

Topical Seminar - Tuesday, May 15 – 5:30 P.M.

My social media account has been hacked, now what. “So what.” – Ira Wexler Seminar Leader

On Sunday, March 25, 2018, two op-ed pieces appeared back-to-back in the New York Times; one, noting the “terrible” things Facebook users are subjected to including “proliferation of hate speech, propaganda and posts meant to undermine faith in democratic institutions” called for antitrust legislation that would break Facebook into smaller units while also implementing strict data collection rules like those currently in place in the European Union. The other, a piece labeled “Stone” - possibly for inclusion in the Stone Reader – argued that, “...for profit companies and foreign agents could use powerful data technologies to disrupt American democracy,” calling for “young minds in high schools and colleges to create 'engineering data ethics' - algorithms that would incorporate ethical concerns into software to replace “Facebook's use of technology without ethics.”^{1,2}

Hundreds of similar articles have appeared over the last several years that similarly accuse Facebook and other social media giants of exerting undue influence over our thoughts and actions. But what harm has actually been done? And what would 'engineering data ethics' look like? Who would decide which such programs were worthy of incorporation into the schools' curriculum? To delve further into these questions a personal search of the internet using the query, “harmful effects of personal data breaches.” was done earlier this year. It returned more than 47 million hits but when the filter was refined to include harmful 'social' effects it produced slightly fewer than 45 thousand hits; i.e., only 0.1%. Of these, the majority dealt with negative effects on businesses – those involving breaches of proprietary technology, stolen bank and credit card information, fraud and so on (individuals are largely shielded from involuntary loss by their financial institution). In fact, only one article was found that used “social” in its title. Acknowledging that the term ‘social impact’ per se is a fickle concept, the authors cited instances in which financial loss had occurred as a result of lax oversight on the part of the bank but this is not “social” harm as we ordinarily use the term. It was, using the author's definition, an instance of “cybercrime.” Cybercrime also includes “child pornography, stalking, criminal copyright infringement and fraud” and can be further defined to include minors who produce and distribute images of themselves that could be considered to be child pornography. Thus, the minor, under this definition of 'social harm', is not in personal danger – at least not of being taken advantage of although that can and does occur – but of being charged with possession and distribution of child pornography: “A sixteen year old who posted naked photos of himself on his phone was accused of committing a sexual offense against himself, [he] took a plea deal in order to avoid going to prison and having to register as a sex offender.”³

What if the perceived “harm” of hacked information comes about as a result of one's own actions - what if you feel “harmed” by an unwelcome response to something you've posted on the internet? Recently, a mother used Twitter to post pictures of her congenitally deformed daughter on the internet in the hopes of raising awareness of her rare condition and to raise money for its treatment. She was horrified at some of the responses she received for posting the pictures. She blamed Twitter for this and became an 'activist', lobbying for legislation to force Twitter to block such responses.⁴ **This again begs the question, at what point are you responsible for what you allow others to learn about you?**

Social media opens a powerful port for enlarging social networks but it comes with some disadvantages as well.

Ross Douthout, writing in the New York Times, suggested in “The Trolling of the American Mind” that

social media activity appearing to originate from Russia has captured our thinking, influenced our emotions, made us more “obsessed”, increased our paranoia, possibly made our government weaker and may have influenced the outcome of the last election - all as a result of our being swayed by disinformation⁵ But is it reasonable to believe that we collectively have left all powers of discrimination behind? Enough to alter a national election? Yes, Facebook, Google and the other social media titans are all about advertising; this is how those businesses survive and they also bring us, the consumers, services that expand our social network, increase our social capital and inform us. **One could argue, then, that their prodigious success is proof that the desire for social interaction far outweighs consideration of the cost of losing one's privacy – and the possibility of ensuing harm.**

References:

