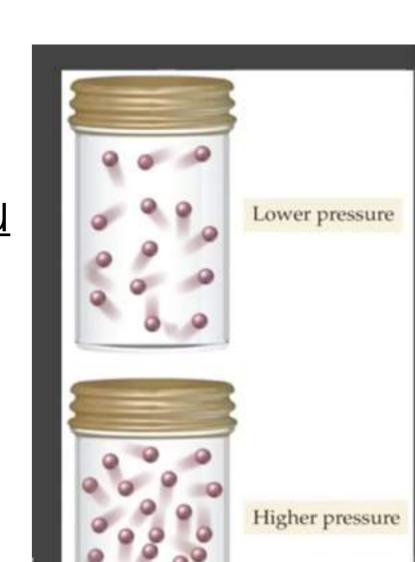
Inst. Biological Engineering (IBE) Regional Meeting: 11-11-2017

Molecules, Butterflies, and Twitter: from Thermodynamics to Political Action



Joseph Andrade
University of Utah
joe.andrade@utah.edu
@JoeAndrade2012



Who am I? Why should you listen to me?

Born 1941; 76 years old Univ of Utah Faculty 1969-2012 Professor of Bioengineering, Materials Science, Pharmaceutics; Distinguished Prof. Dean of Engineering: 1983-87 Chair of Bioengineering Science without Walls; The Leonardo; The CALL Emeritus Prof. 2012 - present Ran for Congress, Dist. 2 Utah, 2012; Lost; The RUN Amateur Novelist: State Change: A Chemical Fantasy (www.statechange.us) Novel #2: Deliver Us From Evil - Pending

Twitterist: @JoeAndrade2012

Engagement Needed

"One of the reasons our nation is in the mess it's in - where ideology rules and critical thinking is almost non-existent - is because the most educated in our society have chosen to be among the least involved. This is especially true in academia. Academic and professional apathy often prevails."

"WHEN THE VOICES OF SCIENTISTS ARE NOT HEARD, THERE IS A PRICE TO PAY."

Janet Napolitano, President, University of California

Scientists, Engineers need to RUN:

@314Action

www.314action.org





My One-Year Experiment in Democracy by Joe Andrade

After many years of reading and study about mental constraints, rigidity, ideology, politics, plutocracy, voter and citizen apathy and misinformation, gerrymandering, and outright non-ethical, immoral, and even illegal behavior and actions,

I devised a **novel hypothesis** and an 'experiment' to address our

political catastrophe and resultant dystopia.

The first implementation of that hypothesis is the 'semi'-novel:

State Change - free at www.statechange.us

from the book's Preamble:

National and World leaders are trapped in a set of assumptions which exacerbate the very problems which must be solved.

Replacing those leaders and rulers is insufficient, as their replacements will likely be afflicted by the same mindsets – based on the same historic assumptions.

The most effective, most pragmatic, most realistic solution is to directly change the mindsets of existent afflicted rulers and elected leaders.

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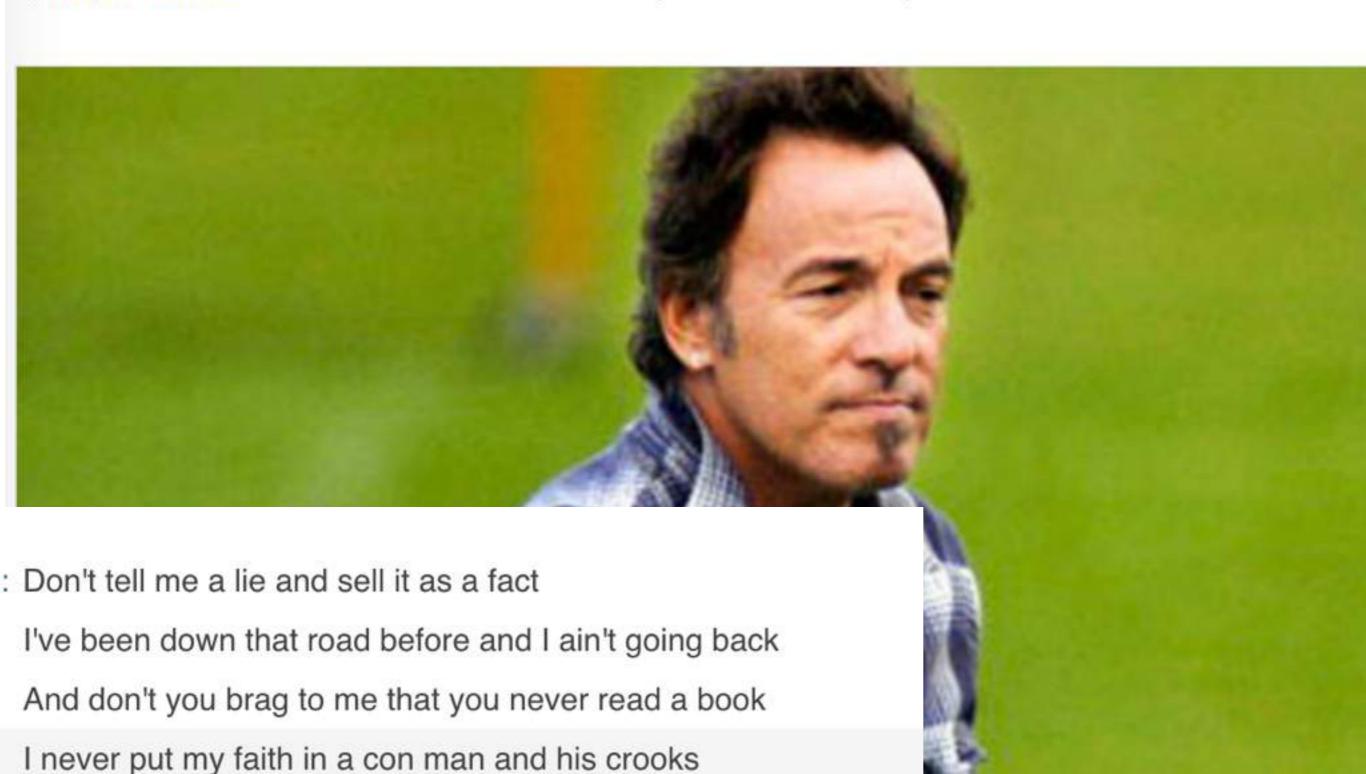
HEIR ARE OF THEIR DEATH

