Patriots	28
III: Understanding User-Generated Censorship	
As Corrupting Collective Intelligence	31
As Reintroducing Heteronomy to the Networked Public Sphere	36
Or: As Actor-Networks Assembling Artifacts	42
IV: THE SOCIAL PRODUCTION OF WHAT?	
The Ark in the Archives: On the Centrality of Sociotechnical Systems	46
Social Media as Machines which Manage the Flood	49
The Social Production of Persuasive Panoramas	55
V: CONCLUSION	
The Relevance of User-Generated Censorship	59
Appendix	
A.1: The Digg Patriots Data: Origins, Controversies, Considerations	66
A.2: The Digg Patriots Data: Some Exploratory Visualizations	70

PREFACE

Biographical Note

Chris Peterson graduated from the University of Massachusetts, Amherst in May 2009, with B.A. in Critical Legal Studies and a minor in Information Technology. He spent six semesters as a teaching assistant for Law and the World Wide Web, Law in Virtual Worlds, and Legal Fictions. His senior thesis, supervised by Professors Ethan Katsh and Alan Gaitenby, adapted approaches from law, sociology, design, behavioral economics, and human-computer interaction to study Facebook privacy, and was featured in the *New York Times*.

Peterson has worked as a senior campus representative for Apple; on the bargaining committee of United Auto Workers 2322; as a research assistant at the Berkman Center for Internet and Society; and most recently as an admissions officer at MIT, where he directed digital strategy while also participating in the selection process with a special interest in subaltern and maker applicants. As a graduate student, he was a research assistant at the Center for Civic Media in the MIT Media Lab, where he managed undergraduate researchers and oversaw data journalism projects. He serves on the Board of Directors at the National Coalition Against Censorship and as a Fellow at the National Center for Technology and Dispute Resolution.

Barring an extinction event, he can probably be reached via email at chris [dot] peterson [at] mit [dot] edu and/or via the web at http://cpeterson.org.

Acknowledgements

Writing a thesis is hard; writing a Comparative Media Studies thesis doubly so. The great reward of a CMS education is that it imparts a penetrating perspective on the biases of media broadly defined, including of the very tools (technological, methodological, ideological) used to study media. The associated risk, however, is that the tools of inquiry themselves may suddenly transform from ready-to-hand to unwieldy instruments, which must themselves be wrestled while the intended subject of study threatens to escape cackling into the distance.

I captured it only with the aid and support of my committee. Ian Condry agreed to be my thesis advisor after we'd barely met; our long talks, and his frank advice, led me through the labyrinth this last year. Ethan Zuckerman, despite being the most brutally busy person I know, made the time to read my drafts and provide detailed feedback. Nancy Baym gave freely of her qualitative expertise and insightful observations. I am very grateful to them.

I received helpful nudges from many others along the way. My friend and colleague Drew Harry, who let me frequently pick his considerable brain, was a committee member in all but name. Beth Hadley '15, Betsy Riley '14, and Steve Murray helped me write (and fix) my code. Ann Blair, Finn Brunton, Susan Crawford, Charlie DeTar, Peter Galison, Stuart Geiger, Eric Gilbert, Tarleton Gillespie, James Grimmelmann, Del Harvey, Max Kantor, Markus Krajewski, Rebecca MacKinnon, Nick Montfort, Evgeny Morozov, Jeff Ravel, Clay Shirky, Dave Weinberger, and Jonathan Zittrain are just a few of the scholars, students, and professionals who volunteered their time and thoughts as I conducted my research.

The staff helped me stay sane through the slog. Becky Shepardson, Jess Tatlock, and Andrew Whitacre of CMS; Shannon Larkin, our tireless graduate guardian angel; and Lorrie LeJeune of Civic, who dispensed chocolates, tea, plants, and career advice with calm and care. Jim Paradis, who first encouraged me to apply to CMS, is a rock for the entire program.

My classmates have been amazing. I have learned more from their brilliance, their character, and their kindness than I could have imagined. So too my friends in Civic, who always knew when and how to deliver exactly the appropriate mixture of snark and support.

I would not be here except for the MIT Office of Admissions, which first welcomed me into this strange, spectacular place and gave me the freedom to do good work. Nor would I *still* be here without the undergraduates I have come to meet, advise, and befriend. They are among the most inspiring, incredible people I have ever known. Sam Keyser once quipped that MIT is hard to get into, and even harder to leave, and it is these students who make it so. Among them, I often feel I have finally found my people; IHTFP.

I have been blessed with an incredible family. This thesis is dedicated to them, and especially to my grandfather Gorham. Though not an educated man, he has always had a love of learning, some of which seems to have rubbed off on me. Much of my childhood consisted of him patiently telling me that there was nothing new under the sun and to always pay close attention to the text. He would have felt at home in many of my classes at CMS, and I think I came to feel at home here in no small part because of him.

I: Introduction

It was the spread of the message that mattered [in the history of communication] — not its origin but its amplification, the way it reached the public and ultimately took hold. That process should be understood as a matter of feedback and convergence, rather than one of trickling down and linear causality.

- Robert Darnton, "News and the Media in Eighteenth-Century Paris" 1

1. Suppressing J30Strike

In June 2011, as heat and hardship beat down on Britain, progressive activists proposed a general strike to protest austerity measures. Like many movements over the last decade they began organizing the strike online.² They created a website at J30Strike.org and launched a publicity campaign through social media, especially by sharing links to the site through Facebook's News Feed.

It's easy to understand why. Facebook is a top source of visitors for the five most popular news sites in the United States.³ The analytics company Shareaholic estimates that Facebook refers more than 25% of global traffic it tracks.⁴ Facebook's News Feed does more than just capture and redistribute eyeballs: like the front page of a major newspaper, it also articulates an agenda, assembling a summary digest of important events. "As more and more is shared," wrote engineer Peter Deng after Facebook centrally embedded the News Feed, "we want you to be able to find out everything that is going on in the world around you." It's a

¹ Robert Darnton, "An Early Information Society: News and the Media in Eighteenth-Century Paris." *The American Historical Review 105*, no. 1 (February 2000), available online at http://www.jstor.org/stable/2652433 and http://www.historians.org/info/aha_history/rdarnton.htm/.

² See generally Clay Shirky, Here Comes Everybody: The Power of Organizing Without Organizations (New York: Penguin Press, 2008). For a critique of the role of networked technologies to in supporting social movements, compare Evgeny Morozov, The Net Delusion: The Dark Side of Internet Freedom (Public Affairs, 2012).

³ Ross Dawson, "Where News Website Traffic Comes from: Google Vs Facebook - Trends in the Living Networks." *Trends in the Living Networks*, May 9, 2011, http://rossdawsonblog.com/weblog/archives/2011/05/where-news-website-traffic-comes-from-google-vs-facebook.html/.

⁴ Colleen Taylor, "Study: Pinterest Drives More Referral Traffic Than Google+, Nearly on Par with Twitter." *GigaOM*, January 31, 2012, http://gigaom.com/2012/01/31/pinterest-referral-traffic-google-plus-twitter/.

⁵ Peter Deng, "Welcome to Your New Home Page." *The Facebook Blog*, March 11, 2009, http://blog.facebook.com/blog.php?post=59195087130/.

vision of social media as a kind of map, as an atlas informing users of worthwhile destinations and providing routes, in the form of links, through which they may be reached.

But, ten days before the strike, Facebook began notifying the activists that links to J30Strike.org could not be shared because they "[contained] blocked content that has previously been flagged as abusive or spammy" by other users.⁶ It erased all links to J30Strike. Then, with relentless, recursive efficiency, Facebook blocked links to sites which themselves linked to J30Strike, including blog posts informing other activists of the embargo.⁷ J30Strike suddenly vanished from the picture of the world projected by the News Feed. It wasn't filtered by a government or corporation. Its servers weren't disabled by hackers. J30Strike was still perfectly accessible but had become strangely unavailable. Like a rural village erased from a map of the English countryside but not from the countryside itself, the site was still there, but suddenly became much less likely to be found by casual travelers.

I knew some of the J30Strike activists. I wrote one of the blog posts which was blocked by Facebook. Watching J30Strike disappear from my map disturbed me. My News Feed had indeed appeared a comprehensive record of everything important going on in the world around me, but my sudden inability to link to J30Strike destabilized this perspective, revealing instead its highly contingent character. What I and others were allowed to see depended upon a complex and invisible confluence of forces largely beyond our control. I began to wonder: what else was being hidden from me? How? And by whom?

⁶ A copy of the message can be seen at http://etc.cpeterson.org/MIT/cms/thesis/images/j30strikeblocked.jpg/.

⁷ See, e.g., my blog post: http://www.cpeterson.org/2011/06/20/facebook-censors-citizen-activism-website/, which was blocked with this message: http://etc.cpeterson.org/MIT/cms/thesis/images/blogpostblocked.jpg/.

⁸ For more on J30Strike, see Nick Baumann, "Why Did Facebook Block UK Strike Site?" *Mother Jones*, http://www.motherjones.com/mojo/2011/06/why-did-facebook-block-uk-strike-website/.

2. Questions, Definitions, Cases

These questions have a negative valence, but the purpose of this thesis is not to argue whether the Internet is 'good' or 'bad' (or, as Evgeny Morozov might tartly observe, whether "the Internet" is a coherent category of inquiry itself). Instead, its purpose is to explore some questions prompted by my experience with J30Strike. These include: how are the pictures of the world produced by social media projected? By whom? With what effects? For what reasons? More specifically, I aim to investigate an emergent practice which I call user-generated censorship: an evolving mode of intervention by which users strategically manipulate social media to suppress information.

Countless scholars have studied what is commonly called 'Internet censorship,' including the 'intermediary censorship' of social media platforms. ¹⁰ Others, most prominently Eli Pariser and Cass Sunstein, have argued that the feedback loops produced by unwitting users interacting with algorithms may cause common lifeworlds to diverge. ¹¹ User-generated censorship, however, differs from these more familiar models. J30Strike did not disappear from my News Feed because it was targeted by some devious autocrat within a corporation or state, nor because I signaled a personal disinterest in radical politics. Instead, it was made to drop by other users, whose decentralized signals were aggregated and enforced through a centralized platform, creating a new capacity for many distributed actors to suppress speech through the power of the algorithm.

⁹ Evgeny Morozov, To Save Everything, Click Here: The Folly of Technological Solutionism (Public Affairs, 2013).

¹⁰ See, e.g., Access Denied: The Practice and Policy of Global Internet Filtering (Cambridge, Mass: MIT Press, 2008); Access Controlled: The Shaping of Power, Rights, and Rule in Cyberspace (Cambridge, Mass: MIT Press, 2010), particularly chapter 5 by Ethan Zuckerman, available at http://www.access-controlled.net/wp-content/PDFs/chapter-5.pdf); Rebecca MacKinnon, Consent of the Networked: The World-wide Struggle for Internet Freedom (New York: Basic Books, 2013).

¹¹ Eli Pariser, The Filter Bubble: How the New Personalized Web Is Changing What We Read and How We Think (Penguin Books, 2012); Cass Sunstein, Republic.com 2.0 (Princeton, N.J.; Woodstock: Princeton University Press, 2009).

Jillian York of the Electronic Frontier Foundation has documented dozens of grassroots campaigns to remove content from Facebook.¹² In one well-documented case, Brian Ries of the *TheDailyBeast* "decided to conduct a little experiment," campaigning on his blog to have followers mark a post by Sarah Palin as "racist/hate speech."¹³ According to Facebook the post did not violate any of its content standards, yet within 24 hours the post had nonetheless been removed by what spokesperson Andrew Noyes called "an automated system" driven by Ries' actions.¹⁴ As Ries later observed, "it took the coordinated actions of a community a fraction of [Facebook's] size" to change the content available through it.¹⁵

Another example occurred on reddit, a popular 'social news' site where users vote on links which an algorithm then organizes into ranked lists. In early 2012 some critics of Republican Presidential candidate Ron Paul discovered that anything they posted, anywhere on reddit, was being downvoted dozens of times within minutes. It was later revealed that a libertarian redditor had written a program which allowed any Paul supporter to enroll her account in a botnet which stalked these critics and rapidly downvoted anything they posted. LibertyBot, as it came to be called, effectively enforced diminished visibility on its enemies, sinking their content and comments so far down that other users would be significantly less likely to see them.

¹² Jillian York, "Policing Content in the Quasi-Public Sphere." *OpenNet Initiative*, September 2010. https://opennet.net/sites/opennet.net/files/PolicingContent.pdf; Jillian York, "AllFacebook.com Editor Uses Bully Pulpit in Attempt to Remove Facebook Page," March 21, 2011, http://jilliancyork.com/2011/03/21/allfacebook-com-editor-uses-bully-pulpit-to-remove-facebook-page/.

¹³ Brian Ries, "Help Report Sarah Palin's Ground Zero..." http://moneyries.tumblr.com/post/841249526/tumblr-help-report-sarah-palins-ground-zero/.

¹⁴ "Facebook Apologizes for Deletion of Palin Post." *CNN*, July 22, 2010, http://politicalticker.blogs.cnn.com/2010/07/22/facebook-apologizes-for-deletion-of-palin-post/.

¹⁵ Brian Ries, "My Facebook War With Palin." *The Daily Beast*, July 23, 2010, http://www.thedailybeast.com/articles/2010/07/23/palins-facebook-ground-zero-mosque-post-how-it-disappeared.html/.

¹⁶ Chris Peterson, "The Fault, Dear Reddit, Is Not In Our Bots, But In Ourselves: The Case of LibertyBot." *MIT Center for Civic Media*, March 22, 2013, http://civic.mit.edu/blog/petey/the-fault-is-not-in-our-bots-dear-reddit-but-in-ourselves-the-case-of-libertybot/.

Google's PageRank algorithm famously interprets incoming links as a kind of vote for a website such that, all else held equal, more links translates to a higher ranking.¹⁷ For many years marketers have worked to manipulate search results by writing programs which post millions of links pointing to clients' sites in order to increase their PageRank: one 2006 study by Kolari et al. found that nearly 90% of all English-language blogs are in fact spam blogs (or "splogs") created to game search engines.¹⁸ Google has long forbidden the practice, and, in April 2012, began penalizing sites with large numbers of "unnatural links" leading to them in order to disincentive splogs.¹⁹ In response some smart spammers simply flipped their business models, launching "NegativeSEO" companies which offered clients the ability to point billions of "unnatural links" at their competitors to sink them in search.²⁰

All of these platforms are influential intermediaries which incorporate user feedback to help decide how prominent the pathways to a particular website should be through them, and the 'democratizing', 'participatory' rhetoric has given rise to associated assumptions that the arrangement of these pathways can be trusted by default. As Tarleton Gillespie has observed, we seem to want the algorithms of social media "to be neutral, we want them to be reliable, we want them to be the effective ways in which we come to know what is most important."²¹

¹⁷ Page et al. "The PageRank Citation Ranking: Bringing Order to the Web." (1999). http://ilpubs.stanford.edu:8090/422; Brin & Page. "The Anatomy of a Large-scale Hypertextual Web Search Engine." Computer Networks and ISDN Systems 30, no. 1 (1998): 107–117, http://infolab.stanford.edu/~backrub/google.html/.

¹⁸ Kolari et al. "Characterizing the splogosphere." In *Proceedings of the 3rd annual workshop on weblogging ecosystem:* Aggregation, analysis and dynamics, 15th World Wide Web conference. University of Maryland, Baltimore County, 2006. http://ebiquity.umbc.edu/file_directory/papers/261.pdf/. As Finn Brunton writes in, *Spam: a Shadow History of the Internet* (Cambridge, Mass: The MIT Press, 2013), at 160, such 'splogs' are "a kind of PageRank greenhouse which is not in itself meant to be read by people."

¹⁹ Matt Cutts, "Another step to reward high quality sites." *Official Google Webmaster Central Blog*, April 24, 2012. http://googlewebmastercentral.blogspot.ca/2012/04/another-step-to-reward-high-quality.html/.

