DIGITAL DISCLOSURE CHEATS: AN ANTHOLOGY OF CAUTIONARY TALES AND PRO TIPS FOR THE PUBLIC INTEREST ADVOCATE

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Sunlight is "the best of disinfectants," the late Justice Louis Brandeis famously told us.¹ Forty years as a political journalist have made me a believer: with perhaps the proves-the-rule exception of the person currently occupying the White House, all of us tend to behave better when we are observed and *know* we are being observed.²

For years, as it began to move from a novelty to a public utility, there was a widespread hope that the Internet would prove a super nova of sunlight.³ The ability to make official schedules, legislative meetings, and public records available to anyone, anywhere, at the click of a mouse seemed to promise exponential improvements in transparency and public engagement.⁴ Or so the Internet evangelicals fervently believed.

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^{1.} LOUIS D. BRANDEIS, OTHER PEOPLE'S MONEY AND HOW THE BANKERS USE IT 92 (1913).

^{2.} See id. (expounding upon the benefits of publicity to hold Wall Street accountable).

^{3.} See Drug Abuse Info Res., Internet Holds People Accountable, GETEDMEDS (Aug. 8, 2017), https://getedmeds.com/2017/08/08/internet-holds-people-accountable/ (discussing accountability in the age of smartphones); Drew Hendricks, 3 Ways the Internet Has Changed the World – And Created New Opportunities?, SMALL BUS. TRENDS (July 7, 2017), https://smallbiztrends.com/2017/07/impact-the-internet-has-on-society.html (commenting on how the Internet has changed interpersonal communication). See generally The Invention of the Internet, HISTORY, http://www.history.com/topics/inventions/invention-of-the-internet (last visited Nov. 14, 2017) (recounting the growth of the Internet from its birth as a tool of the military to a part of everyday life).

^{4.} See Helen Margetts, *The Internet and Transparency*, 82 POL. Q. 518, 518 (2011) (discussing how the Internet and social media websites help people access government information easily and at no cost); Daniel Schuman & Zach Graves, *To Make Congress More*

But to quote another great American philosopher, "It ain't necessarily so."⁵

If the era of Big Data has proven anything, it is that not all data is equal. Sometimes, it is not even data. Sometimes (in the case of all too many Freedom of Information Act (FOIA) requests) it is reams of printouts masquerading as public information. More recently, the problem has been legitimate facts and figures being presented in a way that renders them utterly useless to the average citizen without an advanced degree in law and/or computer science.⁶

None of which is to say that the digital technology is not an enormously promising addition to democracy's tool kit, or that public disclosure battles are not worth fighting. To be effective, however, advocates for public disclosure need to understand some basics about digital data:

(1) functionality (or lack thereof) follows format;

(2) public does not necessarily mean accessible; and

(3) open data does not necessarily equal data that is socially useful.

Reporters, researchers, transparency advocates, and civic hackers have all repeatedly hit potholes on the information highway. Their experiences have informed the following, which describes some of yawning data chasms to be avoided.

I. ANALOG ANTIQUARIANISM

Since no less an institution than the U.S. Congress falls victim to this, one has to assume that the syndrome is even more

Accountable, Make It More Open, THE HILL (Apr. 3, 2014, 10:00 AM EDT), http://thehill.com/blogs/congress-blog/technology/

²⁰²³⁵⁸⁻to-make-congress-more-accountable-make-it-more-open (imagining future enhancements to government websites that could increase transparency and help citizens be more involved in the legislative process).

^{5.} George Gershwin, *It Ain't Necessarily So*, ST LYRICS, https://www.stlyrics.com/ songs/g/georgegershwin8836/itaintnecessarilyso299755.html (last visited Nov. 14, 2017); Visilab, *It Ain't Necessarily So from Porgy and Bess* (Apr. 30, 2009), https://www.youtube.com/watch?v=kP5O_NUhrK0.

^{6.} See, e.g., J. Frazee, M. Finley & JJ Rohack, *mHealth and Unregulated Data: Is This Farewell to Patient Privacy?*, 13 IND. HEALTH L. REV. 384, 394 (2016) (noting that complex data, like that in the healthcare field, can be difficult for the average person to understand); David J. Walton, *Why Big Data Is a Big Deal for Lawyers*, INSIDE COUNSEL (Feb. 14, 2014), http://www.insidecounsel.com/2014/02/14/technology-why-big-data-is-a-big-deal-for-lawyers (discussing the general confusion around "big data").

pervasive and pernicious at a state and local level.⁷ In the twentyfirst century, there is no excuse for providing public documents in any format other than the one in which they were created. Today, anything short of e-filing is an obstacle to public access, not to mention an unnecessary expense.⁸

Alas, that message has not yet penetrated the velvet-hung chamber of the U.S. Senate. Perhaps we should expect no less of an institution where brass spittoons continue to be a part of the chamber's decor.⁹ No campaign manager worth his or her salt would be caught dead operating without spreadsheets and cloud accounts.¹⁰ Candidates for the U.S. House have been filing electronically for years.¹¹ Yet the Senate's more leisurely approach to public disclosure hearkens back to the days of typewriters, if not quill pens.¹²