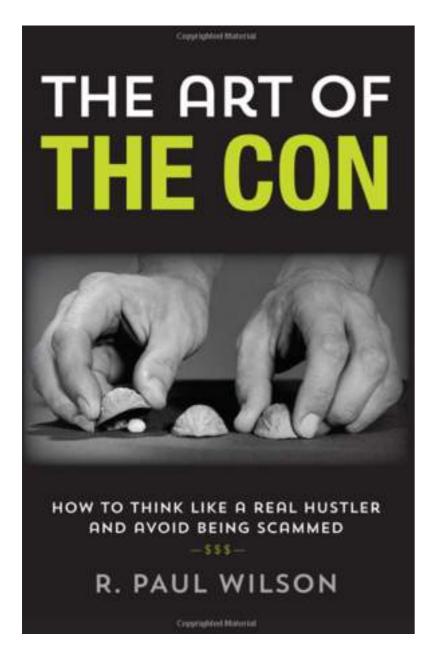


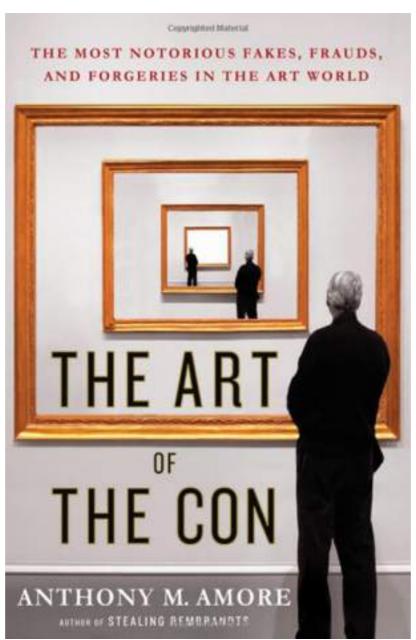
Springsteen Takes Aim at 'Con Man' Trump

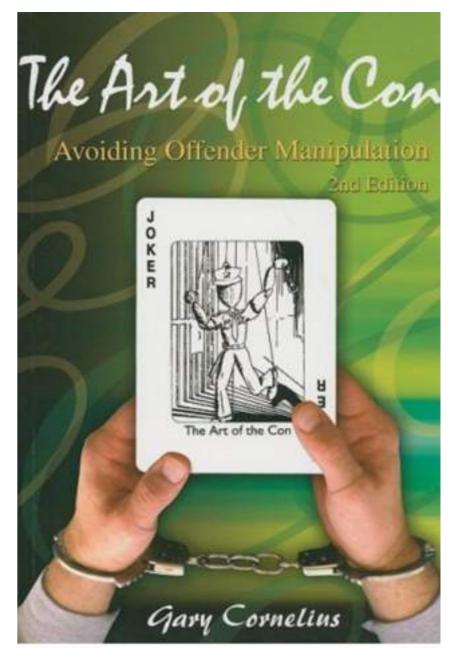
The Boss collaborated with Joe Grushecky on new protest anthem "That's What Makes Us Great."

By Megan Trimble, Associate Editor, Social Media | April 19, 2017, at 2:27 p.m.









Fake News on Twitter Flooded Swing States That Helped Trump Win

A new study reveals how junk content—including from Russia—hit Pennsylvania, Florida, Michigan, and beyond.