²⁰ Chris Peterson, "Google NegativeSEO: Case Study in User-Generated Censorship." *MIT Center for Civic Media*, March 20, 2013. http://civic.mit.edu/blog/petey/google-negativeseo-case-study-in-user-generated-censorship/.

²¹ Tarleton Gillespie, "Can an Algorithm Be Wrong? Twitter Trends, the Specter of Censorship, and Our Faith in the Algorithms Around Us." *Culture Digitally*. October 19, 2011. http://culturedigitally.org/2011/10/can-an-algorithm-be-wrong/.

Yet in the cases I have described, users strategically deploy their ability to arrange information towards making specific pathways less available. The actors are *amateurs*, not professionals; *distributed*, not centralized; they are granted power not through money or station but through the 'democratizing' promise of new media. Yet rather than using this newfound power to make information more broadly available, as the familiar story goes, they instead deploy it to make some information harder to find, reversing their premise and their promise.

I call these cases *wer-generated* because they are animated by signals generated by users to overdetermine the arrangement and availability of content through their interactions with organizational algorithms. One critical, counterintuitive insight is that the 'social' in 'social media' is not an exclusively *human* sociality, but instead the ongoing and active *association* of humans and nonhumans alike into a shambling mass made of people, bots, algorithms, and other ontologically uncertain actors. I call these cases *censorship* following Frederick Schauer's ascriptive definition. Censorship, Schauer argues, is best understood as a label which "does not describe a category of conduct, but rather attaches an operative conclusion (ascribes) to a category created on other grounds."²² Invocations of censorship, according to Schauer, most fundamentally signal anxiety over the allocation of authority to determine access to or availability of information. In adopting this definition I characterize these cases as censorship primarily because the actors involved insistently do.

More formally, I define user-generated censorship as follows:

 Strategic interventions which suppress information by erasing or making to appear uninteresting certain sociotechnical pathways through which it can be found

²² Frederick Schauer, "The Ontology of Censorship" in *Censorship and Silencing: Practices of Cultural Regulation*, ed. Robert Post (Los Angeles: Getty Research Institute for the History of Art and the Humanities, 1998), 160.

- Initiated neither at the behest nor the behalf of a formal public or private authority,
 but instead by 'amateurs' empowered by the distributed mechanisms of social media
- Which, if revealed, strikes other users as an 'unauthorized' or 'inappropriate' use of these systems, which may be ascribed as a form of censorship

If a case meets these three conditions then I believe it constitutes an emergent mode of intervention, broadly distributed to amateurs yet empowered by centralized algorithms, inspiring many of the same concerns and complaints of 'traditional' censorship but departing from its most familiar frameworks and remedies.

3. Outline

My study of user-generated censorship proceeds in three parts.

First, I ground user-generated censorship in a case study. In Chapter II I conduct a qualitative analysis of the Digg Patriots, a group of users active between 2009-2010 who strategically manipulated the social news site Digg in order to make it more politically conservative. My primary source material is an archive of nearly 13,000 posts from the listserv through which they coordinated.²³ I'll examine and share excerpts from this corpus to develop a better understanding of the Digg Patriots through their own words and actions as a canonical case of user-generated censorship.

Second, I review a few models through which we might understand and evaluate the effects of user-generated censorship. In Chapter III, I argue that user-generated censorship could be understood a) as corrupting collective intelligence, b) as disrupting the networked

²³ For information about the origins, controversies, and considerations of the corpus please see Appendix A.1.

public sphere, and/or c) as actor-networks assembling artifacts. The first two models, drawn primarily from the work of James Surowiecki and Yochai Benkler respectively, are very familiar to analyses of social media. The third, based on the work of Bruno Latour, is somewhat less so, but I'll discuss why I find his actor-network approach advantageous.

Third, I explore the artifacts of user-generated censorship. In Chapter IV I build on the information science scholarship of Markus Krajewski to understand social media as sociotechnical machines which make information available. The very centrality of these systems, however, also makes them vulnerable points of subversion for those who would wish to change the information made available through them. I'll draw on some concepts from Latour to model social media machines as producing incomplete pictures of the world which do not reveal their own incompleteness, and to understand user-generated censorship as operating by subtly recomposing these panoramas with persuasive effects.

Studying user-generated censorship provides a point of entry to a broader set of questions concerning the cauldrons of conflicting expectations and uncertain effects bubbling up from the human and nonhuman actors who together animate social media. I conclude by discussing some of these questions and offering two paths forward for investigating the maps made by social media.

II: A Case Study in User-Generated Censorship

I don't know if someone has already said this, but Digg Patriots is like Fight Club. The first rule of Digg Patriots is you don't talk about Digg Patriots outside of the group. The libs on digg already suspect that we are organized, but they don't know about Digg Patriots.

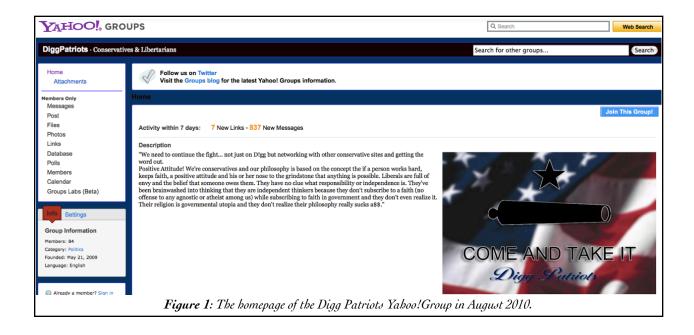
1. "Bury Until They Change Their Ways": Introducing the Digg Patriots

Digg was founded in November 2004. 25 A 'social news' site, Digg allowed users to submit links to other websites and vote them up ('digg') or down ('bury'). An algorithm partially informed by these evaluations ranked the submissions in a list from most popular to least popular. The most popular links rose to Digg's 'front page.' In this way Digg's rankings created a feedback loop: the more popular a post became, the higher it rose, and the more attention it attracted; the higher it rose, the more attention it attracted, and the more popular it became. It was also a tremendous referrer of traffic to the links it ranked. By 2006, Digg was receiving and redistributing over 30 million visitors a month, an online audience roughly equivalent to that of the *New York Times*. In 2008 Digg was nearly purchased by Google for \$200 million. 26 In 2010 Digg would crash, be gutted, and later reborn as a different service under the same name, but from 2006 through 2010 it was one of the most popular and powerful social media sites in the world. It was during this period, at the apex of Digg's influence, that the Digg Patriots arose.

²⁴ This quote was excerpted from a text file in the Digg Patriots' archive named 20100117-DiggPatriots-Re-BURY-LIST-10390.html. In subsequent citations I will only include the filename.

²⁵ Lacy and Hempel. "Valley Boys." *Business Week: Magazine*, August 13, 2006. http://www.businessweek.com/stories/2006-08-13/valley-boys/.

²⁶ Michael Arrington, "Google In Final Negotiations To Acquire Digg For "Around \$200 Million," *TechCrunch*, July 22, 2008, http://techcrunch.com/2008/07/22/google-in-final-negotiations-to-acquire-digg-for-around-200-million/.



The Digg Patriots were founded in May 2009 by Lizbett and VRay Z, two highly-active, politically-conservative Diggers. They created a Yahoo! Group, invited a small number of trusted fellow conservatives, and began coordinating through its mailing list to advance political conservatism on Digg, a campaign which they came to call "the cause." R.J. Carter, an active member and ardent supporter, described their mission as countering a perceived left-leaning bias of Digg by coordinating their votes to swiftly and decisively bury liberal links so that conservative stories could rise higher, making Digg more conservative in the process.

SUBJ: Re: Digg Patriots

[The Digg Patriots were] comprised, or intended to be comprised, of Digg members with conservative political ideals as a means of countering the left-leaning material submitted to Digg that was making the front page of the site on a regular basis....these were submissions that any member of the Digg Patriots would have marked for burial upon encounter. But by organizing under a Yahoo group, the first member to encounter it could immediately let the others know it was there. This had the desired impact -- that a mass of early burials would keep it off the front page when the same number of burials spread over time

would not....The Digg Patriots could have been more successful [but] it did have the capability of keeping the field clear of "debris and detritus" so that other news stories could get to the front page.

- R.J Carter, February 12 2013 27

SUBJ: Re: DiggPatriots- Whining again

I'll continue to bury their submissions until they change their ways and become conservatives. =^)

- VRayZ, June 6 2010²⁸

At least 54 members of the Digg Patriots exchanged almost 13,000 messages over the course of 11 months. The corpus includes almost 7,000 unique Digg links they targeted, although this represents a tiny fraction of their total activity. From April 2009 to August 2010 Lizbett alone dugg an astounding 76,000 links and submitted over 1,600 articles, 20% of which made the front page, a respectable ratio for a site with millions of members and billions of submissions. ²⁹ Many of their campaigns, like this exchange from early in the corpus, began with a link to be targeted, with subsequent responses confirming action had been taken.

SUBJ: Bury

Kill stab hit spit bury thank you
http://digg.com/political_opinion/Dickipedia_Teabaggers_2

- Lizbett, September 22 200930

SUBJ: Re: Bury

stomped on it with golf cleats...

- Individually Warped, September 22 200931

²⁷ R.J. Carter, email to author, February 12, 2013. As I describe in Appendix A.1, R.J. was one of only two Patriots to respond to my requests for comment. This quote was in response to an email from me saying "I'd be curious to know how you and others defined the movement, its validity, and its success (or failure)."

²⁸ 20100606-DiggPatriots-Whining-again-1877.html.

²⁹ For Lizbett's statistics, see http://socialblade.com/digg/top1000users.html under name 'bettverboten'. Statistics for her original account, 'lizbett,' can be seen at http://socialblade.com/digg/topgraveyard.html. Both links accessed on May 24, 2013.

^{30 20090922-}DiggPatriots-Bury-8405.html

^{31 20090922-}DiggPatriots-Bury-8404.html

SUBJ: Re: Bury stomped flat

- Gloria L, September 22 2009³²

SUBJ: Re: Bury

Not only that, I reported it as spam, pornographic, and "calculated hate that goes beyond the limits of taste even in political invective."

I also pointed out, as if they didn't know, that "jblogging" and "thejoshuablog" are one and the same accountholder, and cited his avatar as evidence.

- Temlakos, September 22 2009³³

By far the most common action was downvoting, but, as can be seen in Temlakos' post, the Patriots would also report liberal posts as spam, duplicates, or for other Terms of Service violations. In addition to sending messages to each other, they also employed a variety of tools and techniques which allowed them to closely track submissions by liberal users so that they could instantly target them for downvoting.

Subject: [DiggPatriots] Bury This Crap now

From: "Lizbett email" <vanbo@[domain redacted]>

Date: Thu, 5 Nov 2009 08:50:44 -0600

To: "DiggPatriots" < DiggPatriots@yahoogroups.com>

This has to be stopped and not go to FP

Please bury every way you can and contact anyone that you know can bury it please

http://digg.com/political_opinion/The_Wingnut_Assault_on_Digg

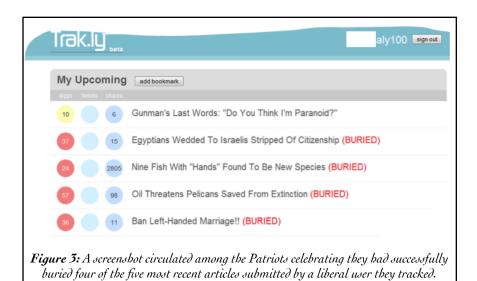
Reply to sender | Reply to group

Messages in this topic (1)

Figure 2: An message from Lizbett targeting an link (ironically about increasing conservative influence on Digg) for burying.

^{32 20090922-}DiggPatriots-Bury-8403.html

^{33 20090922-}DiggPatriots-Bury-8402.html



2. "Any Chair In A Bar Fight": Mission, Metrics, & Methods

<u>SUBJ:</u> Going to be very busy for the rest of the month ... Keep beating back the flood of stupidity, also known as liberalism. Fight the good fight.

- tccbossm4n, July 16 2010³⁴

SUBJ: Re: Renewed Interest in Burving

I'm amazed at their lack of organization. If they had half a wit among them they could bury any and every submission we have but as in real life I guess, liberals just roll with the tide through Digg like they do in real life. They have no work ethic, no core values and no common sense beneath the paper thin liberal skin they cover themselves with.

- VRayZ, June 17 2010³⁵

"I'd love for you to feel better about Digg and a be stronger player" Lizbett encouraged one new member. The indeed, many Patriots focused on becoming 'stronger,' 'more effective' Diggers, which signifies how profoundly they thought of Digg as a system through which they could ∂o something. They needed to develop strength, to become stronger, to win the battles in

^{34 20100716-}DiggPatriots-Going-to-be-very-busy-for-the-rest-of-the-month-not-around-much-5884.html

³⁵ 20100617-DiggPatriots-Renewed-Interest-in-Burying-1786.html

^{36 20100621-}DiggPatriots-What-should-I-do-2421.html

which they believed they were embroiled. "We need to continue the fight," read the first line of the Yahoo! Group's description, and such combative language pervades the Patriots' posts.

"Another one bites the dust," gloated tccbossm4n of a post they successfully buried.³⁷ The Patriots believed that they were outnumbered by liberal users but could outwork and outlight them to make Digg more conservative.

<u>SUBJ: Re: Bury Now Novahater's sub</u>
Again the question arises about the validity of us organizing through email...

I feel we are far outnumbered. So does that make what we do right?
To fight for what is right and just, I would say yes.
Hopefully more people will see our beliefs as the right

- R.J.C., October 29 2009³⁸

SUBJ: Re: Bury Now Novahater's sub

way. We're called the right for a reason.

I think Digg's rules against networking to organize digging and burying are bulls**t, so I don't have any remorse about our own networking. As for trying to get the other side in trouble for doing it--I'm a big believer in the "any chair in a bar fight" philosophy.

Kurt H., October 29 2009³⁹

Digg's Terms of Service forbade "inflating or altering the 'digg count' [or] participating in any other organized effort" to affect rankings, and the Patriots themselves believed they were breaking these rules through their coordination. They were very worried they would be caught: "Be very careful who you invite here, as the 'bury' list can get ALL of us permanently

³⁷ 20090927-DiggPatriots-Re-Another-Noupsell-Bury-Please-8525.html

^{38 20091029-}DiggPatriots-Bury-Now-Novahaters-sub-14422.html

³⁹ 20091029-DiggPatriots-Bury-Now-Novahaters-sub-14423.html

banned," warned Janet M. However, they justified their rulebreaking by appealing to the conservative cause - and their love of fighting liberals.

SUBJ: Re: let's see if he takes the bait

...I'm a big mouth. I did not join Digg (and I did long before I came here) to be a shrinking violet. I didn't join in order to put submissions on the front page.

I joined in order to be myself and to give some a-hole liberals who had been unchallenged ... I joined to give them a challenge.

- Jill K., June 21 2010⁴⁰

SUBJ: Re: DiggPatriots- Maybe...

if digg loses it's competitive nature, and let's face it the real satisfaction [is] in burying the fools and hearing them cry endlessly about it, where is the fun? the whole "everyone wins because the only people i will relate with agree with me" thing is, how can i say it, too freakin' libtard for me. i don't use my twitter, facebook, or myspace accounts and landed on digg because i like fighting with my enemies and i really like winning. The dp's have had an impact. where will the impact be if you're swimming with the current?

Brendan M., July 5 2010⁴¹

"Half the reason I come to digg is to bury the libs," observed VRayZ.⁴² Indeed, a love of fighting for its own sake made it worthwhile for many Patriots to battle even the most incorrigibly liberal opponents. "[They] are what they are and they aren't going to change. bury them without remorse," wrote Brendan M. However, even he still evaluated his actions by whether they advanced the cause - whether they had an 'impact.' Brendan M., like many other members of the Patriots, stayed at Digg in part because he thought it was too liberal and because he thought he could make it more conservative. He lamented the rumored removal of

^{40 20100621-}DiggPatriots-lets-see-if-he-takes-the-bait-2591.html

^{41 20100705-}DiggPatriots-Maybe-4350.html

^{42 20100628-}DiggPatriots-anamolys-mad-at-me-3447.html

^{43 20100617-}DiggPatriots-Whining-again-1911.html

the bury button, which would remove his ability to have an impact, to make a difference. When the love of fighting ran up against the need to win, it was usually the latter which carried the day.