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^{7.} See, e.g., Policy Brief, Campaign Finance Reform, LOCAL PROGRESS, http://localprogress.org/

wp-content/uploads/2013/09/Campaign-Finance-Reform.pdf (last visited Nov. 14, 2017) (discussing local government campaign reform); Inst. Staff, *Scorecard: Essential Disclosure Requirements for Contributions to State Campaigns*, FOLLOWTHEMONEY.ORG (Mar. 15, 2016), https://www.followthemoney.org/research/

institute-reports/scorecard-essential-disclosure-requirements-for-contributions-to-statecampaigns-2016/ (discussing campaign finance at the state level); Ctr. For Responsive Politics, *E-Filing Senate Campaign Reports*, OPENSECRETS.ORG, https://www.opensecrets.org/action/issues/efiling-senate-campaign-finance-reports/ (last visited Nov. 14, 2017) (pointing out that Senate candidates are "the only federal candidate committees not required to file their financial disclosure reports electronically directly with the Federal Election Commission").

^{8.} Tester Introduces Bill to Modernize Senate Campaign Reporting, Save Money, U.S. SENATOR FOR MONT .: JON TESTER (Feb. 26, 2013), https://www.tester.senate.gov/ ?p=press_release&id=2793 (explaining why Senator Tester believes requiring electronic filings is a good idea). Similar bills have appeared in Congress since 2003. See, e.g., Senate Campaign Disclosure Parity Act, S. 1874, 108th Cong. (2003). As of 2017, none have been successful. Filing Fed. ELECTION COMMISSION. Electronic Overview, https://www.fec.gov/help-candidates-and-committees/filing-reports/electronic-filing/ (last visited Nov. 14, 2017) (stating that Senate campaign committees are required to file reports in paper form).

^{9.} Helen Dewar, Will Brass Spittoons Survive Move to Modernize Senate? Bipartisan Task Force Hopes to Make Reform a Reality, WASH. POST (Jan. 15, 1997), https://www.washingtonpost.com/archive/politics/1997/01/15/will-brass-spittoons-survive-move-to-modernize-senate-bipartisan-task-force-hopes-to-make-reform-a-reality/2308c6bd-f2ce-4e1f-99fe-87728a7894c6/?utm_term=.4fba7ce45ee7.

^{10.} Preetam Kaushik, *Technology: The Powerful Political Campaign Manager*, BUS. 2 COMMUNITY (July 31, 2015), http://www.business2community.com/government-politics/ technology-powerful-political-campaign-manager-01289162#WfB7jqrCQIbfYpzj.97.

^{11.} U.S. House Comm'n on Ethics, *Financial Disclosure Forms and Filing*, U.S. HOUSE OF REPRESENTATIVES, https://ethics.house.gov/forms/information-and-forms (last visited Nov. 14, 2017).

^{12.} Thomas E. Mann, *Electronic Filing of Senate Campaign Finance Reports*, BROOKINGS (Mar. 14, 2007), https://www.brookings.edu/testimonies/electronic-filing-of-

Members and would-be members of the institution that styles itself as "the world's greatest deliberative body"¹³ actually *print out* their campaign finance disclosure forms—often thousands of pages in length. They then send them via *postal mail* (with all the attendant security checks and delays required in a post-anthrax age)¹⁴ to the Secretary of the Senate. From there, the documents are *re*processed and sent to the Federal Election Commission (FEC), which arranges for the formerly electronic documents to be keypunched once more into a machine-readable format.¹⁵ The whole arduous process costs the U.S. taxpayers nearly \$700,000 a year, according to the FEC.¹⁶

Other documents that are public mysteriously remain missing from the Internet: the forms that members of the House and Senate are required to file with their respective chambers within three days of opening negotiations for private sector employment.¹⁷ These require a trip to Capitol Hill to view.¹⁸

Bottom line: for information that purports to be public, e-filing is a must. It is not, however, enough to guarantee transparency. That is because, in the digital world, function follows format . . .

senate-campaign-finance-reports/; Ctr. for Responsive Politics, *E-Filing Senate Campaign Reports*, OPENSECRETS.ORG https://www.opensecrets.org/action/issues/efiling-senate-campaign-finance-reports/ (last visited Nov. 14, 2017).

^{13.} Sen. Orrin Hatch & Sen. Mark Udall, U.S. Senator Orrin Hatch (R-UT) on Restoring the United States Senate to "The World's Greatest Deliberative Body" 00:04:07–00:04:09 (C-SPAN video July 22, 2014), https://www.c-span.org/video/?c4504906/us-senator-orrin-hatch-restoring-united-states-senate-worlds-greatest-deliberative-body.

^{14.} Ed O'Keefe, *Ten Years After Anthrax, How Safe is Your Mail?*, WASH. POST (Nov. 1, 2011), https://www.washingtonpost.com/politics/ten-years-after-anthrax-how-safe-is-your-mail/2011/10/12/gIQAR8BadM_story.html?utm_term=.7132d9053b28.