1. Opinion, Deleting Facebook Won't Fix It. Siva Vaidianathan, The New York Times, March 25, 2018, SR2. [attached below] [attached below]
2. The Stone. How Democracy Can Survive Big Data. Colin Koopman, ibid. [attached below]
3. A consideration of the social impact of cybercrime: examples from hacking, piracy, and child abuse material online. Mary Aiken*, et al, Contemporary Social Science, *Journal of the Academy of Social Sciences*, Volume 11, 2016 Issue 4: Crime and Society.
4. <https://www.msn.com/en-us/health/wellness/mom-fights-twitter-after-cruel-troll-mocked-childs-appearance/ar-AAvvtL?li=BBnb7Kz>
5. The Trolling of the American Mind. Ross Douthout, The New York Times, 2018, [attached below] <https://www.NYTimes.com/2018/02/21/opinion/russian-hacking-trolls-election.html>

Additional Materials [Summarized by Ira]

Extracted from articles appearing in the **New York Times** over the last few months dealing with aspects of the above:

1. **Our Privacy Has Eroded. We're OK With That.**
Andrew Ross Sorkin, Dealbook, April 10, 2018.
“With the latest disclosure about Facebook's data missteps – that the personal information of some 87 million users had been improperly harvested – politicians can scream from the rooftops about privacy but the public has proved over and over again that it doesn't care.”
2. **Big Gains for Facebook Despite Privacy Scandal.**
Sheera Frenkel and Kevin Roose, April 26, 2018.
“The silicon valley company reported a 63 increase in profit and a 49 percent jump in revenue The company also said it added 70 million monthly active users last quarter.”
3. **I Can't Jump Ship From Facebook Yet.**
Kathleen O'Brien, April 15, 2018, SR 5.
“Yet I am still on it. It has become a convenient tool to stave off a bit of the isolation that can come with the special-needs-parent territory.”
4. **Letters: Social Media: What's Right, and Wrong.**

Dean Garfield. April 6, 2018.

“For example, let's not forget that we choose to integrate these services into our daily lives because they allow us to deepen social connections and enable us to exercise our individual agency in a fashion that was impossible before their emergence.”

5. **Now We Know How Miserable All Those Friends Are.**

Gina Bellafante, April 15, 2018.

“Facebook Envy” Several years ago the popular psychological press had come up with the term “Facebook envy” to describe the particular sense of despair that arises when we encounter the gloating of others on the site. - certain kinds of social media engagement drain happiness rather than generate it. 'We are surely better connected now than ever before, but is this new connectedness doing any good to our well-being?’ “

6. **Remember Those Friends You Deleted Long Ago? Facebook Does.**

Brian X. Chen, April 12, 2018.

“ They don't delete anything and that's a general policy, said Gabriel Weinberg, the founder of DuckDuckGo, which offers internet privacy tools. He added that data was kept around to eventually help brands serve targeted ads.”

7. **Following the Trail of Online Ads, Wherever It Leads.**

Sapna Maheshwari, Personal Tech. Business, April, 2018

“Often, these companies are building robust pictures of your habits, sometimes across devices, which can ultimately be used to sell ads.”

8. **How the Social Media Giant Uses personal Data.**

Natasha Singer, Business Day, April 12, 2018

“Details that people often readily volunteer – age, employer, relationship status, likes and location – are just the start. 'Every single action, every single relationship is carefully monitored,' said Giovanni Buttarelli, the European Data Supervisor. 'Facebook can learn almost anything about you by using artificial intelligence to analyze your behavior', said Peter Eckersley, chief computer scientist for the Electronic Frontier Foundation.’ “

9. **The origins of an Ad Man's Manipulation Empire.**

Ellen Barry, The Saturday Profile, International, April 21, 2018.

“That using the tools of social science an ambitious young London executive named Nigel Oakes could plant motivations in a person's brain without their knowledge, prompting them to behave as a client wished. 'Adolph Hitler didn't have a problem with the Jews at all, but people didn't like the Jews. Donald J. Trump had done the same thing by tapping into grievances toward immigrants and Muslims.’”

10 **Does Facebook Just Harbor Extremists? Or Does It Create Them?**

Max Fisher and Amanda Taub, The Interpreter, April 26, 2018.