SUBJ: Re - BurY Mutual?

Please, Please, stop the discussions. You are playing right into their hands. If you just can't help yourself, then Maybe you should find another outlet for your frustration. I spend far too much time on Digg to see it wasted by immature sniping. I hope no one is offended, but remember why we are here. We want to Depress the progressive stories, while encouraging conservative ones.

- rgcmsg G, March 29 2010⁴⁴

The dynamic tension between these contradictory motivations gave rise to a fascinating rule *against* commenting on liberal posts. "Don't comment while it's live (wait 24hr or close with not many diggs) is the general rule of thumb," advised asamidigg. 45 This convention developed after the Patriots came to believe the Digg algorithm interpreted comments as an index of interest: posts with more comments would rise more quickly, and posts with less would fall further faster. They treated comments not as a process of deliberative discourse but as a tool which could be leveraged to increase or decrease visibility. Instead of raging at their enemies, they did their best to keep quiet: "Venting here, so I don't violate DP discipline and comment on a submission we're trying to bury," as Kurt H. wrote. 46 Meanwhile, they tried to trick liberal users into pushing their own submissions higher. "We probably should concentrate on commenting on each others stories and creating conversational comments to pull in more people to comment when they come by to digg on our stories," mused Lizbett. 47 "1 try to do it

^{44 20100329-}DiggPatriots-BurY-Mutual-12404.html

^{45 20100325-}DiggPatriots-Re-Bury-12212.html

^{46 20100326-}DiggPatriots-Bury-12308.html

⁴⁷ 20100212-DiggPatriots-Re-Novahators-Sub-More-BURY-13994.html

for all the DPs subs, especially if there are no comments, I comment just to try and start some conversation."⁴⁸

SUBJ: Maybe we can still bury this

what's with [liberal Digger] PhilPerspective hitting the front page so much lately? Looks like we're falling down on the job, or at least need to shift our focus.

- tccbossm4n, December 4 2009⁴⁹

SUBJ: Anomaly100 thinks Novemator is all that...

What she doesn't know, is that our group is growing larger by the day and [liberal Digger] novy is going to have a harder time having his stories pop...

Individually Warped, February 14 201050

The Patriots evaluated their impact by straightforward metrics: they wanted conservative posts to "pop" (rise to the front page) and liberal posts to be "buried" (sunk deep in the rankings). Popped stories were alive with attention; buried stories were effectively dead. "We are the Kevorkian of liberal stories on Digg. I hate Kevorkian, but I think in this case it is a great comparison. It is like putting down a suffering animal," joked Individually Warped.⁵¹ They bent their collect effort to make it harder for liberal links ever to rise from the dead.

SUBJ: RE: Bury

You know people.... I got a feeling if we can pull another 10 or 15 active DP members in we could turn Digg conservative.....

VRayZ, March 5 201052

SUBJ: Re: I think we need to bury this

It is kind of a learn as you go deal. I see what works for other people so I try to reshape my actions to make me a better social digger.

^{48 20100413-}DiggPatriots-I-think-we-need-to-bury-this-12731.html

^{49 20091204-}DiggPatriots-Maybe-we-can-still-bury-this-9649.html

 $^{^{50}\ 20100214\}text{-DiggPatriots-Anomaly} 100\text{-thinks-Novenator-is-all-that-}11285\text{.html}$

⁵¹ 20100628-DiggPatriots-anamolys-mad-at-me-3441.html

^{52 20100305-}DiggPatriots-Bury-11765.html

But the Patriots knew they weren't strong enough to win this fight on their own. "DPs is a place to share and get support for your subs, but we are not big enough or strong enough to get the job done," observed Lizbett.⁵⁴ However, they were extremely hesitant to bring new members on board who might betray their coordination and get them banned. "[He] could be like a digg double agent, wanting us to think he's on our side when all along he's playing for the other team," worried allisonrose870 of one proposed recruit. ⁵⁵ Over the course of the corpus only two new members were added to the group, and only after having been thoroughly and carefully vetted by senior members. To become stronger players, as Lizbett urged all Patriots to do, they instead invented a way to enlist reliable, riskless recruits to join their team.

SUBJ: RE: FP for J!

Okay folks, want to hit FP often? Follow J's lead. He's got 90+ friends all who digg early (this is key). If you can cultivate 90-100 friends like this your subs will hit on a regular basis, but cultivating this many GOOD friends requires you to do the same for them. Gotta digg 'em early and never miss.

phil d., June 17 2010⁵⁶

SUBJ: Re: DiggPatriots- What should I do?

For the next 2/3 weeks, don't sub at all, but concentrate on a) digging good mutuals(ie those who digg more than 50% of your stuff) AND also b) concentrate on digging active diggers...

It's important to remember that digg is all about give and take. If you never digg someones subs, they will notice and not bother digging yours. Conversely, if they notice you digging theirs, they will digg yours...

⁵³ 20100413-DiggPatriots-I-think-we-need-to-bury-this-12731.html

⁵⁴ 20100621-DiggPatriots-What-should-I-do-2421.html

⁵⁵ 20100712-DiggPatriots-Concerning-Dilberto-5276.html

⁵⁶ 20100617-DiggPatriots-FP-for-J-1836.html

Change your profile to mention that are an active digger and you faithfully digg your mutual's subs. Keep your mutuals list to somewhere between 90 and 130 mutuals. This will enable you to get all your mutual's subs early and reliably.

Remember that digg is all about: 'you scratch my back and i'll scratch yours'.

It may take 2 or 3 months for you to get yourself into the consciousness of active diggers around digg. For each FP that you get, that increases your visibility and the 'marketing' (when you comment early on people's subs and you digg other people's subs early, you are effectively marketing yourself) of yourself many-fold.

Get rid of those in your mutuals list who are below your threshold (eg less than 4 or 5 of your recent subs) and mutuals those in your fans list who are digging your stuff often and early.

- J., June 21 2010⁵⁷

The solution was hit upon by J., a sort of senior strategist and tactician for the Patriots whom Lizbett fondly described as her mentor. In 2009-2010 Digg provided a symmetrical relationship between users called "mutuals": if two users agreed to be mutuals then each could easily see what the other had submitted. Digg's developers designed mutuals to assist users in seeing what their friends were sharing as a means of facilitating serendipitous discovery. J., however, realized the Patriots could extend their influence *through* mutuals - if they picked the right ones. He began grooming mutuals, selecting them not by whether they agreed with his politics, but whether they would rapidly, regularly, and reliably upvote his submissions. ⁵⁸ By doing so he was able to muster an army of supporters to push his stories higher. It proved an

⁵⁷ 20100621-DiggPatriots-What-should-I-do-2439.html

⁵⁸ Compare the Patriots' use of mutuals to Brunton's observations on the phenomenon of 'personality spamming,' in *Spam*, 165: "the work of arrogating attention for oneself, using social media to build an audience -- often a very carefully quantified audience of 'followers' and 'rebloggers' -- rather than a network of friends, as was the initial, notional promise. It is a witty condemnation of the socially acceptable but aggressively eyeball-hungry work of those who would be, or act like, celebrities, 'influencers' or 'thought leaders.'"

extraordinarily successful strategy and other Patriots quickly followed suit. "It took me over a month of cultivating mutuals and friends who digg daily to build up to 125+ diggs a sub," observed phil d., who cheerfully noted that he was now recruiting hundreds more.⁵⁹

SUBJ: BURY

...I'm sure it's the same with most people as it is with me - things are rarely personal on digg. The only thing that matters is if you are digging their stuff or not....There is a feminist environmentalist in my list(tomboys), but she seems to be quite good at digging my stuff so i don't care one iota what her beliefs are.

- J., October 30 2009⁶⁰

SUBJ: Re: Bury...

I'm the same, Alan. The only thing i care about is if they are going to digg my stuff consistently early or not. I don't care if they are a rabid environmentalist or a 6 humped creature from planet Zog. If they digg my stuff and are ultra active, then they're in my list.

- J., December 19 200961

SUBJ: Re: Please help with comment diggs Thank you To have any chance to get some of these articles to FP, we are going to have to push extra hard...I've kept a low profile (politically) to build up a strong mutual base, which, as you know, we need. NOW is the time to see who will digg us, after months of digging all their TRASH (I'm sure you know what I mean)

Janet M., March 22 201062

There was broad agreement among the Patriots that mutuals should be measured by how effectively they extended conservative influence. Even Janet M., an ultraconservative FreeRepublic poster who bitterly hated liberals, assumed a ruthlessly pragmatic perspective. "I don't befriend based on someone's politics. I look at their stats," wrote alanocu_digg.⁶³ J.

⁵⁹ 20100606-DiggPatriots-Looks-like-we-missed-one-8307.html

 $^{^{60}}$ 20091029-DiggPatriots-Bury-8916.html

^{61 20091219-}DiggPatriots-Re-Bury-9902.html

^{62 20100322-}DiggPatriots-Please-help-with-comment-diggs-Thank-you-12118.html

^{63 20091219-}DiggPatriots-Re-Bury-9896.html

advised the Patriots not to mutual anyone "east of the Middle East," not out of latent Occidentalism but because the time difference would negatively impact their ability to rapidly upvote his submissions. ⁶⁴ For the Patriots, the most valuable mutuals resembled a kind of mathematical function or mechanical device, a black box into which new submissions were fed and out of which more attention emerged. In a striking ontological inversion, they evaluated human mutuals by their *least human* characteristics; as tools which were useful as long as they 'worked' and discarded as broken once they did not. And at the same time as the Digg Patriots began to evaluate humans as technology, they began to evaluate technologies as human.

SUBJ: Who Runs Digg?

...There's no 'algorithm' at digg. The 'algorithm' most likely consists of a bunch of liberal, bi-sexual, emotypes, who drink mimosas all day, and engage in a circlejerk by night. When they're not doing that, they pull a few levers to get a banana payoff from a machine, which they call the digg 'algorithm'. Just my opinion, but prolly spot-on...

- rjwusa, July 20 2010⁶⁵

SUBJ: Re: Digg's Reply - They buried my Sub in 2hrs...

It IS a bunch of shit. My sub today did not pop with 300+
diggs and 45 comments So I wrote them and asked them why
are you ignoring my stories (I have done this at least 10
times now so it is not like it is the first time)
Well low and behold my story popped about 10 minutes
Later about an hour++after the 24 hour period
If I do nothing they do nothing. If I complain my story
pops. If they like you... your stories pop with
100 or less diggs and maybe 4 comments. I like playing the
digg game but my faith in any REAL algorithm is gone.
Some people like to always believe in Santa Claus too,
but I like common sense and reality...

- Lizbett, March 25 201066

^{64 20091029-}DiggPatriots-Bury-8921.html

^{65 20100719-}DiggPatriots-Who-Runs-Digg-6336.html

^{66 20100326-}DiggPatriots-Diggs-Reply-They-Buried-my-Sub-in-2hrs-12276.html

SUBJ: Re - Bury if you haven't. It's FP

And as I predicted earlier: "This [liberal] sub just past the 10 minute mark... It will probably stay down for about another 5 to 10 hours and then the A.M.A. (Algorithm My Ass) will kick in and promote this story...

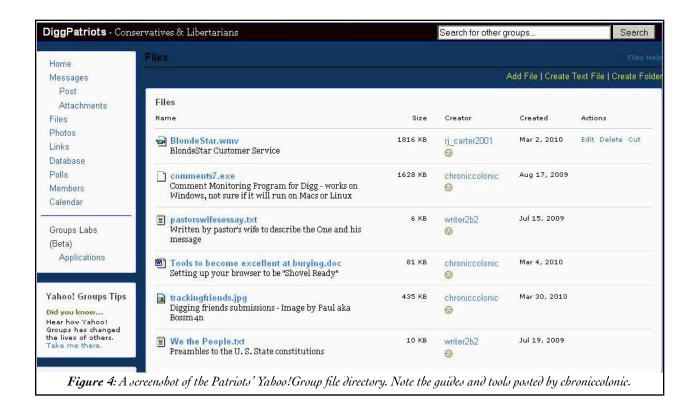
- Individually Warped, March 26 2010⁶⁷

The opaque Digg algorithm was a source of constant fascination and frustration for the Patriots. When liberal posts they thought safely buried popped back to the top, or conservative posts they backed with their collective forces failed to rise, the Patriots suspected that the Digg algorithm was at best broken, and at worst a sham, a technological facade which laundered the San Franciscan sympathies of its engineers. Their complaints could be read as admittedly vulgar versions of Winnerian critiques of the politics of artifacts: the unpredictable output of algorithms anthropomorphized into human capriciousness, as liberal politics embedded in the infrastructure of code. 68 Some of them came to believe that the algorithm was even a lie. "I think there are no 'readers' claiming that it's inaccurate, but digg admin themselves. I also think that it won't reach front page because digg admin won't let it," suspected J.69 This is an especially striking observation because it was precisely J. who, in other situations, so clearly envisioned Digg as a tool he could reliably repurpose. Yet even for him there was no single, essential algorithm, but rather many algorithms imagined differently depending on whether it was behaving as they expected.

^{67 20100326-}DiggPatriots-Bury-if-you-havent-Its-FP-12302.html

⁶⁸ Langdon Winner, "Do artifacts have politics?" Daedalus 109, no. 1 (1980): 121-136.

^{69 20091002-}DiggPatriots-Its-not-just-conservatives-who-get-banned-8533.html



3. "A Rude Wake-Up Call": Reading the Digg Patriots

SUBJ: Re: Digg Patriots

Being a popular Digg user was fun. But it was a lot of work too. I am not sure of what my rank was before the site was sold and changed formats, but I was in the top 200. There were others in the group with higher rankings than mine. To get a story popular on Digg, you had to follow other Digg power users loyally and upvote or "digg" their submissions. The sweet spot was about 200 to 300 mutual friends. The reason I am telling you this, is because the most successful members of the DiggPatriots were friends with all types of people who were just as dedicated, just as addicted, just as loyal to the site but were in no way conservative.

Getting a submission to the front page of Digg meant that hundreds of thousands of people would see your submission and comment on it. Once I started to get the knack of the site, I could get a front pager nearly every day.

What was the best thing to come out of Digg? I became really close friends with all the active members of DiggPatriots. I never met them in real life, but I talk

with them on the phone and I consider them to be very good friends. We are still really good friends to this day. If it were not Digg, we would not have known each other. For that, I could not thank the creators of Digg enough.

- ChronicColonic, February 23 2013⁷⁰

SUBJ: Re: Digg Patriots

In short, the Digg Patriots was a response to a wave of leftism that had grown smug and arrogant in its presence on Digg. We were a rude wake-up call that there were those who felt otherwise within Digg.

- R.J. Carter, February 12 201371

By August 2010 the Patriots were planning to leave Digg. A proposed redesign, created in part to help stop what administrators called "bad behavior like group-burying," eliminated the bury button and mutuals, thwarting the Patriots' methods. The group began to shift to other venues, and on August 1st, 2010, phil d. targeted their first link on reddit. Later that week a muckraking blogger named OleOleOlson - who was also the Patriots' most hated foe on Digg - published a post entitled "Massive Censorship of Digg Uncovered." He accused them of "a widespread campaign of censorship" and published excerpts from their listserv to prove it. The story drove the Patriots deep underground; their archive breaks off as sharply as it began, and there is no reliable record of their continued activity.

What do we know of the Digg Patriots? They thought they could make Digg and, by extension, other users more conservative by gathering together not only their own members

⁷⁰ ChronicColonic, in Facebook message to the author.

⁷¹ R.J. Carter, in email to the author.

^{72 20100801-}DiggPatriots-If-youre-on-Reddit-7971.html

⁷³ OleOleOlson, "Massive Censorship of Digg Uncovered," *Alternet*, August 5, 2010, http://blogs.alternet.org/oleoleolson/2010/08/05/massive-censorship-of-digg-uncovered/.