^{15.} Mann, *supra* note 12.

^{16.} Fiscal Year 2017 Congressional Budget Justification, FED. ELECTION COMMISSION 17 (Feb. 9, 2016), https://www.fec.gov/resources/about-fec/reports/budget/fy2017/fy_2017_Congressional_budget.pdf.

^{17.} U.S. House Comm'n on Ethics, *Memorandum to All House Members, Officers, and Employees*, U.S. HOUSE OF REPRESENTATIVES 4 (Dec. 22, 2016), https://ethics.house.gov/sites/ethics.house.gov/files/Members%20and%20Officers%20Post%20Employment.pdf.

^{18.} See U.S. Senate: Select Comm. on Ethics, New Ethics Rules: Job Negotiations, Post-Employment and Influencing Hiring, WWW.ETHICS.SENATE.GOV, https://www.ethics.senate.gov/downloads/pdffiles/new%20ethics%20rules_job%20negotiati ons.pdf? (last visited Nov. 14, 2017) (stating that the forms can be found at the Office of Public Records).

II. THE CURSE OF THE PDFS

There was a time that Portable Document Format (PDF) made sense.¹⁹ That time, however, was before many of the young adults now moving into the workforce were born.²⁰ Back in the early 1990s, when incompatible software, hardware, and operating systems made it difficult to share information among computer users, the PDF was a convenient and welcome solution.²¹ In an era of cloud computing, not so much.²²

Because they are essentially *images* of original documents, PDFs are, for the most part, not machine-readable.²³ That makes it difficult, if not impossible, to search them or sort the information they contain.²⁴ Public information that is published in PDF format is public only in the sense that a member of the public can read it. Any more sophisticated analysis is forbiddingly daunting—unless the would-be analyst happens to work for an organization with enough money to transform the material into a more usable format.

A prime example of the loss to the public: the underutilization of the political advertising data maintained by the Federal Communications Commission (FCC).²⁵

^{19.} *The History of PDF*, PREPRESSURE.COM, https://www.prepressure.com/pdf/basics/history/2 (last visited Nov. 14, 2017).

^{20.} See id. (referencing the PDF's first use in the mid-1990s).

^{21.} Fredric Paul, *Mac and Windows Compatibility Through the Decades*, NETWORK WORLD (Jan. 21, 2014, 6:00 AM PT), https://www.networkworld.com/

article/2173526/computers/mac-and-windows-compatibility-through-the-decades.html; see The History of PDF, supra note 19 (noting that the PDF changed information management).

^{22.} See Bisk, 3 Ways Cloud Computing Affects Business, VILL. U., https://www.villanovau.com/resources/bi/3-ways-cloud-computing-affectsbusiness/#.WbMxrsiGPIU (last visited Nov. 14, 2017) (discussing the benefits of cloud computing and how it allowed team members to easily collaborate worldwide).

^{23.} PDF. Three Letters That Changed the World, ADOBE, https://acrobat.adobe.com/us/ en/why-adobe/about-adobe-pdf.html?promoid=CW7625ZK&mv=other (last visited Nov. 14, 2017); Stanford Soc. Sci. Data & Software, Turning PDF Documents into Analyzable Data, STANFORD UNIV., https://ssds.stanford.edu/turning-pdf-documents-analyzable-data (last visited Nov. 14, 2017); see Paul Blumenthal, Political Advertising Is About to Become a Lot 29, More Transparent, HUFFINGTON Post (Jan. 2016, 2:44 \mathbf{PM} ET). http://www.huffingtonpost.com/entry/political-ad-disclosure-

 $transparency_us_56 abb3b7 e4b00b033 aaef303 \ (suggesting that political ad files be machine-readable).$

^{24.} See Turning PDF Documents into Analyzable Data, supra note 23 (pointing out that even though political advertisements are submitted in PDF format to the FCC, they do not have to be in a standardized or machine-readable format, making them difficult to analyze).

^{25.} See Blumenthal, supra note 23 (discussing the difficulties in analyzing these advertisements when they are not in a machine-readable format).

The FCC requires any television or radio station running political advertising to make copies of the contracts and associated documentation public.²⁶ This treasure trove of data²⁷ is particularly vital in an era of dark money.²⁸

This information—which includes the names of advertising organizations, amounts of money spent, and schedules of advertisements—has gradually been migrating from file cabinets to the Internet since 2012.²⁹ A pilot program during that presidential election year required broadcast stations in the nation's fifty largest TV markets to publicly post the advertising files. It has now expanded to include all terrestrial and non-terrestrial TV and radio stations nationwide.³⁰ There is no question of the advertising files' public utility: the information in them has been used to identify the interests behind dark money spending and—in one case in which the Author was involved—to show the stark contrast between the amount of money local television stations make from political ads and the amount they spend on political coverage.³¹

Few such studies have been undertaken however.³² The reason is that they are so labor intensive. While it is hard to imagine that the data in the files—essentially, billing information—originated

edocs_public/attachmatch/DOC-343246A1.pdf (last visited Nov. 14, 2017).