“Everyday users might not intend to participate in online outrage, much less lead it. But the incentive structures and social cues of algorithm-driven social media sites like Facebook can train them over time – perhaps without their awareness – to pump up the anger and fear. Eventually, feeding into one another, users arrive at hate speech on their own.”

11. **Affected Users Say Facebook Betrayed Them.**

Mathew Rosenberg and Gabriel J.X. Dance, April 9, 2018, A1

“ Christopher Deason was taking a lot of online surveys in 2014, each one earning him a few dollars to pay bills. Mr. Deason completed the first step of a psychological survey he granted access to his Facebook account. Less than a second later, a Facebook app had harvested not only his profile data but also data from the profiles of 205 of his Facebook friends. A Facebook ad told people who took the quiz that their data would be used only for academic purposes but the fine print that accompanied the questionnaire may have told users that their data could be used for commercial purposes.”

12. **Swindled on Facebook By Fake Marks and Sheryls.**

Jack Nicas, Business Day, April 26, 2018, B1

“A Facebook notification on Gary Bernhardt's phone woke him with incredible news: a message from Mark Zuckerberg himself, saying that he had won \$750,000 in the Facebook lottery. He first needed to send \$200 in iTunes gift cards. Mr. Bernhardt wired an additional \$3,100 in cash. He eventually realized he had been the unwitting victim of a scam to lure people in. He said he told his scammer about growing up in a foster home and his dream of owning a house on a lake. 'They sucked me in because they knew my dreams.' “

13. **The Facebook Fallacy: Privacy Is Up to You.** Eduardo Porter, The Economic Scene, April 25, 2018

“ Privacy control settings give people more rope to hang themselves; Facebook has figured this out so they give you incredibly granular controls. As we devote more of our lives to online experiences, while offering data about ourselves in exchange for information, entertainment or whatever, the critical question is whether, given the tools, we can be trusted to manage the experience. The increasing body of research into how we behave online suggests not. People who profess concern about privacy will provide the emails of their friends in exchange for some pizza.”

14. **To Protect Data, Be Wary of Unfamiliar Brands.**

Brian X. Chen, Personal Tech, Business April 5, 2018, B5

“Collecting Data on Minors. Parents beware: A number of internet products have specifically collected data about children. How? By looking at children's private information. SearchHelp offered a parental control app for parents to monitor their children's online activities. Later re-branded as 'Echometrix,' it released a tool to marketers for providing insight on youths by aggregating data from teenagers' chat transcripts and blog posts. The Electronic Privacy Information Center accused Echometrix of violating the Children's Online Privacy Protection Act (COPA) by collecting information on minors without parental consent.”

15. **YouTube Is Improperly Collecting Children's Data, Consumer Groups Say.**

Sapna Maheshwari, Media, April 9, 2018, B7

“A coalition of consumer groups said YouTube failed to comply with the Children's Online protection Act (COPA), a federal law that requires companies to obtain consent from parents before collecting data on children younger than 13. By watching a YouTube video, watchers then give Google permission to collect data tied to their device, location, browsing habits, phone number and more. “

16. **Decline in Fertility, Below Even What Young Women Say They Want.**

Lyman Stone, The Upshot, February 14, 2018

“Americans across many ages and Marital statuses are having less sex than they used to. The share of people 18 to 30 who have not had sex in the past year has risen to nearly 20 percent today, from about 10 percent between 1990 and 2010. Diminished face-to-face interaction, and possibly increased use of pornography, may explain the fall in sex, and both of those trends may be explained by the rise in cellphone usage and other screen time.”

Readings

Deleting Facebook Won't Fix It

By Siva Vaidhyanathan

March 24, 2018

On March 16, as the buzzer sounded in perhaps the worst upset in N.C.A.A. tournament history, and my beloved University of Virginia went down to the 16th-seeded University of Maryland, Baltimore County, I had one thought: I need to deactivate my Facebook account. I did not want to endure the taunts and trash talk of my friends who cheer for Duke.