⁷⁴ Ironically, Olson himself was an unabashed Digg strategist, who proudly published guides for how progressives could use mutuals to extend their message just as the Patriots had. See, e.g., "Progressives Guide to Social Media 3: Digg," http://newsjunkiepost.com/2012/02/14/progressives-guide-to-social-media-3-digg/. The few Digg Patriots I was able to reach were all angry that Olson, whom they believed manipulated Digg just as much as they, had not only been able to successfully cast them as censors, but had escaped similar blame him.

but also mutuals and the affordances of the algorithm. They were profoundly social, but not only with humans, but with technologies, and humans which they treated like technologies: they battled against humans (liberals) and algorithms (as liberal) with the assistance of humans (as tools) and algorithms (as tools). Their exact impact is uncertain, but there is no doubt that they made Digg *different* by fighting to make liberal content less visible than it would have been without their intervention.⁷⁵

This complicated legacy could be read in several different lights. Their urge to battle liberals as underdogs could be placed historically in the context of the decline of a particular brand of conservatism. Their understanding of Digg as a manipulable system could be situated culturally in the context of comparative privilege providing a sense of strategic agency. Their need to cooperate to achieve their goals could be considered paradoxically in the context of their strongly individualistic ideology. Their efforts to suppress and silence, rather than promote and engage with, expression could be read ironically in the context of their frequent 'patriotic' references to the Constitution.

In this thesis, however, I'm interested in understanding how Olson, along with countless others, could so easily read the Patriots as censors, for this interpretation tells us less about the Patriots proper than it does about the interpreters themselves. Why were the Patriots almost universally understood as bad actors subverting Digg and not (say) as an oppressed minority resisting hegemony? What makes group burying 'bad behavior'? Why did Digg

⁷⁵ The impact of the Patriots is difficult to measure for several reasons. First, because of the many redesigns Digg has undergone, I have been unable to find any data from when they were active. Second, it's not clear how their impact would be measured even if such data could be found. What would be the baseline? I elaborate upon this question further in Chapter III in the section on collective intelligence.

⁷⁶ Critical legal scholars often observe that different individuals have different perspectives on their relationship with law depending on their situation within society. See, e.g., Silbey & Ewick, *The Common Place of Law: Stories from Everyday Life* (Cengage Learning, 2005), particularly chapter 5.

forbid it? If the Patriots were 'breaking' Digg, what exactly were they breaking, and why? Where, whom, or from what do these expectations arise that the Patriots could violate them?

III: UNDERSTANDING USER-GENERATED CENSORSHIP

The interesting question is not whether Twitter is censoring its Trends list.

The interesting question is, what do we think the Trends list is, what it represents and how it works, that we can presume to hold it accountable when we think it is "wrong?" What are these algorithms, and what do we want them to be?

- Tarleton Gillespie, "Can an Algorithm Be Wrong?"

1. As Corrupting Collective Intelligence

One way to model the impact of the Patriots is as corrupting the collective intelligence which would otherwise be elicited by Digg. Social media have long been popularly understood as systems for aggregating the wisdom of many minds: "an essential part of Web 2.0," wrote Tim O'Reilly in 2005, "is harnessing collective intelligence, turning the web into a kind of global brain..." Platforms like blogs and social media, he wrote, lowered the barriers to publish to the Web, which permitted more people to post and link between content with powerful emergent effects. According to O'Reilly, "much as [Google's search algorithm] PageRank produces better results than analysis of any individual document, the collective attention of the blogosphere selects for value." 79

Perhaps the most popular contemporary writer on collective intelligence is James Surowiecki. In his book *The Wisdom of Crowds* Surowiecki argues that, under certain conditions, markets, or systems which behave like markets, can elicit some aggregate collective intelligence

⁷⁷ Gillespie, "Can An Algorithm Be Wrong?"

⁷⁸ Tim O'Reilly, "What Is Web 2.0?" *O'Reilly Media*, September 30, 2005, http://oreilly.com/web2/archive/what-is-web-20.html?page=3/.

⁷⁹ O'Reilly, "What Is Web 2.0?"

superior to that distributed among its constituent members. Surowiecki himself believed new media to offer opportunities for the 'wisdom of crowds' to emerge: collective intelligence, he argued, is "the reason the Internet search engine Google can scan a billion Web pages and find the one page that has the exact piece of information you were looking for."81

But not all crowds are wise, and not everything collected by them constitutes intelligence. Surowiecki identified "four conditions that characterize wise crowds:"82

- **Diversity of opinion**: each person should have some private information, even if it's just an eccentric interpretation of the known facts
- Independence: people's opinions are not determined by the opinions of those around them
- Decentralization: people are able to specialize and draw on local knowledge
- Aggregation: some mechanism exists for turning private judgments into a collective decision

Surowiecki's pop scholarship has distinguished intellectual ancestry. He traces his work directly to Frances Galton, but another forebear could well have been the Marquis de Condorcet, who advanced a statistical argument for democracy in 1785. His eponymous jury theorem in "Essay on the Application of Analysis to the Probability of Majority Decisions" proved, as a matter of math, that if every voter in a given pool is more likely than not to vote 'correctly,' the probability that the majority vote is 'correct' increases with the size of the pool

⁸⁰ James Surowiecki, *The Wisdom of Crowds* (Random House Digital, Inc., 2005).

⁸¹ Surowiecki, Wisdom of Crowds, 15.

⁸² Surowiecki, Wisdom of Crowds, 10.

(and decreases if voters are more likely to be 'wrong').83 Surowiecki's contemporaries include Cass Sunstein, who adopted the Condorcet theorem, along with Hayek's price theory and other tools from economics and political science, to divine the conditions under which certain systems, particularly 'Web 2.0' systems like Slashdot and Wikipedia, may elicit 'correct' answers.84

These models of collective intelligence share some common premises. First, for at least some questions a 'correct' answer exists, and at least part of this knowledge is distributed among individuals. Second, this distributed knowledge, which Surowiecki calls "private information," can be aggregated if many individuals are allowed to make decisions independently. Independence is a key criterion because it allows crowds to solicit private information from many uncoordinated sources such that their individual 'errors' do not correlate and compound. 85 The more private information the better, since, in theory at least,

⁸³ See "Condorcet's jury theorem," Wikipedia: The Free Encyclopedia, accessed May 24, 2013, http://en.wikipedia.org/ wiki/Condorcet's jury theorem/.

⁸⁴ Cass Sunstein, *Infotopia: How Many Minds Produce Knowledge* (Oxford University Press, 2006).

⁸⁵ Of course, a premise *to* this premise is that sufficient autonomy is even possible: Surowiecki, who calls independence "intuitively appealing" and "at the core of Western liberalism," admits it is "hard to come by" in everyday life, where social scientists tend to "describe people as embedded in particular social contexts, and see influence as inescapable." Surowiecki, Wisdom of Crowds, 42.

inaccuracies should cancel out such that only 'good' information remains, like salt left behind by evaporated seawater.⁸⁶

For Surowiecki and Sunstein, collective intelligence is disrupted by foreknowledge or coordination, either of which corrupts private information and produces information cascades. Information cascades, Surowiecki writes, occur "when people's decisions are not made all at once but rather in sequence, so that some people go to one of the [options] first and then everyone else follows in order," transforming decisions into "a sequence of uninformed choices, so that collectively the group ends up making a bad decision." When actors don't act independently, or when there is insufficient diversity of opinion, collective intelligence is impaired; as with Condorcet, it is reliably unreliable.

From this perspective the Digg Patriots can be seen to corrupt the conditions necessary for collective intelligence to reliably emerge. Surowiecki's model *requires* humans to behave with naive, autonomous independence; indeed, he specifically acknowledges 'situatedness' as a problem for collective intelligence. The Patriots and their mutuals, however, constituted a coordinated conservative bloc which colluded to form information cascades. Kristina Lerman

⁸⁶ Another interesting tradition in eliciting 'correct' information emerged, not from the humanities and social sciences, but from electrical engineering. In his 1937 masters thesis for MIT, which has been called the most importance of the century, Claude Shannon demonstrated that circuits could be built to evaluate and solve boolean logic; Shannon, "A symbolic analysis of relay and switching circuits," (S.M. thesis, Massachusetts Institute of Technology, 1937), http://dspace.mit.edu/handle/1721.1/11173. In 1949 he copublished The Mathematical Theory of Communication and coined the term "bits" to designate the binary digits which could be used to express information through their boolean state; Shannon & Weaver, The Mathematical Theory of Communication (University of Illinois Press, 1949). Shannon, a researcher at Bell Labs, was primarily trying to figure out how to make telephone communications more efficient, but James Gleick argues that his work represented a turning point in the history of information; Gleick, The Information: A History, A Theory, A Flood (Vintage, 2012). It was Shannon, Gleick argues, who provided the theoretical base for the idea that 'communication' could be understood most fundamentally as the transmission of information. Under this model, Gleick observes, "information is surprise," is what is new; see Gleick, *The Information*, 284. The 'signal' is what is left behind when the 'noise' has been canceled out through an algorithmic process, which for Shannon was math, but could also be seen as voting on Digg or other social media. The parallels, especially to Surowiecki's arguments about public vs private information, are striking, but the discourses different enough that I have not developed the argument further in this paper.

⁸⁷ Surowiecki, Wisdom of Crowds, 55.

has demonstrated that "social networks [within Digg] have a strong impact on the number of votes received," and the Patriots maintained armies of mutuals to achieve precisely this dispositive effect.⁸⁸

But while seeing the Patriots as disrupting popular models of collective intelligence is straightforward, it's also not necessarily the most productive perspective to adopt. It's been well-documented that social media aren't particularly effective aggregators of collective intelligence under the best of circumstances, as Surowiecki himself pointed out when reddit persistently misidentified suspects after the bombing of the Boston Marathon.⁸⁹ In a striking study of over 170,000 links posted to reddit, Eric Gilbert found that over 52% of the links which became popular were in fact resubmissions which had failed to initially become popular, demonstrating that the community was a *reliably unreliable* arbiter of its own interests.⁹⁰

There are two other reasons that the collective intelligence model, while still very popular in the social media context, is not a particularly helpful guide to understanding user-generated censorship. First, it presumes that knowledge exists 'out there' in the world to be elicited *by* processes, which runs against the proposition that knowledge is instead constructed *through* processes. It's not *a priori* obvious that the Patriots should be evaluated by to what degree they made Digg more or less 'correct' as much as that they made Digg *different*. Second, because the collective intelligence model eschews coordination in favor of independence, it doesn't provide a conceptual apparatus by which to understand the Patriots as a strategic

⁸⁸ Kristina Lerman, "Social information processing in news aggregation," *Internet Computing*, IEEE 11, no. 6 (2007): 16-28; Lerman & Galstyan, "Analysis of social voting patterns on digg." In *Proceedings of the first workshop on Online social networks*, pp. 7-12. ACM, 2008, at 8.

⁸⁹ James Surowiecki, "The Wise Way to Crowdsource a Manhunt," *The New Yorker: Daily Comment,* April 24, 2013, http://www.newyorker.com/online/blogs/comment/2013/04/reddit-tsarnaev-marathon-bombers-wisdom-of-crowds.html/.

⁹⁰ Eric Gilbert, "Widespread underprovision on Reddit." In *Proceedings of the 2013 conference on Computer supported cooperative work*, pp. 803-808. ACM, 2013, http://comp.social.gatech.edu/papers/cscw13.reddit.gilbert.pdf/.

group; it can only characterize them as 'bad actors.' These are not, of course, problems with collective intelligence as a model, but they may be indications that collective intelligence might not be the most useful way to think about user-generated censorship.

2. As Reintroducing Heteronomy to the Networked Public Sphere

Another way to model the Patriots is as reintroducing heteronomy to the networked public sphere. The concept of the networked public sphere was introduced by Yochai Benkler in Wealth of Networks as a component of his contention that the Internet constitutes a revolutionary advance for human freedom. 91 Before discussing the Patriots' effect on the networked public sphere, however, it may be helpful to explore Benkler's ideas a bit. Though the concept of the public sphere is most strongly tied to the work of Jurgen Habermas, whom Benkler frequently cites, the line tying the two is actually deceptively long and twisty, as Benkler's theory of the public sphere departs from Habermas' in several important respects.

First, for Habermas, a "public sphere from which specific groups would be eo ipso excluded was less than merely incomplete; it was not a public sphere at all." This necessary condition of "universal access" was most famously critiqued by Nancy Fraser when she hammered Habermas for allegedly ignoring the exclusion of women from his historical examples of the public sphere. Benkler, however, readily acknowledges that the Internet is neither universally accessible nor equivalently used. For his purposes it is instead sufficient

⁹¹ Yochai Benkler, *The Wealth of Networks: How Social Production Transforms Markets And Freedom* (Yale University Press, 2006), http://www.benkler.org/Benkler Wealth Of Networks.pdf/.

⁹² Jurgen Habermas, The Structural Transformation of the Public Sphere: An Inquiry Into a Category of Bourgeois Society (MIT Press, 1991), 85.

⁹³ Nancy Fraser, "Rethinking the Public Sphere: A Contribution to the Critique of Actually Existing Democracy," in *Habermas and the Public Sphere*, Craig Calhoun ed (MIT Press, 1992), 109-142.

that the networked public sphere a) offers "universal intake" in principle and b) has a broader "intake basin" in practice than that of the mass-media.⁹⁴

Second, as Ben Roberts observes, it's "very important for Habermas that [the public sphere] for rational debate is kept separate from the political apparatus." According to Mark Warren, "Habermas emphasizes that public spheres cannot be organizers of collective action, and must be protected from imperatives of collective action... [all democratic organizations] must distinguish arenas of decisions and organizations of action." For Benkler, however, the promise of the networked public sphere is precisely the opportunities it offers for the two to mix: most his examples, such as the 2004 boycott of Sinclair Broadcasting Group organized through progressive blogs, are cases in which the processes of establishing and enacting a consensus blend together into some more potent political accelerant than either on their own.

Third, as Stuart Geiger notes, the function of the public sphere most critical for Habermas is "the admittedly arduous process of negotiating with those that one would not ordinarily meet in private life." For Habermas, democratic solidarity arises not from merely mixing people in space, but from interlocuters conferring equal standing and respect upon each other, the first step in a long process of exhaustive controversy through which different lifeworlds are made commensurate. Geiger contends that the very painlessness of distributed filtration mechanisms *precludes* them from functioning as Habermasian public spheres. But

⁹⁴ Benkler, *Wealth of Networks*, 182, 236, 260. Howevr, Eszter Hargittai has suggested that Benkler may not have met these conditions; Hargittai, "Whose Networks? Whose Wealth?" *Crooked Timber*, May 30, 2006, http://crookedtimber.org/2006/05/30/whose-networks-whose-wealth/.

⁹⁵ Ben Roberts, "Beyond the 'networked public sphere': Politics, participation and technics in web 2.0." *The Fibreculture Journal* 14 (2009), https://fourteen.fibreculturejournal.org/fcj-093-beyond-the-networked-public-sphere-politics-participation-and-technics-in-web-2-0/.

⁹⁶ Mark Warren, "The self in discursive democracy," in *The Cambridge Companion to Habermas* (Cambridge University Press, 1995), ed. Stephen White, 171-172; cited in Roberts, "Beyond the 'networked public sphere."

⁹⁷ R. Stuart Geiger, "Does Habermas understand the Internet? The algorithmic construction of the blogo/public sphere." *Gnovis: A Journal of Communication, Culture, and Technology* 1 (2009): 1-29, http://gnovisjournal.org/2009/12/22/does-habermas-understand-internet-algorithmic-construction-blogopublic-sphere/.