30. In the Matter of Revisions to Public Inspection File Requirements – Broadcaster Correspondence File and Cable Principal Headend Location, FED. COMM. COMMISSION (Jan. 31, 2017), https://apps.fcc.gov/edocs_public/attachmatch/FCC-17-3A1.pdf.

^{26.} See Public Inspection Files, FED. COMM. COMMISSION, https://publicfiles.fcc.gov/ (last visited Nov. 14, 2017) (explaining that stations are required to keep a "public inspection file" which includes data about political programming).

^{27.} Blumenthal, *supra* note 23 (mentioning that nearly every mass communications operator must keep and maintain political ad files).

^{28.} Id.; Agustino Fontevecchia, The Koch Brothers Paradox: Dark Money, SuperPACs, and the Forbes 400, FORBES (Oct. 2, 2015, 9:01 AM), https://www.forbes.com/sites/afontevecchia/2015/10/02/the-koch-brothers-paradox-dark-money-superpacs-and-the-forbes-400/#738dd8a53406.

^{29.} About Public Inspection Files, FED. COMM. COMMISSION, https://publicfiles.fcc.gov/about-station-profiles/ (last visited Nov. 14, 2017); Blumenthal, supra note 23; Office of Media Relations, FCC Eliminates Two Public Inspection File Requirements: Action Reduces Regulatory Burdens on Commercial Broadcasters and Cable Operators, FED. COMM. COMMISSION, https://apps.fcc.gov/

^{31.} Jenn Topper, New Study Found More Political Ads than Coverage Leading Up to 2014 Elections, SUNLIGHT FOUND. (Mar. 19, 2015, 12:01 PM), https://sunlightfoundation.com/2015/03/19/new-study-found-more-political-ads-than-coverage-leading-up-to-2014-elections/.

^{32.} See generally Sheila Krumholz, Dark Money and Potential Foreign Influence, OPENSECRETS.ORG (July 19, 2017), https://www.opensecrets.org/news/2017/07/dark-money-potential-foreign-influence/ (noting how difficult it can be to determine the identity of political advertisers).

in anything but a spreadsheet, that data is presented in PDF format.³³ As a result, there is no easy way to search across multiple stations to find out how many ads a certain group bought in how many markets; there is no way to tote up amounts spent with any kind of reliable accuracy, even in individual television markets.³⁴ In other words, tracking any national trends is impossible without a small army of data entry clerks. It is a classic example of "public disclosure" that fails to live up to its name because the disclosing entity's choice of technology makes the data so difficult to access and analyze.

III. THE UNHELPFUL INTERFACE

Plenty of data is available—if only you ask the right question. The problem: the "right" question may not be the question you want to have answered. Many state campaign finance databases will allow members of the public to search their records by names of candidates and donors.³⁵ But casting a different kind of net—for, say, contributions above a certain amount, or given between certain dates, or by people who work for certain companies becomes more problematic.³⁶

Another example of data that remains largely unusable because of poor technology: the Foreign Agent Registration Act (FARA) database.³⁷ FARA was recently made famous when President Donald Trump's former campaign manager, Paul

^{33.} See, e.g., Bright House Networks, LLC Political Files, FED. COMM. COMMISSION, https://publicfiles.fcc.gov/cable-system/003624-bright-house-networks,-llc/political-

files/2017/local/rick-baker-for-mayor/7a7095f5-a18e-84fa-8261-5b217527e786/ (last visited Nov. 14, 2017) (providing an example of data presented in PDF format).

^{34.} See generally Public Inspection Files, supra note 26 (enabling the public to search public inspections files of entities).

^{35.} See, e.g., N.J. Election Law Enforcement Comm'n, Search for Contribution by Contributors, STATE OF NJ, http://www.elec.state.nj.us/

ELECReport/SearchContributorsAdvanced.aspx (last visited Nov. 14, 2017) (New Jersey's database); Mass. Office of Campaign and Political Fin., *Search Contributions and Expenditures*, OCPF, http://www.ocpf.us/Reports/SearchItems (last visited Nov. 14 2017) (Massachusetts' database); Fla. Div. of Elections, *Campaign Finance Database*, FLA. DEP'T OF STATE, http://dos.elections.myflorida.com/campaign-finance/contributions/ (last visited Nov. 14, 2017) (Florida's database).

^{36.} See, e.g., Search for Contribution by Contributors, supra note 35 (New Jersey's database).

^{37.} U.S. Dep't of Justice, FARA Document Search, FARA.GOV, https://www.fara.gov/ (last visited Nov. 14, 2017).

Manafort, was prosecuted for violating the Act.³⁸ FARA contains minutely detailed records of interactions between agents of foreign interests and the representatives of federal, state, and local government, as well as the members of the media.³⁹ Maintained by the U.S. Department of Justice, it offers an advanced search option and even downloadable data!⁴⁰ Figuring out what data to download and how to do it, however, requires the kind of expertise that is not readily available to users of the FARA site and steps too numerous to document here.⁴¹ And while it is possible to download data into a spreadsheet, doing so costs you the links to the original documents, resulting in a cumbersome and time-consuming process for researchers.