I do this often. When I need to focus on a project or relax a bit, I turn off the noise that comes from Facebook — the constant stream of disturbing faces, angry comments and shallow pulls on my precious attention. I also lose the lovely pictures of puppies and babies. But sometimes it's worth it to retreat from the addictive torrent of stimuli framed in blue.

If you feel the same way about how Facebook affects your daily life, by all means suspend or even delete your account (not that Facebook makes it easy to). But don't pretend it will make a difference to Facebook or to the state of the world.

A Twitter movement known as #DeleteFacebook is motivated by the stream of terrible things that Facebook has been involved in, including the proliferation of hate speech, harassment and propaganda meant to undermine trust in democratic institutions. The final spark was the news that the British political data firm Cambridge Analytica had acquired Facebook data on 50 million Americans. But even if tens of thousands of Americans quit Facebook tomorrow, the company would barely feel it. Facebook has more than 2.1 billion users worldwide. Its growth has plateaued in the United States, but the service is gaining millions of new users outside North America every week. Like most global companies, Facebook focuses its attention on markets like India, Egypt, Indonesia, the Philippines, Brazil and Mexico. At current rates of growth, it could reach three billion users by 2020.

People in those countries are getting value out of Facebook; in some places, it's one of the few reliable ways to keep in touch. In much of the developing world, Facebook is also the only news source that matters. This should horrify us. But it's not a problem that will be solved by indignant Americans leaving the service.

Moreover, quitting Facebook lets Google and Twitter off the hook. It lets AT&T and Comcast and its peers off the hook. The dangers of extremist propaganda and hate speech are just as grave on YouTube, which is owned by Google. Russian agents undermining trust in institutions and democracy are even more visible on Twitter. And every major telecommunications firm, as well as Google and Twitter, relies on surveillance systems similar to the one Facebook uses to run targeted advertising. Facebook is bigger and better at all of this than the others, but its problems are not unique.

Facebook's problems are not peripheral, not just some rough edges that can be sanded down. Its core functions are to deploy its algorithms to amplify content that generates strong emotional responses among its users, and then convert what it learns about our interests and desires into targeted ads. This is what makes Facebook Facebook. This is also what makes Facebook such an effective vehicle for promoting so much garbage and what makes it the most pervasive personal surveillance system in the world. As long as that's true, don't expect Facebook to fix itself.

Hope lies, instead, with our power as citizens. We must demand that legislators and regulators get tougher. They should go after Facebook on antitrust grounds. Facebook is by far the dominant social platform in the United States, with 68 percent of American adults using it, according to the Pew Research Center. That means Facebook can gobble up potential competitors, as it already has with Instagram, and crowd out upstarts in fields such as artificial intelligence and virtual reality.

The Department of Justice should consider severing WhatsApp, Instagram and Messenger from Facebook, much as it broke up AT&T in 1982. That breakup unleashed creativity, improved phone

service and lowered prices. It also limited the political power of AT&T.

The European Union has already stepped up its legal efforts to protect data. Its General Data Protection Regulation, which goes into effect in May, is intended to ensure that users understand and consent to data collection and how that data is used. Users won't have to agree to give access to their data to start using a product.

As with some recent American consumer finance regulations, data collection policies under the new European Union rules must be clear, concise and in plain language. Companies will have to declare up front how they will use the data, and users can withdraw consent at any time. This should significantly deter many abuses that companies like Facebook and Google have committed. It won't repair the sins of the past. But it's something.

Regulatory interventions have limitations. As long as Facebook is big and rich, its algorithms will determine and distort much of what we read and watch. Our long-term agenda should be to bolster institutions that foster democratic deliberation and the rational pursuit of knowledge. These include scientific organizations, universities, libraries, museums, newspapers and civic organizations. They have all been enfeebled over recent years as our resources and attention have shifted to the tiny addictive devices in our hands.

If we act together as citizens to champion these changes, we have a chance to curb the problems that Facebook has amplified. If we act as disconnected, indignant moral agents, we surrender the only power we have: the power to think and act collectively. We could even use Facebook to mount campaigns to rein in Facebook. It is, after all, a powerful tool for motivation, even if it's a terrible tool for deliberation.