Benkler defines the public sphere as "the set of practices that members of a society use to communicate about matters they understand to be of public concern and that potentially require collective action or recognition." In other words, for Benkler the public sphere doesn't develop between people: it emerges across the network. Indeed, he implies that he values the networked public sphere precisely for its peaceable synthesis of public opinion through a liberal pluralist process as against the critical deliberative tradition of Habermas which seeks to negotiate common understanding. 99

The cumulative effect of these various departures is that Benkler transforms public spheres from a) universally accessible, politically neutral discursive spaces in which people negotiate mutually intelligible lifeworlds through communicative action to b) comparatively accessible, politically engaged speech systems configured by technology and policy through which people are more or less free to engage in speech acts. Benkler's use of the term 'public sphere' has led most to construe his as a Habermasian project, but his contribution is actually much more innovative and interesting than simply extending Habermas' concepts around a new domain, for instead he has developed his own 'digitally native' model of the public sphere which lends itself to an entirely different mode of investigating the Internet.

Because Benkler's model shifts the purpose of the public sphere from negotiating mutually intelligible lifeworlds to providing freer platforms for speech, he values the networked public sphere because he believes it more autonomous than the mass-mediated. He characterizes the mass-media as a narrow band of speakers or subjects filtered to high visibility by state or market power and the Internet as a broad band of speakers or subjects

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⁹⁸ Benkler, Wealth of Networks, 177.

⁹⁹ Benkler, Wealth of Networks, 184.

¹⁰⁰ Benkler, Wealth of Networks, 16.

filtered to high visibility by mechanisms broadly distributed to users. The economics of networked information production shift the most relevant considerations for freedom from publishing to filtering: when anyone can speak, "the central point of failure becomes the capacity to be heard—who listens to whom, and how that question is decided." ¹⁰¹

It is critical to understand that the Internet does not *remove* this point of failure. Indeed, it *cannot* be removed, for, as in the Babel objection, if anyone can speak, no one can be heard. Instead, Benkler argues that the Internet *diffuses* and *distributes* it. Unlike the mass-media, he argues, the networked public sphere possesses "no single point of failure for discourse: no single point where observations can be squelched or attention commanded—by fiat or with the application of money." According to Benkler, the well-documented unequal distributions of attention to websites are not the product of power, but rather "emerge from many small-scale, independent choices where free choice exists... power law distributions of attention to Web sites result from random distributions of interests, not from formal or practical bottlenecks that cannot be worked around..." These random distributions are collected, computed, and reflected, he argues, not by emperors or editors but by distributed filtering mechanisms. Thus, "we see the Babel objection solved on a distributed model, without anyone exerting formal legal control or practical economic power [through the] coordinate effects [of] uncoordinated actions." 104

The crux of Benkler's argument is thus that the networked public sphere has "no obvious points of control or exertion of influence—either by fiat or by purchase." ¹⁰⁵ From this

¹⁰¹ Benkler, Wealth of Networks, 238.

¹⁰² Benkler, Wealth of Networks, 271.

¹⁰³ Benkler, Wealth of Networks, 173.

¹⁰⁴ Benkler, Wealth of Networks, 173; 5.

¹⁰⁵ Benkler, Wealth of Networks, 177.

perspective the Digg Patriots can be seen to disrupt the networked public sphere by identifying and seizing upon a *third* point of control, exerting their power not through the state, or through the market, but *through the algorithm*. Under their sway Digg reflected not solely the coordinate effects of uncoordinated actions, but also the *coordinate effects of coordinated actions*. As such, the Patriots, aligned with their mutuals and empowered by algorithms, threaten to reintroduce what Benkler calls "heteronomy, of dependence on the judgment of others that subjects individuals to their control..." Suddenly it is no longer clear how or by whom the power law distributions of attention are produced! This is a problem, because for Benkler there is a sharp normative distinction between unequal distributions of attention produced from uncoordinated action (good) and those produced by coordinated action (bad).

Like collective intelligence, the networked public sphere can be thus disrupted by coordinated activity, but unlike Surowiecki, Benkler embraces situated human action, because "liberal theories that ignore culture are rendered incapable of answering some questions that arise in the real world and have real implications for individuals and polities." Instead, Benkler advocates developing an approach "able to diagnose different conditions in the practical cultural life of a society as more or less attractive from the perspective of liberal political theory." From this perspective the Patriots can be seen as problematic *culture warriors* who produce normatively bad cultural conditions by sidestepping the synthesis of the networked public sphere, refusing to either peaceably clear disputes or negotiate mutually intelligible lifeworlds. For Benkler, there needs to be some form of discourse, even if it is emergent across a network rather than between individuals. The Patriots, however, sought to

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¹⁰⁶ Benkler, Wealth of Networks, 173.

¹⁰⁷ Benkler, Wealth of Networks, 280.

¹⁰⁸ Benkler, Wealth of Networks, 280.

simply suppress the 'other side' rather than engage it in deliberation, even going so far as to treat comments instrumentally rather than discursively. Instead of *clearing* their disputes or *negotiating* lifeworlds, they worked to *escalate* disputes and *totalize* lifeworlds.

Compared to collective intelligence, the networked public sphere offers a much more theoretically sophisticated model by which to understand and assess user-generated censorship. It provides a clear vision for what the Internet ought to be (a freer platform for speech) and a simple rubric by which to evaluate the effects of the Patriots against its realization (by reintroducing heteronomy and refusing to engage in the synthesis of opinion).

However, the networked public sphere model also doesn't completely cover some of the core characteristics of user-generated censorship. While Benkler is very concerned with power wielded by traditional authorities, he doesn't provide a conceptual apparatus to think about the problems posed by algorithmically-empowered individuals. There's also a huge liberal theory foundation beneath Benkler's work - the focus on speech acts, on freedom, on abstract individuals, and so forth - that may not be helpful to import to discussions of user-generated censorship. And the peaceable vision of the networked public sphere doesn't quite seem to capture the fighting spirit of the Patriots, who did not think of themselves as engaged in the emergence of a consensus, but sought instead to win a contest and simply change everyone else.

As with collective intelligence, this doesn't mean that the networked public sphere is a bad model, just that it might not be the useful model by which to understand user-generated censorship specifically. An even more effective model might account for factors that both of these miss: the core coordination, the argumentative style, the desire to effect a sort of change through the assembled strength of many actors. One such model might be drawn from the field of science-technology studies, particularly the work of Bruno Latour.

3. Or: As Actor-Networks Assembling Artifacts

Latour is a French sociologist perhaps best known for studying the means by which scientific arguments are made stronger, transforming mere propositions into hard facts. Yet Latour doesn't fit comfortably in either camp of the so-called 'science wars' of which he is a indisputably a veteran: as Graham Harman observes, Latour has been "attacked simultaneously for opposite reasons," by scientists as "another soft French relativist" and by social theorists as "a sellout to fossilized classical realism." 109

One of Latour's central theses may be oversimplified as follows: all facts (arguments, ideas, institutions, and so on) are socially constructed, but they are not all constructed equally strongly, nor are they constructed solely by and of humans. In order to study or explain a fact (of what and by whom it is built; why and to where it spreads), the social scientist must not appeal to generalized 'social forces' which 'lie behind,' 'contextualize,' or 'give power to' the argument. Instead, they should trace the specific human and nonhuman actors who are recruited to form the fact. "I can now state the aim of this sociology of associations more precisely," writes Latour: "there is no society, no social realm, and no social ties, but there exist translations between mediators that may generate traceable associations." 110

For example, consider a researcher who claims to have discovered a new bacterium. When challenged to defend her claim, she may cite the microscope through which she saw it, the method through which she defined it, and another journal article which guided her work. The microscope, the method, and the article are all *actors* which she *enrolls* into an *alliance*

¹⁰⁹ Graham Harman, *Prince of Networks: Bruno Latour and Metaphysics* (re.press, 2009), http://www.re-press.org/book-files/OA-Version-780980544060 Prince of Networks.pdf, 5.

¹¹⁰ Bruno Latour, Reassembling the Social: An Introduction to Actor-Network-Theory (Oxford University Press, 2005), http://dss-edit.com/plu/Latour Reassembling.pdf, 108.

supporting her claim, and her claim depends on their continued cooperation. If her microscope is well-calibrated, her method sound, and the article credible, then her allies held fast, and her claim stays strong. But if the lens is defective, her method obsolete, or the article flawed, they betrayed her, and her claim may fail. As Harman writes, from a Latourian perspective all facts are fundamentally fights, and each brawler only as strong or as weak as its assembled allies:

It is never the actant in naked purity that possesses force but only the actant involved in its ramshackle associations with others, which collapse if these associations are not lovingly or brutally maintained...Any actant has a chance to win or lose, though some have more weaponry at their disposal. The loser is the one who failed to assemble enough human, natural, artificial, logical, and inanimate allies to stake a claim to victory.¹¹¹

But while Latour can be reasonably said to believe in the 'social construction of scientific facts,' for him the 'social' refers not to some exclusive domain or character of human sociality, but the process of associating together many human and nonhuman actors. Facts, propositions, ideas, concepts are not more or less 'objectively true,' but more or less well-constructed. The strength or weakness of a fact arises, not from the fact itself, but from the assembled strength or weakness of its allies, many of which are nonhuman. From this perspective, atoms are more real than angels not because the former exist in reality and the latter in prayer, but because atoms are more strongly linked with many other actors, like mathematics and bombs.¹¹²

Latour thus lends social constructions the stubborn strength of nonhuman actors.

Anyone *can* dispute Newtonian physics, but they must battle both the Royal Academy of Sciences and also apples insistently falling to earth. Against such tightly-knit facts the gods

¹¹¹ Harman, Prince of Networks, 20.

¹¹² Cf Harman, Prince of Networks, 110.

themselves contend in vain unless, like a Swiss patent clerk, they can convince enough assembled actors to turn traitor such that it unravels itself like an old sweater. ¹¹³ The social scientist thus investigates a fact which she wishes to understand as an engineer investigates a mountain through which she wishes to tunnel: by "[negotiating] with the mountain at each stage of the project, testing to see where the rock resists and where it yields, and [being] quite often surprised by the behavior of the rock." ¹¹⁴

Actor-networks become stronger by incorporating more and stronger actors into themselves. The more associations the more durable the actor-network becomes because each member has a stake in the whole thing holding together. The actor-network acts by *translating* and *transforming* along the chain: "every time you want to know what a nonhuman does," writes one of Latour's alter egos, "simply imagine what other humans or other nonhumans would have to do were this character not present." These actors became *delegates* of the actor-network which issue forth like Nazgûl from Mordor. But no delegate is neutral, and no delegation is costless. A hotel wishing to greet its guests with open doors may hire a porter, or it may install a machine; each may solve the problem, but only after having been disciplined in particular ways with different effects.

The most reliable delegates may congeal into *black boxes*. Like utterly trusted lieutenants, black boxes *seem* to carry out orders without imposing their own biases, opinions, motivations, or other transformative, translative effects. But this is only an illusion, for any black box may be opened to reveal its politics, either through the careful prying of a determined investigator or after being exploded by the box's own unexpected behavior.

¹¹³ Cf Harman, Prince of Networks, 22.

¹¹⁴ Harman, Prince of Networks, 18.

¹¹⁵ Jim Johnson, "Mixing humans and nonhumans together: The sociology of a door-closer." *Social Problems* (1988): 298-310; 299.

Harman has compared Latour's black boxes to Heidegger's tools: taken-for-granted and readyat-hand until they break or malfunction, at which point their contingencies, dependencies, and configurations suddenly leap screaming to the foreground.¹¹⁶

From this perspective we might see the Patriots as assembling an actor-network through Digg. Like the Pasteurization of France, the Patriotization of Digg proceeded by and through the enrollment of mutuals as delegates, evaluated on their technical characteristics and disciplined like door-closers. The most reliable mutuals came to be seen as black boxes, but as soon as they failed the alliance by behaving unexpectedly or unreliably they were inspected and discarded like broken hammers. Algorithms could be allies too: like a megaphone which amplifies human voice, their strategic leveraging allowed the Patriots to make their points more loudly. Yet, like unreliable mutuals, those same algorithms could also seem to work against the Patriots, weaken their arguments, and leave them cursing the human and nonhuman traitors which had betrayed their alliance.

In this chapter I have not conducted a proper actor-network analysis of the Digg
Patriots. However, I find the conceptual toolkit of actor-network theory, and more generally
science-technology studies, to offer several advantages as an approach for thinking about usergenerated censorship. First, this approach enables the descriptive study of user-generated
censorship without being weighed down by the normative baggage of other models. Second, it
begins from a presumption of coordinated activity, and provides a versatile set of tools by

¹¹⁶ Harman, *Prince of Networks*, 34. Indeed, it transpires that there are sufficient connections to merit a Actor-Network Theory/Heidegger mailing list called ANTHEM based out of LSE: https://groups.google.com/forum/?fromgroups#!forum/anthem-lse. ANTHEM hosted a conference and discussion between Harman and Latour after the publication of *Prince of Networks*, the transcript of which was itself turned into a book. See Erdelyi et al, *The Prince and the Wolf: Latour and Harman at the LSE* (John Hunt Publishing, 2011).

which to track and understand the alliances of humans and nonhumans which emerge through sociotechnical systems.

But if we are to see the Patriots as making arguments through Digg, we need not only ask how these arguments are made (that is, by the association of human and nonhuman actors), but also the *form* which these arguments eventually take. As Harman writes, for Latour "truth and reality are assembled through chains of actors in the same way that bills go through Congress: slightly transformed and translated at each step, and failing as often as they succeed. All reality is political, but not all politics is human." Truth and reality are made manifest in *things*. A hypothesis becomes a finding, becomes a result, becomes a fact. A discussion becomes a bill, becomes a law, becomes a right. But into what does user-generated censorship harden? What are the artifacts of its politics?

IV: THE SOCIAL PRODUCTION OF WHAT?

Take the library of the British museum, for instance, valuable and useful and accessible as it is: what chance has a work of being known to be there, merely because it is there? If it be wanted, it can be asked for; but to be wanted it must be known. No one can rummage the library.

- Augustus De Morgan, to Charles Babbage¹¹⁸

1. The Ark in the Archives: On the Centrality of Sociotechnical Systems

In asking after the artifacts of the politics of user-generated censorship, I do not mean, as Langdon Winner has famously argued, artifacts which *embody* a particular politics, but

¹¹⁷ Harman, Prince of Networks, 89.

¹¹⁸ Quoted in Gleick, The Information, 410.

merely artifacts which are the *result of* a politics.¹¹⁹ If, as I have argued, alliances of actors assemble together the front page of Digg, the Facebook News Feed, Google Search results, and so on through political processes, then these assemblies, once assembled, are themselves the artifacts of politics. But what are these artifacts, and what are their metaphysics? When the Patriots coordinate to change Digg, what are they changing, and how does it change?

It's trivial to observe that social media are socially produced; the far more interesting question is *what* is produced through the process of social production.¹²⁰ One possible answer is a kind of representation, like a map, which guides users through an otherwise unnavigable flood of information. Such signposts are so central as to be invisible, yet profoundly influential despite - indeed, because of - their invisibility. "Information infrastructure is a tricky thing to analyze," observe Bowker and Star, because "Good, usable systems disappear almost by definition. The easier they are to use, the harder they are to see." ¹²¹

Perhaps an example, set in a familiar scene, can make them more visible. In the closing moments of *Raiders of the Lost Ark*, shortly after federal agents refuse to reveal its location to Indiana Jones, the camera cuts to anonymous hands nailing the ark inside a wooden crate.¹²² An old man wheels it slowly down the aisle of an enormous warehouse packed full of

¹¹⁹ Contra Winner, "Do Artifacts Have Politics?", compare Bernward Joerges, "Do Politics Have Artefacts?", Social Studies of Science 29, no. 3 (1999): 411-431. Whereas Winner believes that artifacts embody a politics, Joerges believes that they usually cannot, and argues compellingly that Winner's most famous example - Robert Moses' bridges - is simply incorrect. Instead, Joerges advocates studying not the artifacts, but the processes which produce them. By asking after the artifacts of a politics I am somewhere between the two: interested in the things produced by the processes Joerges cares about without requiring a specific politics as Winner would. I elaborate on my interest in the third section of this chapter and in the conclusion. My quip about the result, not the reason, is a riff on a legal realist catchphrase: see generally Karl Llewellyn, The Bramble Bush: On Our Law and Its Study (Oceana Publications, 1930); see also Elizabeth Mensch, "The History of Mainstream Legal Thought," in The Politics of Law: A Progressive Critique, ed. David Kairys (Basic Books, 1998), 23-53.