Another disappointment: almost all of the data available through FARA is in PDFs; therefore, neither searchable nor sortable. Potentially interesting questions—such as which members of Congress or the Executive have had the most contacts with foreign agents—cannot be readily answered through the FARA website.

Another version of the unhelpful interface results from intent rather than incompetence: some government agencies exile interesting (or potentially embarrassing) data to cyber-Siberia.⁴² One now infamous example is what the Environmental Protection Agency (EPA), under President Trump, has done with climate

^{38.} E.g., Tessa Berenson, Paul Manafort's Indictment Could Have Some Washington Lobbyists on Edge, TIME (Nov. 1, 2017), http://time.com/5005142/paul-manafort-indictment-foreign-agents-registration-act-fara/.

^{39.} U.S. Dep't of Justice, FARA Frequently Asked Questions, FARA.GOV, https://www.fara.gov/fara-faq.html#2 (last visited Nov. 14, 2017).

^{40.} U.S. Dep't of Justice, *Foreign Agents Registration Act*, FARA.GOV, https://www.fara.gov/ (last visited Nov. 14, 2017).

^{41.} See Daniel Schuman, Tracking Lobbying by Foreign Governments, MEDIUM.COM (Aug. 22, 2016), https://medium.com/demand-progress/

tracking-lobbying-by-foreign-governments-a8d870a12c95 (outlining the problems with the FARA database). A training document that the Author drafted on this subject ran thirteen pages. See Kathy Kiely, Follow the Money: US Footprint of Freedom of the Press Scofflaws, http://docs.google.com/document/d/18RUWpg1mEEv3sQele9xJSAH3E3PJID2CTyRMuZO KZVE/edit?usp=sharing_eil&invite=CJXupYoB&ts=5a060358 (last visited Nov. 14, 2017) (explaining how to complete a search for registered foreign lobbyists through the FARA website).

^{42.} See generally David Farenthold, *Breaking Points 2014*, WASH. POST (Dec. 15, 2014), http://www.washingtonpost.com/wp-srv/special/national/breaking-points/#reports (noting that Congress compelled some agencies to furnish certain reports for policing purposes).

change information.⁴³ That information is still available, but only if you know where to look.⁴⁴

An only slightly less blatant example of inconvenient truths obscured comes from Good Jobs First, a non-profit that tracks how much taxpayer money states and municipalities give away, in the form of tax abatements and other financial incentives, to attract large employers.⁴⁵ Rather than making this information readily available to the public, some of the governmental entities "require users to search for keywords in webpage search engines," Good Jobs First reports, "or bury documents in difficult-to-find areas of their websites."⁴⁶

IV. OBFUSCATION BY INFORMATION

This reporter has worked in all too many newsrooms where empty corners were stuffed with cartons filled with barely-lookedat papers. The cartons contained the responses to FOIA requests that were obstructed, delayed, and then finally answered with a dump of paper so massive it would take several lifetimes to separate the wheat from the chaff.

The digital age version of this is what I would call data "shovel-ware": agencies that seem to scan every document in their file cabinets, throw them online, and call it open government.⁴⁷ Former President Barack Obama's much ballyhooed Data.gov

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^{43.} See U.S. Envtl. Prot. Agency, *EPA Kicks Off Website Updates*, EPA (Apr. 28, 2017), https://www.epa.gov/newsreleases/epa-kicks-website-updates (explaining the EPA website transition under the Trump administration).

^{44.} Compare U.S. Envtl. Prot. Agency, Searches Related to Climate Change, EPA (Nov. 13, 2017), https://search.epa.gov/epasearch/

epasearch?querytext=climate+change&site=archive&typeofsearch=epa&result_template= archive.ftl&inmeta=gsaentity_collection%3DEPA+Archive (providing an archived search of the term "climate change" yielding over 13,000 results), *with* U.S. Envtl. Prot. Agency, *Searches Related to Climate Change*, EPA, https://search.epa.gov/epasearch/

 $epasearch?querytext=climate\%20 change\&collection=epa_default&result_template=2col.ftl (last visited Dec. 12, 2017) (providing the current search results for the term "climate change" yielding approximately 5,000 results).$

^{45.} See About Us, GOOD JOBS FIRST, http://www.goodjobsfirst.org/about-us (last visited Nov. 14, 2017) (promoting accountability regarding economic development through mandatory disclosures of revenue lost by state and local entities as a result of corporate tax breaks).

^{46.} Leigh McIlvaine, Philip Mattera & Greg LeRoy, *Show Us the Local Subsidies: Cities and Counties Disclosing Economic Development Subsidies*, GOOD JOBS FIRST 9 (May 2013), http://www.goodjobsfirst.org/sites/default/files/docs/pdf/showusthelocalsubsidies.pdf.