So go ahead and quit Facebook if it makes you feel calmer or more productive. Please realize, though, that you might be offloading problems onto those who may have less opportunity to protect privacy and dignity and are more vulnerable to threats to democracy. If the people who care the most about privacy, accountability and civil discourse evacuate Facebook in disgust, the entire platform becomes even less informed and diverse. Deactivation is the opposite of activism.

Siva Vaidhyanathan is a professor of media studies at the University of Virginia and the author of the forthcoming book "Antisocial Media: How Facebook Disconnects Us and Undermines Democracy." Follow *The New York Times Opinion* section on [Facebook](#) and [Twitter \(@NYTopinion\)](#), and sign up for the [Opinion Today newsletter](#).

The Trolling of the American Mind

By [Ross Douthat](#)

Feb. 21, 2018

There are two Russian scandals connected to the 2016 campaign. One deserves the attention that it's getting. The other is closer to — what's the term I'm looking for? — *fake news*.

The real scandal involves the Russian hacking operation against the Democratic National Committee. This was a genuine crime, a meaningful theft, which led to a series of leaks that were touted by the Republican nominee for president often enough that we can assume that Donald Trump, at least, thought they contributed something to his victory. The fact that members of his family and inner circle were willing and eager to meet with Russians promising hacked emails, the pattern of lies and obfuscation from the president and his team thereafter, and the general miasma of Russian corruption hanging around Trump campaign staff — all of this more than justifies Robert Mueller's investigation, and depending on what his team ultimately reports it might even justify impeachment.

But alongside and around this real scandal you have the other Russian efforts to influence the election and its aftermath, the outlines of which have been apparent for some time, but which have earned a new wave of agitated attention thanks to Mueller's battery of indictments against a Russian troll farm and the various goblins, kobolds and boggarts it employed.

Their efforts added up to a lot of social media activity and a few events in meatspace, in which the Russians had the clever idea to organize demonstrators on both sides of our great American divide. Memes were distributed, millions of dollars spent, fake accounts employed — all to encourage not just the specific political goal of elevating Trump (and Bernie Sanders) and discrediting both party establishments, but the broader ambition of widening our internal fissures, inflaming our debates, making our imperium more ungovernable at home and thus weaker on the global stage.

Such conduct is certainly worthy of indictment, legal and rhetorical. What it is not worth is paranoia and hysteria, analogies to [Pearl Harbor](#) and [the Sept. 11 attacks](#), and an “America under attack”/“hacking our democracy” panic that give the Russian trolls far too much credit for cleverness and influence and practical success.

Because on the evidence we have, nothing they did particularly mattered. The D.N.C. hack was genuinely important because it involved a real theft and introduced a variable into the campaign that would not otherwise have been present. But the rest of the Russian effort did not introduce anything to the American system that isn’t already present; it just reproduced, often in lousy or ludicrous counterfeits, the arguments and images and rhetorical tropes that we already hurl at one another every day.

And the scale of the effort, set against the scale of campaign spending and online activity and political frenzy from domestic partisans, meant that any real influence was necessarily negligible, swamped by the all-too-American sources of our national derangement.

A scan through this newspaper’s accounting of some of the Russian operations should serve to illustrate the point. The pro-Trump ads the trolls sponsored during the campaign were just clumsy variations on ubiquitous right-wing themes (“Hillary is a Satan, and her crimes and lies had proved just how evil she is”). The protests and counterprotests they ginned up after the election were marginal imitations of the all-American crowds that showed up for Trump rallies and later for the Women’s Marches. And the operatives’ surprise at American credulity — “I created all these pictures and posts, and the Americans believed that it was written by their people” — was itself a testament to the essentially imitative quality of their work: People believed the trolls were real Americans because so many totally real, born-in-the-U.S.A. counterparts were saying exactly the same things.

And the [people who believed them](#), by and large, were probably not the nearly 78,000 Midwestern swing voters who officially determined the election’s Electoral College outcome, since on the evidence we have most fake news is [political pornography for hyperpartisans](#) — toxic in its own way, deserving of concern, but something driven more by panting, already polarized demand than by nefarious, median-voter-manipulating suppliers.