¹²⁰ This observation, along with the title of this chapter, is riff on the work of (and with apologies to) Ian Hacking. Hacking, *The Social Construction of What?* (Harvard University Press, 1999).

¹²¹ Bowker & Star, Sorting Things Out: Classification And Its Consequences (MIT Press, 2000), 13.

¹²² Raiders of the Lost Ark. Directed by Steven Spielberg (1981).

innumerable crates, each indistinguishable from that which contains the ark. The worker turns left. As ominous music builds, the ark vanishes from view, effectively lost in plain sight among a sea of infinite, identical crates.

Suppose Indiana Jones decided to search for this ancient and dangerous artifact. It is not enough for him to merely infiltrate the warehouse. He needs to know where to begin looking, yet despite the considerable determination and unorthodox methods of Professor Jones, his search would almost certainly be stymied without the aid of some Ariadne's thread to follow through the warehouse. Blair and Stallybrass have traced the origins of the verb "to file" to mean the literal stringing of documents along a wire - that is, a *filum* - and so too must Jones move only ever down the organizational filaments leading to the ark. Thumbing through the folder of "O" for "Occult" he may find a slip of paper indexing its location; by the door, a map depicts the layout of the warehouse, which he may navigate by following signs amidst the stacks. Eventually Jones may indeed find the crate, but *only if* every step along the way holds true. If the index is off, the map incorrect, or any other link in the chain snipped (by earnest error or strategic mislabeling), Jones is lost, and so too the ark. No one can rummage the warehouse.

This story illustrates how objects may be formally accessible yet contingently findable. It underscores the central role of sociotechnical systems in making available information; that is, assisting its location or discovery. Indeed, to archive the ark in the warehouse means not only to put the box on a shelf but also to enroll it in a system through which it may later be located. Stamping with an identifying number, indexing into an inventory, mapping against the stacks: each nonhuman actor in this chain refers to the next, paving the pathways along which Jones

¹²³ Blair & Stallybrass, "Mediating Information 1450-1800," *This Is Enlightenment*, ed. Siskin & Warner (Chicago: University of Chicago Press, 2010), 152.

must travel. The spacious warehouse in *Raiders* collapses in practice to these tiny, two-dimensional conduits through which knowledge actually circulates. The ark is 'in' the archives, but effectively can't be found 'there'; instead, it's found *through* sprawling sociotechnical systems. As Latour once said at a lecture on globalization, "...we always tend to exaggerate the extent to which we access this global sphere...There is no access to the global for the simple reason that you always move from one place to the next through narrow corridors without ever being outside." 124

Discussions of censorship usually focus on an imagined formal accessibility of objects: is the book/painting/record 'in' the library/gallery/store? But once we see objects as existing not 'in' space but *through* passageways, our focus reorients around these newly-realized relations. ¹²⁵ From this perspective the questions of how, by whom, and for what reasons these corridors are tunneled and reinforced elevates from ancillary interest to central significance. User-generated censorship operates by reconfiguring these corridors with the assistance of social media machines, a metaphor I've adapted from the media historian Markus Krajewski.

2. Social Media as Machines which Manage the Flood

With the invention and spread of printing with movable type, a complaint arises in the learned reading world. It is the book flood, always a nautical or irrigation metaphor, that has a disturbing effect on readers in the newly established privacy of their studies...Only

¹²⁴ Bruno Latour, "Spheres and networks: two ways to reinterpret globalization." *Harvard Design Magazine* 30 (2009): 138-144. http://www.bruno-latour.fr/sites/default/files/115-SPACE-HARVARD-GB.pdf/.

¹²⁵ Indeed, as Stuart Geiger has reminded me, a strict ANT approach would suggest that there can in fact be no distinction since an object is always and only defined in association with its relations. See also Julie Cohen's model of 'embodied spatiality': Cohen, "Cyberspace as/and Space." *Columbia Law Review* (2007): 210-256; Chris Peterson, "The Ark in the Archives: Toward a Theory of Link-Oriented Antiepistemology," *MIT Center for Civic Media*, November 6, 2012, http://civic.mit.edu/blog/petey/the-ark-in-the-archives-toward-a-theory-of-link-oriented-antiepistemology/.

when the library is inundated is the need to deal with all of this material recognized. 126

So begins the second chapter of Krajewski's improbably enthralling *Paper Machines:*About Cards & Catalogs, 1548-1929, which traces the development of card catalogs as a response to newly abundant information after the introduction of the printing press. Krajewski's book is a refreshing reminder that neither our contemporary concerns nor favored metaphors for information overload are new. "...Paper also became so cheap, and printers so numerous, that a deluge of Authors covered the land," complained Alexander Pope in *The Dunciad*. As James Gleick notes, "Deluge became a common metaphor for people describing information surfeit.

There is a sensation of drowning: information as a rising, churning flood." 127 The deadly flood had to be tamed by tools: "...the shortness of our life and the multitude of things that one must know today to count among the learned do not allow us to do everything ourselves," wrote

Gabriel Naude in 1627 of the need to rely on instruments to manage the book flood. 128

Card catalogs were among the instruments developed to help readers navigate this intensely-felt flood of information. While the earliest bibliographic practices indeed consisted of little more than lists of books in a library's collection, it was Leibniz, as director of the library at Wolfenbüttel, whom Krajewski credits with first arriving at the idea of cataloging books on paper slips which could be easily rearranged to account for new additions. The first actual catalog wasn't created for nearly a century, when one was developed for the Viennese royal library, coincidentally during the same decade that the Empress Maria Theresa ordered conscription numbers be publicly posted as addresses to help the monarchy identify

¹²⁶ Markus Krajewski, *Paper Machines: About Cards e3 Catalogs, 1548-1929* (MIT Press, 2011), 9.

¹²⁷ Gleick, The Information, 384.

¹²⁸ Ann Blair, Too Much To Know: Managing Scholarly Information Before The Modern Age (Yale University Press, 2010), 57.

¹²⁹ Krajewski, Paper Machines, 22.

soldiers among "an indistinct *sea* of houses." ¹³⁰ As their respective empires expanded, both royals and readers developed methods to help them find objects amidst their newfound abundance.

Krajewski calls card catalogs paper machines because they "can be described as a chained mechanism" which does the work of organizing information when powered by the user's hand. 131 Following the dominant metaphors of the time, he argues that the organizational work which card catalogs do can be understood as channeling the book flood by digging canals which tame the torrent into more manageable streams. But there is no translation without transformation: card catalogs, like all mediators, do not simply transmit information unperturbed, but impose their effects as they go. Krajewski notes that "it would be insufficient to mark only beginning and end, sender and receiver. Rather, what is crucial is the way this transfer occurs, including any disturbances, changes, stoppages, irritations and detours," and so he carefully tracks the manner by which card catalogs transform the books to which they also refer. 132 Cards in catalogs, as mobile, rearrangeable pointers to books located in the the stacks, also "[embody] a highly compressed data set that characterizes the book to be found... [becoming] a representation of the text - which now need no longer be read every time." ¹³³ A card *must* compress, distort, transform the book to which it points; else it is not a card, but the book itself, and the flood continues to rise.

The key insight here is that card catalogs play a central, rather than incidental or ancillary, role in connecting readers to books. In any collection of meaningful size, card catalogs mediate the two; it is only by traveling through cards that readers find books. Yet it is

¹³⁰ Krajewski, *Paper Machines*, 21.

¹³¹ Krajewski, *Paper Machines*, 7.

¹³² Krajewski, Paper Machines, 3.

¹³³ Krajewski, Paper Machines, 23.

precisely their role in making books more findable which makes them an attractive avenue of intervention for those who wish to make books less findable. Krajewski calls the specter of lost cards "the sum of all librarian's fears," and this specter came to haunt the University of Illinois in the 1960s when, according to Nicholson Baker, student radicals targeted card catalogs for disruptive action. ¹⁵⁴ Over 50,000 cards were burned and scattered in February 1969: "The tragedy," library Dean Robert Downs told the *Daily Illini*, was that now "there won't be a complete record of all the books in the stacks and in the various departmental libraries." ¹³⁵ In response, the University of Chicago placed its catalog under armed guard for months while it carried out a secret project to microfilm a backup copy of its cards. ¹³⁶ This is the strange, dialectical quality of finding devices: that, because they help find, they may also be repurposed to inhibit finding.

Krajewski models card catalogs as machines which, through their mobility and reconfigurability, assist readers in managing the book flood. The raging river of print never receded, but was eventually tamed by a system of locks and canals, its well-channeled waters eventually powering the turbines of knowledge production. We might extend his model to understand social media as machines which help manage the digital flood. Nautical metaphors for information abundance are as common today as they were in the time of Leibniz and Pope; like our analog ancestors, we constantly feel at risk of drowning beneath its rising tides, and need new mechanisms by which to channel the waters.

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¹³⁴ Krajewski, Paper Machines, 54; Nicholson Baker, The Size of Thoughts: Essays and Other Lumber (Vintage, 1997).

^{135 &}quot;Vandals Destroy About \$15,000 In University Library Catalog Cards", Daily Illini, May 24, 1969, page 8.

¹³⁶ Neil Radford, "Books On Film," *The Core: College Magazine of the University of Chicago*, summer 2010, http://thecore.uchicago.edu/Summer2010/eye-books-on-film.shtml/.

¹³⁷ See also Krajewski's discussion of the economic relations of card catalogs, e.g. quoting Goethe on libraries as "One feels as if in the presence of capital that noiselessly yields unpredictable interest" in *Paper Machines* at 24.

Like cards constituting compressed versions of books, the links exchanged through social media pack whole websites, pictures, and films into tiny, mobile representations. A link on Digg is not merely a pointer, but a "highly compressed data set that characterizes" the site to be found at the other end, annotated by net upvotes and user comments. But these links are mobile *vertically* in a way that cards are not. Social media streams are usually organized around metaphors of depth: sites like Digg and reddit enable users to vote good content "up" and bad content "down", while services like Twitter and Facebook algorithmically curate "top" posts. It's as if the information flood acquired a new digital dimension; as if, when information overflowed its banks, social media responded by digging the riverbed deeper. Dave Weinberger has argued that, on social media, "[filters] no longer filter out. They filter *forward*, bringing their results to the front." He might instead have said, with a bit more accuracy, that social media don't filter out: they filter *forwar*.

This is a fundamentally different model of knowledge management than paper machines. Card catalogs often have outdated ontologies but within their schema all books in a given collection are equivalently available; nothing is ever at the "bottom" of a card catalog. But the users of social media, by operating the chained mechanisms of algorithms, *surface* some stories, *submerge* others, and stop still more at their source. Reading the front page of Digg, or the Facebook News Feed, is like standing atop a rock in a dark, swift river: while some objects are clearly visible, having been buoyed to the surface, countless others rush by invisibly in the depths. The latter *can* be found by a determined reader - but only if she dons goggles, hold her breath, and dives deeply in search of them, and even then only if she knows to look.

¹³⁸ David Weinberger, Too Big to Know: Rethinking Knowledge Now That the Facts Aren't the Facts, Experts Are Everywhere, and the Smartest Person in the Room Is the Room (Basic Books, 2012), 11.

Like card catalogs, social media sit centrally between readers and information; their mechanisms make their compressed referents to content more or less visible. John Rajchman, building on Foucault, argues that "spaces are designed to make things seeable, and seeable in a specific way." So too with social media which, with their surfaces and submergences, are also designed to make certain things *unseeable* in a specific way. Information is always immediately at risk of being drowned beneath the waterline in social media streams, submerged sufficiently to suffocate for lack of air and attention. Taina Bucher has called this the "threat of invisibility:" unlike the all-seeing eye of the panopticon which regulates by imposing visibility before its inescapable gaze, the mechanisms of social media regulate by imposing "the constant possibility of disappearing" beneath the surface. 140

User-generated censorship enforces this threat, leveraging social media machines to make certain information effectively unfindable. Like student radicals sinking whole sections of the stacks back into the book flood, the Digg Patriots submerged liberal links deep in social media streams, rendering them less visible than they would have been without their intervention, sucked under by an algorithmic riptide. These objects remain accessible but suddenly less available, the long chain of references linking them buried too deeply to be easily followed by casual travelers. Whole pathways drown beneath the waves like lost continents, while others pop to the surface in their stead, distracting from what has gone missing.

The subversive genius of user-generated censorship is that it intervenes not on objects but on the routes through which they can be found, which are erased or made to appear less interesting to travel down. It's a quiet, subtle mode of strategic action, which, through the

¹³⁹ John Rajchman, "Foucault's art of seeing," *October* 44 (1988): 88-117, http://www.jstor.org/stable/778976. Cited in Taina Bucher, "Want to be on the top? Algorithmic power and the threat of invisibility on Facebook." *New Media & Society* 14, no. 7 (2012): 1164-1180.

¹⁴⁰ Bucher, "Want to be on the top?"

laundering of algorithms, is often not even distinguishable as such. Censoring objects is usually loud and noisy: a banned book is obviously gone, and a blocked website is self-evidently inaccessible. User-generated censorship eschews such crude methods, instead hiding its targets in plain, unseeable sight, sunk in the muck at the bottom of the social river.

3. The Social Production of Persuasive Panoramas

User-generated censorship is a strategic repurposing of the general filtering function which tames the flood. By making information more or less available, social media produce influential representations of the things which exist to be viewed, experienced, accessed, as well as links leading directly to them. In other words, they make maps, providing both a list of destinations and well-paved pathways through which they can be found. But, as Alfred Korzybski observed, the map is not the territory. Indeed, the map cannot be the territory, for a map of the earth the size of the earth would be just as unnavigable. The interesting question, then, is not whether a given representation of the world is incomplete, but in what ways it is incomplete; that is, which aspects were omitted in compression, with what effects?

In *Reassembling the Social* Latour discusses two different types of representations: "clamps," as he calls them, to help compress the world so it can be mapped. The first kind of map Latour calls *oligoptica*. ¹⁴³ Unlike their implicit opposites, all-seeing panoptica, oligoptica

¹⁴¹ Alfred Korzybski, *Science And Sanity: An Introduction to Non-Aristotelian Systems and General Semantics* (Institute of General Semantics, 1958), 750.

¹⁴² Borges: "In that Empire, the Art of Cartography attained such Perfection that the map of a single Province occupied the entirety of a City, and the map of the Empire, the entirety of a Province. In time, those Unconscionable Maps no longer satisfied, and the Cartographers Guilds struck a Map of the Empire whose size was that of the Empire, and which coincided point for point with it. The following Generations, who were not so fond of the Study of Cartography as their Forebears had been, saw that that vast Map was Useless, and not without some Pitilessness was it, that they delivered it up to the Inclemencies of Sun and Winters." Jorge Borges, "On Exactitude in Science," *Collected Fictions*, translated by Andrew Hurley (Penguin Books, 1999), 325.

¹⁴³ Latour, Reassembling the Social, 181.

provide self-evidently narrow, limited lines of sight to the things surveyed. Deploying his favored military metaphors, Latour characterizes a war room as an oligopticon, from which generals may view scenes from a distant front only long as the attenuated connections hold; as such, they are hyperaware of their dependence on satellites and radios, and that they are not able to see what's happening where the camera isn't. The second kind of map Latour calls panoramas. "Contrary to oligoptica," he writes, "panoramas...see everything. But they also see nothing since they simply show an image painted (or projected) on the tiny wall of a room fully closed to the outside." Panoramas, in other words, are representations which do not reveal their own incompleteness. As Latour writes:

[Panoramas] are being painted every time a newspaper editorialist reviews with authority the 'whole situation'; when a book retells the origins of the world from the Big Bang to President Bush; when a social theory textbook provides a bird's eye view of modernity; when the CEO of some big company gathers his shareholders; when some famous scientist summarizes for the benefit of the public 'the present state of science'; when a militant explains to her cellmates the 'long' history of exploitation'... They design a picture which has no gap in it, giving the spectator the powerful impression of being fully immersed in the real world without any artificial mediations or costly flows of information leading from or to the outside. Whereas oligoptica are constantly revealing the fragility of their connections and their lack of control on what is left in between their networks, panoramas give the impression of complete control over what is being surveyed, even though they are partially blind and that nothing enters or leaves their walls except interested or baffled spectators. To confuse them with oligoptica would be like confusing a war episode monitored from the U.S. Army war room in Tampa, Florida, with the same one related on Fox News when a retired general is commenting on the 'day at the front'. The first account, which is a realist one, knows painfully well that it can become unreal as soon as communications are cut off; the second one might be just as real but it has a smaller chance of telling us whether or not it's fiction. 145

¹⁴⁴ Latour, Reassembling the Social, 187.