^{47.} Patrick Wintour, Government Criticised for Dumping Raw Data to Fulfil Transparency Promises, THE GUARDIAN (Aug. 1, 2012), https://www.theguardian.com/ politics/2012/aug/01/government-criticised-data-transparency-promises.

"database"⁴⁸—junk-drawer dump might be the better description is a prime example.⁴⁹ Obama administration officials regularly touted it as an indicator of their commitment to transparency.⁵⁰ Yet, it rarely—if ever—figured into any major news stories. That is because it contained a lot of data, but very little useful information.

V. WHAT TO DO?

Trying to sift, sort, and organize the massive quantities of information that is available or could be available online is a daunting task even for so-called "digital natives."⁵¹ Having been born after the advent of the Internet might make you a savvier *consumer* of data, but everyone needs lessons in how to be a more effective *producer*. This Part provides some pointers.

A. Acquire Minimal Computer Literacy

Don't worry lawyers, journalists, and other fellow citizens of the Kingdom of Words: it does not require becoming fluent in computer code. As with any "foreign" language, knowing a little

^{48.} The Home of the U.S. Government's Open Data, DATA.GOV, https://www.data.gov/ (last visited Nov. 14, 2017).

^{49.} See, e.g., Saul Hansell, Data.gov: Unlocking the Federal Filing Cabinets, BITS (May 22, 2009, 6:38 PM), https://bits.blogs.nytimes.com/2009/05/22/datagov-unlocking-the-federal-filing-cabinets/ (referencing criticism that not enough data sets were provided at launch); Alexis Madrigal, Data.gov Launches to Mixed Reviews, WIRED (May 21, 2009, 6:05 PM), https://www.wired.com/2009/05/datagov-launches-to-mixed-reviews/ (criticizing the "accessibility and usability of government data" provided on Data.gov). See generally Rob Kitchin, Four Critiques of Open Data Initiatives, LONDON SCH. OF ECON. & POL. SCI. (Nov. 27, 2013), http://blogs.lse.ac.uk/impactofsocialsciences/

^{2013/11/27/}four-critiques-of-open-data-initiatives/ (criticizing the difficulty of getting meaningful information out of "data dump" websites, as well as the character of the data available).

^{50.} See, e.g., The White House: President Barack Obama, Data.gov, OBAMAWHITEHOUSE.ARCHIVES.GOV, https://obamawhitehouse.archives.gov/

²¹stcenturygov/tools/data-gov (last visited Nov. 14, 2017) (discussing Data.gov as "a gateway to hundreds of thousands of agency data sets, sharing this national assert with everyone").

^{51.} See John B. Horrigan & Lee Rainie, Americans' Views on Open Government Data, PEW RES. CTR. (Apr. 21, 2015), http://www.pewinternet.org/2015/04/21/open-governmentdata/ (discussing the perceived effectiveness of government in sharing data it collects with the public: "[j]ust [five percent] say the federal government does this very effectively"); see also Oliver Joy, What Does It Mean to Be a Digital Native?, CNN (Dec. 8, 2012, 6:47 AM ET), http://www.cnn.com/2012/12/04/

business/digital-native-prensky/index.html (explaining that "digital natives" are the generations who have grown up in the culture of the present technology).

can go a long way. Make friends with data and make friends with people who know data better than you do. It will expand not only your mind, but the circle of experts you can call on.

B. Demand Identifiers: The More Specific, the Better

Veterans of campaign finance research know the shell game well:

(1) Real estate developers spawning dozens of alphabet soup LLCs to hide contributions that, when aggregated, amount to the buying of a candidate—if not a violation of law;⁵²

(2) Corporate subsidiaries with names so unlike the parent company's so as to effectively anonymize dealings;⁵³ and

(3) Wealthy individuals with multiple homes who vary their addresses when they disclose contributions, making it harder to ascertain whether they are all coming from the same person.⁵⁴

On the federal level, the Center for Responsive Politics has done yeoman work to unmask such obfuscators.⁵⁵ But that does not help citizens trying to trace influence on their local zoning boards or city councils.⁵⁶ Moreover, leaving the disclosure of public information susceptible to the whims of a non-profit's funders is not good public policy. Taxpayers deserve better.

This is an era in which all of us have credit cards, driver's licenses, and passport numbers.⁵⁷ For individuals and entities that

see also Ctr. for Respons https://www.opensecrets.org/

55. Ctr. for Responsive Politics, *About*, OPENSECRETS.ORG, https://www.opensecrets.org/ (last visited Nov. 14, 2017).

^{52.} See Ashley Balcerzak, Surge in LLC Contributions Brings More Mystery About True Donors, OPENSECRETS.ORG (Apr. 27, 2017), https://www.opensecrets.org/

news/2017/04/surge-in-llc-contributions-more-mystery/ (using the real estate industry as an example in discussing how donations made through LLCs can be a challenge to track and regulate).

^{53.} Id.