In this landscape, the people obsessing about how Russian influence is supposedly driving polarization and mistrust risk becoming like J. Edgar Hoover-era G-men convinced that Communist subversives were the root cause of civil rights era protest and unrest. There *were* Soviet agents bent on [encouraging racial conflict](#), just as there are Russian trolls today. But then as now obsessing over Russian influence can become a way to deny or minimize American realities that are far more important than some provocateur’s Hillary-for-prison meme.

And that is the danger for a liberalism (or an anti-Trump centrism or conservatism) that’s forever wringing its hands over how surely, surely Russian interference might have been enough to shift those crucial 78,000 votes and make Donald Trump the president. Because even if you believe that the interaction between the F.B.I. investigation of Hillary Clinton, the hacking and the WikiLeaks drip-drip did swing those votes (I’m quite sure the memes and fake accounts did not), the proper question should still be: *How was it that close to begin with?*

A new Cold War is not an answer to that question. (Especially since, for all the talk of Trump-the-traitor, he has moved our military posture somewhat closer to the policies the Russia hawks demand.) Neither is a theory that obsesses over tens of thousands of voters when the Americans who switched

from Obama to Trump, in the Midwest and elsewhere, probably [number in the millions](#).

The bottom line is that liberal mandarins in the West — not just in America — face a hard choice when it comes to the populism that gave us Trump, Brexit and right-wing parties and governments in Central and Eastern Europe. Should this re-emergent nationalism be conciliated and co-opted, its economic grievances answered and some compromises made to address its cultural and moral claims? Or is it sufficiently noxious and racist and destructive that it can be only crushed, through gradual demographic weight or ruthless polarized mobilization?

The Russia fixation, at its worst, is a way to make the second choice without admitting that you're making it — to pretend that in trying to crush your fellow countrymen you're really fighting traitors and subversives and foreign adversaries, to further otherize the domestic out-group by associating them with far-off Muscovy.

Trump's election was, indeed, a sudden shock in a long-running conflict. But it does us no good to pretend the real blow came from outside our borders, when it was clearly a uniquely hot moment in our own cold civil war.

I invite you to follow me on [Twitter \(@DouthatNYT\)](#).

How Democracy Can Survive Big Data

By Colin Koopman

March 22, 2018

Only a few years ago, the idea that for-profit companies and foreign agents could use powerful data technologies to disrupt American democracy would have seemed laughable to most, a plotline from a Cold War espionage movie. And the idea that the American system would be compromised enough to allow outside meddling with the most basic of its democratic functions — the election of its leaders — would have seemed even more absurd.

Today we know that this is not fiction but fact. It is a secret so open that even its perpetrators seem halfhearted about hiding it.

“Data drives all that we do.” That is the motto emblazoned on the website of Cambridge Analytica, the consulting firm that was employed by the Trump campaign to influence voters and that is now under scrutiny for its unauthorized harvesting of data from at least 50 million social media users.

The heart of Cambridge Analytica's power is an enormous information warehouse — as many as 5,000 data points on each of more than 230 million Americans, according to [recent reporting](#), a fact the company proudly [confirms](#) on its website. Its promise of elections driven by data ultimately implies a vision of government steered not by people but by algorithms, and by an expanding data-mining culture operating without restrictions.

That such threats to democracy are now possible is due in part to the fact that our society lacks an information ethics adequate to its deepening dependence on data. Where politics is driven by data, we need a set of ethics to guide that data. But in our rush to deliver on the promises of Big Data, we have not sought one.

An adequate ethics of data for today would include not only regulatory policy and statutory law governing matters like [personal data privacy](#) and [implicit bias in algorithms](#). It would also establish cultural expectations, fortified by extensive education in high schools and colleges, requiring us to think about data technologies as we build them, not after they have already profiled, categorized and otherwise informationalized millions of people. Students who will later turn their talents to the great challenges of data science would also be trained to consider the ethical design and use of the technologies they will someday unleash.