¹⁴⁵ Latour, Reassembling the Social, 188.

From this perspective we might see the maps of social media as constituting persuasive panoramas. Panoramas, because the pictures they provide do not volunteer their own incompleteness; persuasive, because their reflexive silence fails to betray the many ways in which their representations are incomplete, luring the viewer into believing they are looking at a comprehensive and natural image of the world, as if through a clear lens, when in fact they are watching a wholly political performance. Social media, as sociotechnical systems, can be understood to assemble users and algorithms together to make arguments about what is important, what is relevant, what is "trending," what is "top," and so on; these arguments are manifest in the panoramic artifacts projected onto their front page, their News Feed, their search results, and so on.

All representations of the world are compressed, but they are not all compressed the same way, and the composition of representations is a primary concern in media studies. Critical theorists across fields and activists of all stripes routinely critique different pictures of the world as dominant and hegemonic while working to construct alternate and resistive narratives from subaltern perspectives, and so on. Indeed, a core insight of media studies is that the narratives, perspectives, and representations made through media help constitute our ontologies, our ontologies our lifeworlds, and our lifeworlds our politics. What these Latourian concepts provide is a way to distinguish between representations based on their epistemological earnestness. Oligoptica see the world through tunnel vision, and continuously destabilize themselves by foregrounding their own dependencies and contingencies. Panoramas, on the other hand, are born stable, whole, and totalizing; they must be forced to admit their incompleteness.

The power of user-generated censorship derives from these epistemological tensions. ¹⁴⁶ Panoramas are persuasive not because there $i\omega$ no gap in them but that there *seems* to be no gap. Any absence is utterly inconspicuous: the eye seamlessly elides what it does not expect to not see, like Muggles simply failing to notice the Knight Bus. ¹⁴⁷ Fundamentally, it's a problem of unknown-unknowns: there's no real reason to look for what $i\omega n't$ included in Google's search results, what $i\omega n't$ highlighted in the Facebook News Feed, what $\partial oesn't$ rise to the top of reddit or Digg. The panorama provides users a convincing map of what exists and what is interesting such that they do not notice what they do not notice.

Latour has recently shifted his focus from critique to composition, taking a surprising Habermasian turn towards negotiating a common world. 148 "A world that you have to compose is not the same thing as a world you have to discover, and not the same thing as a world you have to uncover," says Latour; instead, it is something you *make*. 149 One way to understand user-generated censorship is as *recomposing* the common world produced by social media, shifting objects between the foreground and background of the panorama such that the artifact remains apparently natural and undisturbed. It's as if a clever Church cleric, ordered to paint fig leaves on nudes but aware of the attention his painfully obvious censorship might bring,

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¹⁴⁶ Or anti-epistemological: cf. Peter Galison, "Removing Knowledge", Critical Inquiry 31, no. 1 (2004): 229-243.

¹⁴⁷ "'How come the Muggles don't hear the bus?' said Harry. 'Them!' said Stan contemptuously. 'Don' listen properly, do they? Don' look properly either. Never notice nuffink, they don'.'" - J.K Rowling, *The Prisoner of Azkaban* (Scholastic, 1999), 36. As you may have (dare I say it?) noticed, I have a bit more sympathy for how hard it can be to notice things than Mr. Shunpike.

¹⁴⁸ Bruno Latour, "An Attempt At A 'Compositionist Manifesto", New Literary History 41, no. 3 (2010): 471-490, available at http://www.bruno-latour.fr/sites/default/files/120-NLH-GB.pdf. See also "Prof. Bruno Latour 'From Critique to Composition'": "And here compromise means etymologically promise together. Is there a way to promise together a common world which is composable? A world which does not exist but which can be made to be? Which is completely different from having the common world as a background known by matters of fact on which now you add the politics." - 1:12:50, http://www.youtube.com/watch?v=-02aCvQ-HFs/.

¹⁴⁹ Latour, "From Critique to Composition," at 30:00.

could instead, through some trick of the eye, subtly alter the painting such that viewers simply elided the offending portions of their own unconscious accord.

At its most basic, the user-generated censorship theory of change is a classic technique of agenda setting, of altering media representations, akin to convincing a newspaper editor to not run a story or a textbook editor to change her history book. Yet it is not merely this, for these are new levers, distributed to different actors, laundered by algorithms, emerging from complex systems often inaccurately presumed to be free of such politics. Almost anyone, with the timely aid of a few allies, can cut a backroom deal with an algorithm to help suppress a story, change a narrative, shift a lifeworld, and these interventions leave far subtler traces than their analog analogues. No books are burnt. No redactions highlighted in black marker. Just some roads quietly dropped from the map, pathways effaced or erased, such that their destinations become much harder to find. "Can't get there from here," my grandparents from Maine sometimes simply say; so too it is with user-generated censorship.

V: CONCLUSION

...[Social media practices] reflect something genuinely new, and as yet not clearly theorized, distinct equally from Habermasian communal conversation-as-deliberation as from the blandly managerial product, shaped by layers of human talent for the broadest possible distribution, of Adorno and Horkheimer's Kulturindustrie.

- Finn Brunton, "Spam: A Shadow History of the Internet" 150

1. The Relevance of User-Generated Censorship

In this thesis I have studied user-generated censorship as an emergent mode of intervention made possible by social media. I grounded it in the case of the Digg Patriots, who assembled and maintained human and nonhuman allies in order to make Digg different than it

¹⁵⁰ Brunton, *Spam*, 165-166.

would have been without their intervention. I compared social media machines to paper machines as sociotechnical systems which make specific information more or less available amidst general abundance. Finally, I analogized the artifacts of social media machines to maps which provide more or less obviously incomplete representations of the world, as panoramic pictures which can be recomposed to alter the pathways paved by and through them. But an important question remains: so what? What is the significance of user-generated censorship? Why does it matter? What makes it worth thinking about, worth writing about - and, if you've made it this far, worth reading about?

The most straightforward answer is that social media are politically important. They are among the most influential informational intermediaries we have. To the extent that social media mediate people - to the extent they pave the routes of passage through which we must travel to come to know things, as well as lists of destinations which may come to be known - changing the composition of social media changes the composition of the (un)common world of which they are themselves a constitutive element. As such, the representations made by and through social media merit the same critical attention long paid to other representations of the world made by newspapers, television news, history books, and so on.

A corollary observation is that the artifacts of social media are no more 'natural' or 'neutral' than the artifacts of other media - nor could they be. It is not only, as Daston and Galison have shown, that the very meaning of 'objectivity' has changed over time. ¹⁵¹ Nor is it only that there is no way to transform the territory into the map without losing something in the process with political effects. More fundamentally, it is that the territory itself effectively does not exist to be mapped, but is in fact constituted by its mapping. When James Surowiecki argues that

¹⁵¹ Daston & Galison, Objectivity (Zone Books, 2010).

for "Google searches, there is a definitive answer, which at some point is settled once and for all...whether it found the right page or not," he mistakes, to paraphrase the legal realists, the reason for the result. 152 Search is as indeterminate as law: the 'right page' is not that which *preexists* the search, to be uncovered by Google, but that which is *produced by* the search, through sociotechnical alliances assembled precisely to make the proposition of 'rightness' seem more or less persuasive. 153

Social media cannot be 'natural', yet we desperately want them to be, to the point of creating truly bizarre ontological categories. Compare, for example, Google's fascinating prohibition of 'unnatural links.' 154 What makes authoring a hyperlink - which exists only ever in an electronic world as produced by humans or their delegates - more or less 'natural'? A configuration of chromosomes? A state of mind? A mode of creation? Or consider The Atlantic's revelation that, in Facebook's dispute resolution process, human moderators "optimize for half a second" of time before deciding whether to retain or remove the flagged content based on a complex set of fixed rules, an algorithm inscribed on paper rather than manifest in code. 155 From the perspective of biology, Facebook's moderators are unquestionably human, yet from the perspective of the dispute resolution process, they are effectively a computer, one which recovers the original definition as the job description of one who computes. 156

¹⁵² Surowiecki, Wisdom of Crowds, 236.

¹⁵³ On the indeterminacy of search, see James Grimmelmann, "The Google Dilemma." New York Law School Law Review (2009): 939, http://works.bepress.com/james_grimmelmann/19/.

^{154 &}quot;Link Schemes", Webmaster Tools Help, accessed May 24, 2013, http://support.google.com/webmasters/bin/ answer.py?hl=en&answer=66356/.

¹⁵⁵ Emily Bazelon, "How to Stop the Bullies," The Atlanic, February 20, 2013, http://www.theatlantic.com/ magazine/archive/2013/03/how-to-stop-bullies/309217/.

¹⁵⁶ See, e.g., "Human computer," Wikipe∂ia: The Free Encyclope∂ia, accessed May 24, 2013, http://en.wikipedia.org/ wiki/Human computer/.

posts of the Patriots, humans and algorithms are often ontologically indistinguishable, oscillating across the nature/culture boundary depending on whether they are behaving as expected at any given time. When mutuals or algorithms 'worked,' they seemed neutral, natural tools; when they 'resisted,' they were instead opened to find the people and politics packed inside. The same is true of their opponents, like Olson, who first began to suspect the existence of an organization like the Patriots when Digg did not behave as he expected. Oddly, actual people seem to be invisible in social media - until things go poorly. It is only when the systems do not behave as expected that the presence of people becomes apparent as the *source* of the biases, inadequacies, and errors. Thus many of these platforms forbid 'manipulating,' 'altering,' or doing 'unnatural' things, which necessarily imagines some 'unmanipulated,' 'unalterated,' 'natural' paradise lost. Perhaps it is my childhood talking, but there's something strangely Catholic about this: as if when human motivations, behaviors, or incentives are recognized in social media, the first instinct is to read them as contaminant; as sin.

It is out of this gap between the designer and the user, between the author and the authorized, that the very possibility of user-generated censorship emerges, like a plant growing from cracks in concrete. It is only because Digg was imagined to produce some 'unaltered' representation of the world that the activities of the Patriots could cause such concern. It is only because Google imagines a certain kind of links as 'natural' that other kinds of links can become unnatural. When I began discussing J30Strike with a former Facebook engineer she interrupted to exclaim "ah, you're talking about people misusing the spam button" only because she could envision a different use which is not misuse. When I asked a respected Internet scholar about my case studies he offhandedly characterized them as "exploitations" of social media because "everyone knows they aren't supposed to behave like that." The central

conflict of the Digg Patriots is suddenly shown to not be between liberals and conservatives at all, but between the expectations of the designers of platforms and the acts of their resistive users, revealing the actual hierarchies animating 'democratized' media.¹⁵⁷

User-generated censorship is not, as it may initially appear, a simple story of bad humans and algorithmic levers, but instead a complex narrative which interweaves the agency and expectations of many ontologically uncertain actors. It is best understood not as a standalone practice but as one which <code>coevolved</code> interdependently with a lush material-semiotic ecology. User-generated censorship is not only relevant politically, but productive intellectually, because the process of investigating its emergence leads one to the unexpected conditions which made its emergence possible. It thus transforms from a subject of inquiry to a <code>vebicle</code> of inquiry, facilitating access to certain questions which it makes more visible and interesting to ask, questions which pertain not only to the continued study of user-generated censorship, but more generally to the algorithmic turn. ¹⁵⁹

One set of questions are *ethnographic*. For user-generated censorship, as for other algorithmic phenomena, it may be asked: who are the actors involved? What are their categories and concepts, their epistemologies and ontologies? How may their associations be traced? Such questions are best answered by appealing to the actors themselves. These investigations may proceed through traditional ethnography, such as the interviews Malte Ziewitz has conducted of search engine optimization engineers, or those Nick Seaver is

¹⁵⁷ This, I think, is the core insights of Evgeny Morozov's critique of the Internet as "The Internet." To the extent that we see "The Internet" as an assembled object made of unspoken expectations what it "ought" to be, it inhibits us from asking certain questions from perspectives which do not share those assumptions. Morozov, *To Save Everything Click Here.*

¹⁵⁸ For an excellent history of a practice coevolving in a sociotechnical ecology, see generally Brunton, *Spam*; see also Stuart Geiger, "The Lives of Bots," in *Wikipedia: A Critical Point of View*, ed. Lovink & Tkacz (Amsterdam: Institute of Network Cultures, 2011), http://www.stuartgeiger.com/lives-of-bots-wikipedia-cpov.pdf/.

159 For one definition of the algorithmic turn, see William Uricchio, "The algorithmic turn: Photosynth, augmented reality and the changing implications of the image." *Visual Studies* 26, no. 1 (2011): 25-35.

conducting of music recommendation algorithm developers.¹⁶⁰ Or, they may employ more radical methods, such as Stuart Geiger's technique of "trace ethnography" which enables him to decode large-scale quantitative documentary data into nuanced qualitative accounts of the human and nonhumans who animate Wikipedia, or Taina Bucher's careful excavation of the concepts and categories embedded in the algorithms of programmed publics.¹⁶¹

Ethnography is a powerful method for eliciting and describing actors, their categories, and their associations. Yet it can also be limited, for a faithful ethnography, informed by its subjects, is often blind in the same ways they are. This is especially true for the accounts of actor-network theory. Latour cheerfully characterizes ANT as "myopic" precisely because of its shortsighted perspective, which then gives rise to the problem of "plasma":

namely, that which is not yet formatted, not yet measured, not yet socialized, not yet engaged in metrological chains, and not yet covered, surveyed, mobilized, or subjectified. How big is it? Take a map of London and imagine that the social world [traced] so far occupies no more room than a subway. The plasma would be the rest of London, all its buildings, inhabitants, climates, plants, cats, palaces, horse guards...If knowledge of the social is limited to the termite galleries in which we have been traveling, what do we know about what is outside? Not much. 162

The problem of plasma is fundamentally this: when you follow the actors, trace their associations, and elicit their categories, you are left with a highly-descriptive but narrow version of the subject of study. We know something about the Digg Patriots from their unusual qualitative corpus. But what of the rest of Digg? What of the other users and their artifacts?

¹⁶⁰ See Malte Ziewitz, "Evaluation as Governance: The Practical Politics of Reviewing, Rating and Ranking on the Web," http://ziewitz.org/projects/evaluation-as-governance.html; Nick Seaver, "Knowing Algorithms", http://web.mit.edu/comm-forum/mit8/subs/abstracts.html#seaver/.

¹⁶¹ For an introduction to trace ethnography, see Geiger & Ribes, "Trace Ethnography: Following Coordination through Documentary Practices" in *Proceedings of the 44th Annual Hawaii International Conference on System Sciences (HICSS)*. http://dx.doi.org/10.1109/HICSS.2011.455; Taina Bucher, "The friendship assemblage: Investigating programmed sociality on Facebook", *Television e³ New Media* (2012), http://dx.doi.org/10.1177/1527476412452800/. http://dx.doi.org/10.1177/1527476412452800/. http://dx.doi.org/10.1177/1527476412452800/. https://dx.doi.org/10.1177/1527476412452800/. https://dx.doi.org/10.1177/1527476412452800/.

What of the 70 million people who monthly visit reddit? Or the billions of human and nonhumans actors who assemble together Google's search results? We cannot trace all their associations, and even if we could, we would just be tangling ourselves in an ever more complex web of threads without any ability to characterize what is being woven.