^{54.} See Nicholas Confessore, Sarah Cohen & Karen Yourish, The Families Funding the 2016 Presidential Election, N.Y. TIMES (Oct. 10, 2015), https://www.nytimes.com/ interactive/2015/10/11/us/politics/2016-presidential-election-super-pac-donors.html (noting that "[m]any donations" for the 2016 presidential election had already come from "business addresses or post office boxes, or wound through limited liability corporations or trusts"); see also Ctr. for Responsive Politics, Dark Money Basics, OPENSECRETS.ORG,

dark-money/basics (last visited Nov. 14, 2017) (identifying ways donors can obscure their identities and reviewing some of the reporting requirements of different kinds of organizations).

^{56.} See *id.* (discussing the comprehensive resources available for "federal campaign contributions, lobbying data and analysis," but not for the local level).

^{57.} See U.S. Dep't. of State, Passport Statistics, U.S. PASSPORTS & INT'L TRAVEL, https://travel.state.gov/content/passports/en/passports/statistics.html (last visited Nov. 14,

are spending large sums to influence public policy, it should not be too much to insist on identification to get into the party. One major step forward is the Global Legal Identifier⁵⁸ developed in the wake of the 2008 meltdown for financial institutions.⁵⁹ All corporate entities should be required to have them and list them in public filings for everything from contract bids to campaign finance disclosures.

C. Insist on Standardization

In the cloud-computing age, there is no reason that government agencies cannot require forms that allow information to be easily organized into basic spreadsheets. There are simply no excuses for anything less.

D. Require Data that is Downloadable in Bulk

This allows members of the public to query and organize the information the way they want and not be limited by the imagination of a front-end developer and the options he or she can fit onto the public-facing page of a website.⁶⁰ In other words, it eliminates some of the limitations we noted on state campaign websites, above. A gold standard for this is the Federal Election Commission, which offers a wide range of options for interacting with its data, enabling the simplest⁶¹ to the most complex queries.⁶²

^{2017) (}noting 18,676,547 new passports issued in 2016); Scott Schuh & Joanna Stavins, *The 2011 and 2012 Surveys of Consumer Payment Choice*, FED. RES. BANK OF BOSTON (Sept. 29, 2014), www.bostonfed.org/economic/rdr/2014/rdr1401.pdf (estimating a fourteen percent increase in "credit and charge card payments by consumers" from 2010 to 2012).

^{58.} This Is GLEIF, GLOBAL LEGAL ENTITY IDENTIFIER FOUND., https://www.gleif.org/en/

about/this-is-gleif (last visited Nov. 14, 2017).

^{59.} U.S. Dep't of Treasury, *Frequently Asked Questions: Global Legal Entity Identifier* (*LEI*), www.TREASURY.GOV, https://www.treasury.gov/initiatives/

wsr/ofr/Documents/LEI_FAQs_August2012_FINAL.pdf (last visited Nov. 14, 2017) (answering the question: "[w]hy do we need a global LEI?").

^{60.} Clay Johnson, *What I'd Change About Data.gov*, SUNLIGHT FOUND. (May 28, 2009, 2:11 PM), https://sunlightfoundation.com/2009/05/28/what-id-change-about-datagov/.

^{61.} See, e.g., Graphic Presentations, FED. ELECTION COMMISSION, http://classic.fec.gov/ portal/graphic_presentation.shtml (last visited Sept. 14, 2017) (providing graphic maps to help the consumer better understand campaign finance data). The Federal Election Commission's website allows users to search for: "specific candidates, political party committees and political action committees." *Id.*

^{62.} See, e.g., Disclosure Data Catalog, FED. ELECTION COMMISSION, http://classic.fec.gov/data/

E. Avoid Predestination

Or, as Bob Lannon, a former Sunlight Foundation developer and civic hacker, puts it, "the more disaggregation, the better." What this means: like food, data is best consumed unprocessed. You will never find out how much taxpayers spent on that golden toilet seat—or even that it exists—if the Pentagon is only required to report its expenditures on plumbing. So drafting rules for data disclosure should focus on disclosure—the more granular the better (how much did the Pentagon spend on what?)—rather than on categories of information (how much did the Pentagon spend on plumbing?). The more that members of the public can ask their own questions of the data, the more it can reveal.

The drafters of the federal DATA Act⁶³ set broad, resultsoriented standards. The law encourages agencies to implement those standards in ways that provide transparency into how the data is aggregated.⁶⁴ It also requires that federal agencies make it easy to connect their data to other data sets⁶⁵—another way of facilitating use and exploration by the public. Hudson Hollister, founder of the Data Coalition, an advocacy group that helped write the law, is pushing for even less prescriptive standards. A financial transparency bill in the 115th Congress that his organization supports⁶⁶ says the data now collected must feature "a common legal entity identifier for all entities" and be "fully searchable and machine-readable" and "nonproprietary."⁶⁷ Experts in working with government data put special emphasis on that last point.

DataCatalog.do~(last visited Nov.~14,~2017)~(including detailed datasets available for download as well as the simpler graphic maps).

^{63.} Digital Accountability and Transparency Act of 2014, Pub. L. No. 113-101, § 4, 128 Stat. 1146, 1148-49.

^{64.} *Id*.

^{65.} Id.