Clearly, we are not there. High schoolers today may aspire to be the next Mark Zuckerberg, but how many dream of designing ethical data technologies? Who would their role models even be? Executives at Facebook, Twitter and Amazon are among our celebrities today. But how many data ethics advocates

can the typical social media user name?

Our approach to the ethics of data is wholly reactive. Investigations are conducted and apologies are extracted only after damage has been done (and only in some instances). Mr. Zuckerberg seemed to take a positive step on Wednesday, when he vowed to take action to better protect Facebook's user data. "We also made mistakes, there's more to do, and we need to step up and do it," he said in, unsurprisingly, a Facebook post.

This is like lashing a rope around the cracking foundation of a building. What we need is for an ethics of data to be engineered right into the information skyscrapers being built today. We need data ethics by design. Any good building must comply with a complex array of codes, standards and detailed studies of patterns of use by its eventual inhabitants. But technical systems are today being built with a minimal concern for compliance and a total disregard for the downstream consequences of decades of identifiable data being collected on the babies being born into the most complicated information ecology that has ever existed.

Mr. Zuckerberg and other Silicon Valley chiefs admitted in the wake of the election that their platforms needed fixing to help mitigate the bad actors who had exploited social media for political gain. It is not Mr. Zuckerberg's fault that our society has given him a free pass (and a net worth of \$67 billion) for inventing his platform first and asking only later what its social consequences might be. It is all of our faults. Thus, however successful Mr. Zuckerberg will be in making amends, he will assuredly do almost nothing to prevent the next wunderkind from coming along and building the next killer app that will unleash who knows what before anybody even has a chance to notice.

The challenge of designing ethics into data technologies is formidable. This is in part because it requires overcoming a century-long ethos of data science: Develop first, question later. Datafication first, regulation afterward. A glimpse at the history of data science shows as much.

The techniques that Cambridge Analytica uses to produce its psychometric profiles are the cutting edge of data-driven methodologies first devised 100 years ago. The science of personality research was born in 1917. That year, in the midst of America's fevered entry into war, Robert Sessions Woodworth of Columbia University created the Personal Data Sheet, a questionnaire that promised to assess the personalities of Army recruits. The war ended before Woodworth's psychological instrument was ready for deployment, but the Army had envisioned its use according to the precedent set by the intelligence tests it had been administering to new recruits under the direction of Robert Yerkes, a professor of psychology at Harvard at the time. The data these tests could produce would help decide who should go to the fronts, who was fit to lead and who should stay well behind the lines.

The stakes of those wartime decisions were particularly stark, but the aftermath of those psychometric instruments is even more unsettling. As the century progressed, such tests — I.Q. tests, college placement exams, predictive behavioral assessments — would affect the lives of millions of Americans. Schoolchildren who may have once or twice acted out in such a way as to prompt a psychometric evaluation could find themselves labeled, setting them on an inescapable track through the education system.

Researchers like Woodworth and Yerkes (or their Stanford colleague Lewis Terman, who formalized the first SAT) did not anticipate the deep consequences of their work; they were too busy pursuing the great intellectual challenges of their day, much like Mr. Zuckerberg in his pursuit of the next great social media platform. Or like Cambridge Analytica's [Christopher Wylie](#), the twentysomething data scientist who helped build psychometric profiles of two-thirds of all Americans by leveraging personal information gained through uninformed consent. All of these researchers were, quite understandably, obsessed with the great data science challenges of their generation. Their failure to consider the consequences of their pursuits, however, is not so much their fault as it is our collective failing. For the past 100 years we have been chasing visions of data with a singular passion. Many of the best minds of each new generation have devoted themselves to delivering on the inspired data science

promises of their day: intelligence testing, building the computer, cracking the genetic code, creating the internet, and now this. We have in the course of a single century built an entire society, economy and culture that runs on information. Yet we have hardly begun to engineer data ethics appropriate for our extraordinary information carnival. If we do not do so soon, data will drive democracy, and we may well lose our chance to do anything about it.

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