Ethnography may thus be complemented by *archaeology*: the process of *comparing* the artifacts of social media. Instead of tracing the associations of the actors who assemble an artifact, this approach holds the artifact thus assembled against another, revealing the differences between them. These comparisons do not themselves 'say anything,' but the *process* of making visible these differences opens pathways for inquiry about why and how they are different, for what reasons and with what results.

This approach is particularly useful for the study of social media. If, as I have argued, the interlocking levers of social media machines often produce panoramic representations of the world, these deceptive projections must be $ma\partial e$ to admit their incompleteness with the aid of diagnostic instruments. For example, my colleague Nathan Matias at the MIT Center for Civic Media has helped develop the OpenGenderTracking toolkit, which he has used to reveal some startling differences between the gender representation of authors in U.K. newspapers. Nate is now building an application called FollowBias which visualizes the gender distribution of one's Twitter feed, thus foregrounding a factor of its composition which would otherwise easily sink to the background.

If the methods of ethnography provide tools which help investigators trace the assembly

¹⁶³ Matias & Evans, "Women's representation in media: readers preferences for online news revealed", *The Guar∂ian: Datablog*, October 23, 2012, http://www.guardian.co.uk/news/datablog/2012/oct/23/women-media-representation-online-news. The OpenGenderTracking toolkit is available at http://opengendertracking.org/blog/2013/01/08/Tracking-Gender-In-Online-News/.

¹⁶⁴ FollowBias is presently available for installation at http://followbias.com/.

of artifacts, these archaeological instruments, like magnifying glasses or slides, help them notice differences between artifacts already assembled, which provides a path forward not only for scholarly inquiry but also for pragmatic intervention. It is only once someone notices that their Twitter feed is comparatively male, or their subreddit comparatively liberal, that they can decide what they want to do about it. The most productive path forward is to deploy these complementary approaches in complementary fashion, for the relevant distinction is not between qualitative and quantitative methods, but rather between tracing the assembly of an artifact and comparing artifacts once assembled. By these means we may come to see the maps of social media for what they are: incomplete and unnatural in any given configuration, yet indispensable in function for navigating the unfathomable largeness of the networked world.

APPENDIX

A.1: The Digg Patriots Data: Origins, Controversies, Considerations

I was first introduced to the Digg Patriots by Drew Harry, who pointed me to OleOleOlson's 2010 *Alternet* article exposing their existence. Additional research led me to an article by Olson published in the *NewsJunkiePost* a few weeks after the original report. In this article, Olson revealed that the source material for his stories had come from an archive of the Digg Patriots' Yahoo! Group listsery. He wrote:

Our investigation team decided early on that we should not release the full archive on Wikileaks due to the presence of personal information on DP members, and they have manipulated this decision to attempt to claim that this is manufactured. The Digg Patriots have been asked numerous times on public forums to agree to sign a release of all mass communications archived from the Yahoo group if they would like to

¹⁶⁶ Olson, "Digg Patriots Censorship Part 2: The Evidence", NewsJunkiePost, October 15, 2010, http://newsjunkiepost.com/2010/10/15/digg-patriots-censorship-part-2-the-evidence/.

¹⁶⁵ Olson, "Massive Censorship of Digg Uncovered."

our investigation team to take a much longer approach of redacting personal information manually. That archive is now available at NoTruePatriot.org.

Though there were, by Olson's count, between 30,000-40,000 messages exchanged between the Patriots, NoTruePatriot.org contained around 13,000 posts in HTML form, which Olson attributed to an aggressive redaction program. I was able to access NoTruePatriot.org from summer 2011 through February 2012. By April 2012, however, the site had been replaced by a generic landing page for GoDaddy.com, presumably the domain's registrar. I contacted Olson and another member of his investigation team, but before they responded to me, the site was restored. I used a free Firefox extension called DownThemAll to download all of the files for local storage in case the archive disappeared again. Sure enough, within a few months it was gone, apparently purchased by domain squatters. To the best of my knowledge there is no copy of the NoTruePatriot archive now available publicly through the web.

I decided to parse the messages in the HTML files into plain text to assist in my qualitative analysis. Beth Hadley '15 helped me write a Python program using the beautifulSoup library which pulled some important information (date, time, subject, and body) out of the posts and wrote them to text files. The program also produced a spreadsheet which (among other things) counted links to Digg.com to help me quantify their contents. This process yielded 12,742 posts. I imported the text files, along with the original HTML files, into a DEVONthink database, and then read every post, tagging and highlighting them as I went. After several days I had tagged several hundred posts with dozens of categories, and I excerpted from these posts in Chapter II. I have by no means told "the whole story" of the Patriots. There were many fascinating characters, dynamics, subplots, and so forth which I

abridged. Instead, I have tried to tell a faithfully *representative* story of the Patriots for the purposes of understanding user-generated censorship as a mode of action.

I have struggled with the question of whether to publish my copy of the NoTruePatriot archive along with my thesis. On the one hand, it is a vibrant, interesting, rich data set which is no longer publicly available. Publishing it for general access would both enhance my own work (by making its source material available alongside it) and also potentially provide opportunities for future scholarship. On the other hand, the Patriots' corpus contains a great deal of personal information, which its members clearly intended to not be available to a general audience. Although Olson's "investigative team" did redact most email addresses and names from the posts, they did not remove all of them, and many of the Patriots can be quickly reidentified through cursory Google searches.

A major complicating factor is the considerable controversy over how Olson's team took possession of the corpus. Olson told me via email that the messages had been leaked by a "disaffected Digg Patriot." He pointed me to a post on NewsJunkiePost written under the name Sam Pennington - according to Olson the investigative leader of the team - which alleged that the messages had been "forwarded" to them by at least two members of the Patriots. 167

Pennington claimed that these members had become disturbed by the online activity of a Patriot called R.J. Carter. Carter, however, responded by arguing that screenshots posted by Pennington showed they had been taken by someone logged in as him, and accused Pennington of hacking his Yahoo account to access the archives. 168 However, after the Digg

¹⁶⁷ Sam Pennington, "The Digg Patriots Investigation: How We Exposed DiggGate", NewsJunkiePost, October 19, 2010, http://newsjunkiepost.com/2010/19/the-digg-patriots-investigation-how-we-exposed-digggate/.

¹⁶⁸ R.J. Carter, "NewsJunkiePost Implicated in Computer Hacking to Breach DiggPatriots Yahoo Group," R.J. Carter's Line in the Sand, December 6, 2010, http://therjcarter.wordpress.com/2010/12/06/newsjunkiepost-implicated-in-computer-hacking-to-breach-diggpatriots-yahoo-group/.

Patriots were exposed, they began using Skype chats to communicate, and some of the logs of these chats were later published in what Carter himself called a definite leak. ¹⁶⁹ Olson, for his part, claimed that he had always believed *Carter* was the mole, and had been accusing Pennington and others of hacking in order to cover his tracks. There is much interesting intrigue but almost no certainty or clarity surrounding the provenance of the corpus.

On several occasions I attempted to contact the Patriots to interview them directly. I managed to identify email addresses and Facebook accounts for several Patriots but most failed to respond to my inquiries. However, my message was forwarded to the current Digg Patriots mailing list and R.J. Carter (intrigue!) emailed me to discuss his thoughts on the Patriots. I asked him how the Patriots would feel about me making their archive public again. He told me that, while he himself did not care since he was proud of their actions, most other members did not want them to be published anew. This was the clearest signal I had yet about how the Patriots felt about the corpus I had come to possess.

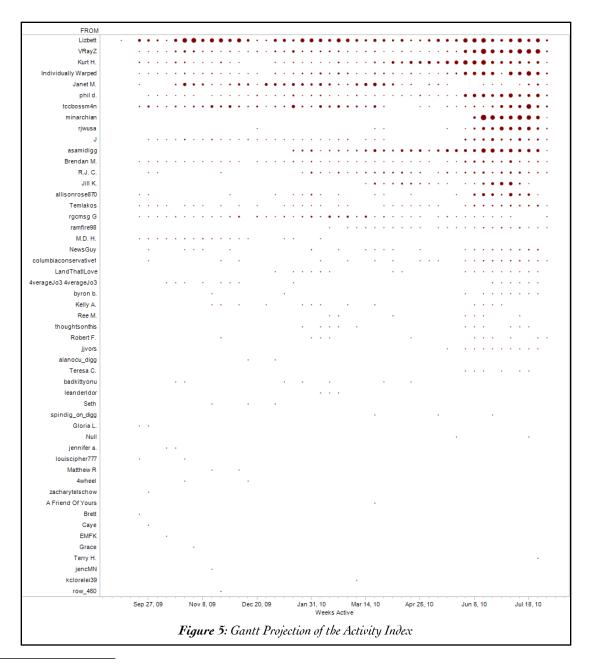
I have tried to balance the academic interest in the Patriots' archive with respect for their privacy as contextual integrity. As a result I have also decided not to make my copy of the Patriots' archive publicly available at this time, because of my ethical discomfort with indiscriminately sharing information which had been intended for a small audience and subsequently published to a general audience without their consent. However, I plan to provide the corpus to the MIT archives to preserve it for future scholarship, and researchers may contact me via email at chris [dot] peterson [at] mit [dot] edu to request a copy.

169 Olson, email to author, February 11, 2013.

¹⁷⁰ See generally Helen Nissenbaum, *Privacy in Context: Technology, Policy, and the Integrity of Social Life* (Stanford Law Books, 2009).

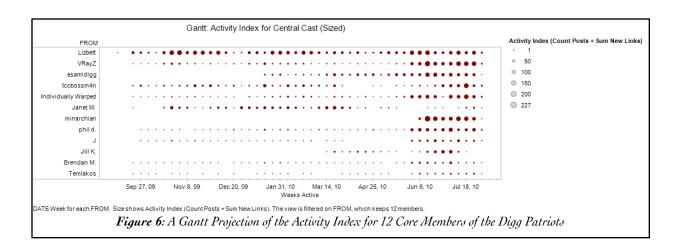
A.2: The Digg Patriots Data: Some Exploratory Visualizations

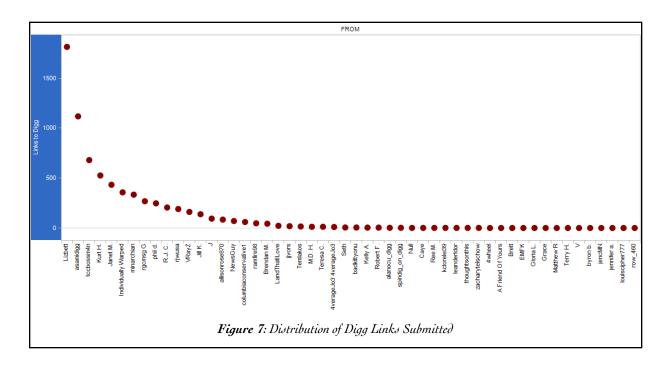
I used the spreadsheet which I generated from the Patriots' corpus to produce some data visualizations with Tableau. I did not include them in my case study chapter because they were not 'findings' I wanted to share, but rather *instruments* which guided my exploration of the corpus, drawing my attention to particular users, patterns of use, and so forth.¹⁷¹

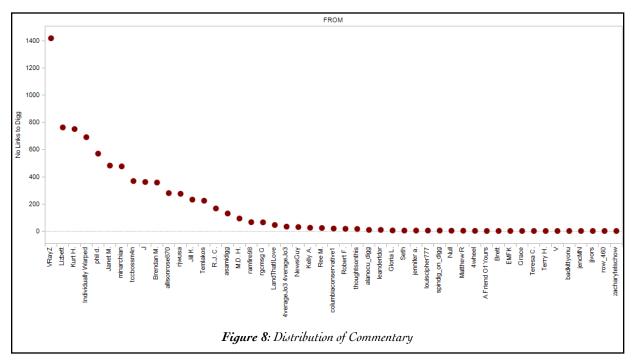


¹⁷¹ For more on visualizations-as--exploration, see generally Schnapp et al, *Digital_Humanities* (MIT Press, 2012).

Figure 5 depicts a Gantt chart of a measure I developed called the "activity index," which is the sum of the count of messages sent by a user and the count of links to Digg submitted by that user. Each dot represents a week during which that user sent a message to the list, the size of the dot scales with the size of that week's activity index, and the users are ranked in order of their activity index over the length of the corpus. This chart illustrated different patterns of use. Some I expected: for example, that Lizbett was the most active, while many members barely registered a trace. Some surprised me: minarchian, a libertarian activist who joined the Patriots latest among its members, was still so active during his admittedly short tenure that he had one of the highest activity indices overall. Had I been interested in telling the story of the Digg Patriots qua the Digg Patriots, as opposed to qua user-generated censorship, a chart like this would have been invaluable in helping me identify a 'central cast' on whom to focus my narrative attention. I have included below another Gantt chart which narrows its scope to a dozen such members to illustrate the point.

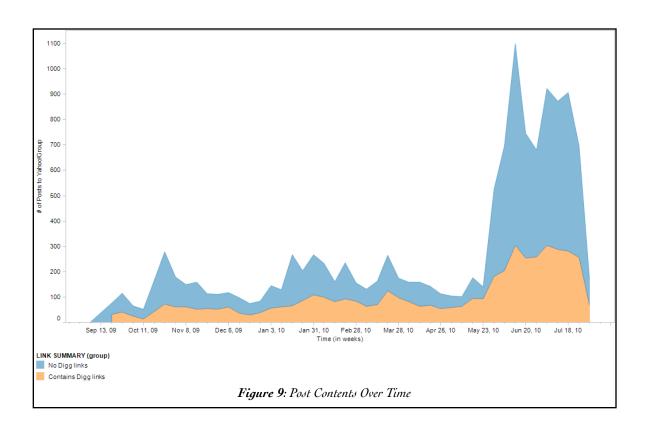


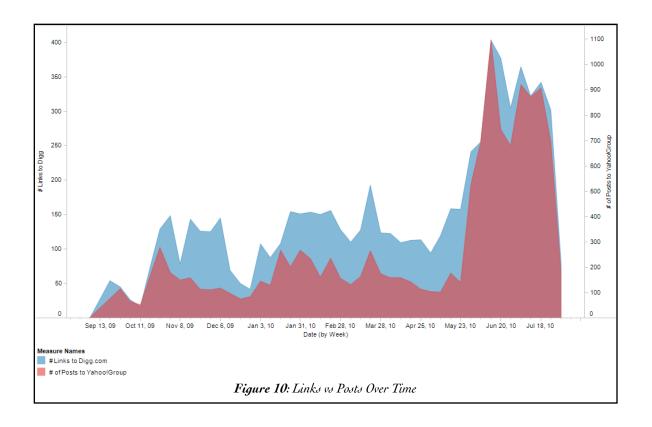




Figures 7 and 8 flip the Gantt projection on its axis and split the activity index into its constitutive elements: posts which contain links to Digg, and posts which contain no links to Digg, which I have called commentary. While the distributions follow the trend of the activity

index, the delineation between links and commentary allowed me to distinguish between types of users. Notice, for example, that Brendan M. sent far fewer messages with links to Digg than he did without. A close inspection of his posts reveals that, rather than initiating a course of action, Brendan preferred to join the fray, and sent lots of gossipy, joking, 'smalltalk' messages back and forth among his friends in the group. A similar pattern can be seen in VRayZ, who, despite being the second most active user overall behind Lizbett, skewed heavily towards commentary, which corroborates his status as a senior 'thought leader' within the Patriots.





Figures 9 and 10 depict the contents of the posts in the corpus over time. In Figure 9, the total height of both the blue and orange bars is equal to the number of posts sent to the group during that week. This chart shows that in most weeks the Patriots made more posts that did *not* contain links to Digg (blue) than did (orange). However, as Figure 10 shows, the *total number* of links per week often exceeded the number of posts sent during that time, because posts which $\partial i\partial$ contain links contained large numbers of them. These charts illustrate two modes of engagement with the listserv: the majority of messages which constituted of commentary, and a minority of messages which were densely packed with links to target for intervention.

That's it. Thanks!

¹⁷² The spike in June and July appears to be an artifact of the redaction process, which was not fully completed for these months according to Olson, rather than an actual increase in activity during that time. This discrepancy itself was revealed in the process of making these visualizations.