^{66.} The Financial Transparency Act, DATA COALITION, https://www.datacoalition.org/ issues/financial-transparency-act/ (last visited Nov. 13, 2017).

^{67.} Financial Transparency Act of 2017, H.R. 1530, 115th Cong. (2017), available at https://www.congress.gov/bill/115th-congress/house-bill/1530/text.

F. Beware Rent-Seekers

There is no shortage of entrepreneurs out there trying to get their standards written into legislation.⁶⁸ The federal government has adopted the company's Data Universal Numbering System as the code used to identify all recipients of government grants and contracts.⁶⁹ Businesses must get a DUNS number to be eligible for a grant or contract.⁷⁰ But when the Sunlight Foundation tried to analyze data on the recipients of this money, Tom Lee, the group's former labs director recalled in an email exchange, information on corporate parent-child relationships was unavailable because Dun & Bradstreet considered the information "proprietary."⁷¹ As a result of the decision to outsource the management of this key information to a private company, adds Hudson Hollister, "nongovernmental users of grant and contract information must purchase a license from D&B in order to download and use the data."⁷²

Another example of what should be public information locked behind a paywall: PACER. A class-action lawsuit contends that U.S. courts have been overcharging users of PACER, the electronic system for accessing court records, to underwrite pet projects unrelated to the venerable electronic records system.⁷³

Public disclosure advocates should make sure that government at every level eschews "public-private data partnerships that offer short term savings and long-term costs,"

^{68.} See, e.g., Juho Lindman, Tomi Kinnari & Matti Rossi, Industrial Open Data: Case Studies of Early Open Data Entrepreneurs, in PROCEEDINGS OF THE 47TH ANNUAL HAWAII INTERNATIONAL CONFERENCE ON SYSTEM SCIENCES 739, 739 (2014) available at

http://ieeexplore.ieee.org/document/6758695/ (last updated Mar. 10, 2014) ("This empirical paper reports the experiences of pioneer entrepreneurs of open data, who build their company offering on released open datasets.").

^{69.} Charles S. Clark, GSA's New Contract with Dun & Bradstreet Draws Mixed Reaction, GOV'T EXECUTIVE (Oct. 17, 2016), http://www.govexec.com/management/2016/10/gsas-new-contract-dun-bradstreet-draws-mixed-reaction/132205/.

^{70.} U.S. Small Bus. Admin., Get a D-U-N-S Number, SBA.GOV, https://www.sba.gov/ contracting/getting-started-contractor/get-d-u-n-s-number (last visited Nov. 13, 2017).

^{71.} Email from Tom Lee to Kathy Kiely, *Public-Private Data Partnerships* (Nov. 1, 2017, 4:52 PM) (copy on file with *Stetson Law Review*).

^{72.} Hudson Hollister, *GSA Asks How to Break DUNS Monopoly*, DATA COALITION (Feb. 13, 2017), https://www.datacoalition.org/gsa-asks-how-to-break-duns-monopoly/.

^{73.} David Kravets, *Lawsuit Accuses PACER of Milking the Public for Cash in Exchange for Access*, ARS TECHNICA (Apr. 22, 2016, 2:03 PM), https://arstechnica.com/techpolicy/2016/04/lawsuit-accuses-pacer-of-milking-the-public-for-cash-in-exchange-for-access/.

Lee warns.⁷⁴ In a world where technology is changing and improving at lightning speed, it makes sense to avoid long-term contracts that can lead to information monopolies. As Lee notes: "[I]t's easy for a cozy early deal to turn into a fiercely protected fieldom⁷⁵

G. Fund Transparency

One of the most effective backdoor methods for making government less transparent is to cut funding for the employees, databases, and websites that allow members of the public to interact with the information they should own.⁷⁶ As should by now be obvious, government data must be presented in a user-friendly way. That requires a workforce smart enough, nimble enough, and continuously educated enough to keep up with the latest trends and respond to them.

So when journalists and public interest lawyers advocate for transparency, they should also advocate for the people who make that transparency possible.

H. Watchdog Budgets and Payrolls

Let public servants know you have their backs. Doing so will encourage them to feel more loyalty to the taxpayers they serve than to the law- and policy-makers whose power transparency is meant to check. Make sure that there is enough funding for good public disclosure, and enough employees dedicated to serve the cause.

VI. CONCLUSION

Being a good global citizen in an information age requires good information. If we cannot master the complexities of our digital society, not only will we fail to realize its promise, we risk being enslaved by it. In the twenty-first century, control of government will be determined not by who owns the bombs or the bullets, but by who owns the bytes upon bytes of data that can tell us what our elected officials are, or are not doing.

^{74.} Email from Tom Lee, *supra* note 71, at 2.

^{75.} Id.

^{76.} Kitchin, supra note 49.

Ensuring that the owners remain "We the People" means that all of us must take responsibility to study the *owners' manuals* of the digital world in which we now live. We must make the effort to control technology, or we will be controlled by those that do. Whether we live up to that responsibility is what will determine whether public information is truly public—or not.