DENISE CLIFTON SEP. 28, 2017 1:00 AM











WHAT'S "FAKE NEWS"? 60 MINUTES PRODUCERS Stewart's News an INVESTIGATE

Stewart's Conf. Panel: News and Democracy

What surprised 60 Minutes producers who reported on "stories that are provably false" -- and why arguing about it "is like going down the rabbit hole"

http://www.cbsnews.com/news/whats-fake-news-60-minutes-producers-investigate/

2017 MAR 26 COMMENTS

73

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STUMBLE

What does the phrase "fake news" mean? It depends who you ask. The term has become so loaded that when a team of 60 Minutes producers began to investigate fake news, the producers first had to agree on a definition.

"We weren't interested in doing a story about the 'fake news' that is invoked by politicians against the media for stories that they don't like or for comments that they don't like," explains producer Michael Radutzky in the 60 Minutes Overtime video above. "We're using the term 'fake news' to describe stories that are provably false, have enormous traction in the culture, and are consumed by millions of people."

Weaponized Lies: How to Think Critically i

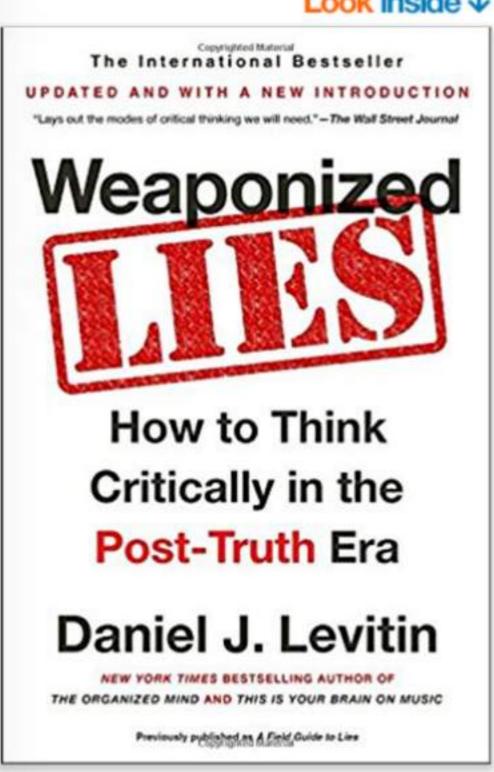
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by Daniel J. Levitin ▼ (Author)



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APRIL D. WEST

English has one word, TRUTH,

with Two Definitions:

- 1. In accordance with fact or reality the real world;
 - 2. A firmly held opinion or conviction as in the spiritual world.

TRUTH is What Is or What I Believe

To Understand Trump, Learn Russian



Andrew Rosenthal

DEC. 15, 2016



Donald Trump speaking to reporters last week in Ohio. Doug Mills/The New York Times

Russian has two different words for TRUTH:

истина, пожалуйста

Real, Unshakeable, Factual Truth

Правда, пожалуйста

Surface, Subjective, Superficial Truth

 $\frac{https://www.nytimes.com/2016/12/15/opinion/to-understand-}{trump-learn-russian.html?_r=0}:$

"You can fiddle with the pravda all you want, but you can't change the istina."





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Professor Jon Anzalone talking about @News

#LICSS2017

News Literacy

@NewsLiteracy

The Center for News Literacy at Stony Brook University is the birthplace of Nowe Literacy: teaching critical thinking

In Italian Schools, Reading, Writing and Recognizing Fake News

By JASON HOROWITZ OCT. 18, 2017











Laura Boldrini, president of Italy's Chamber of Deputies, spearheaded a project to educate high-school students on how to recognize fake news and conspiracy theories online.

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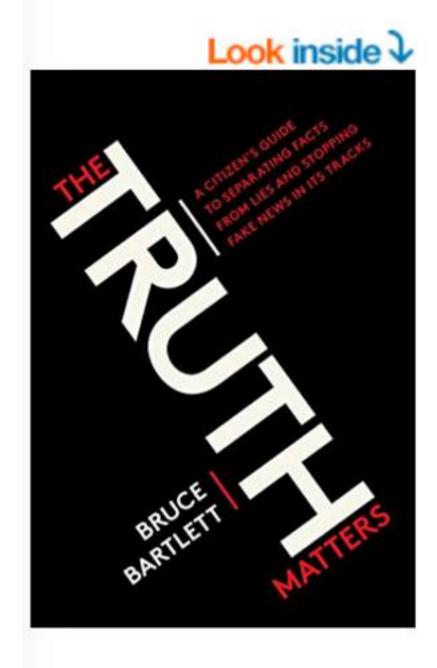
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Need to return schools to teaching critical thinking!



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On Bullshit

Harry Frankfurt Princeton University

ne of the most salient features of our culture is that there is so must bullshit. Everyone knows this. Each of us contributes his share. But tend to take the situation for granted. Most people are rather confident in ability to recognize bullshit and to avoid being taken in by it. So momenon has not aroused much deliberate concern, or attracted must tained inquiry. In consequence, we have no clear understanding of which is, why there is so much of it, or what functions it serves. And we lack scientiously developed appreciation of what it means to us. In other words, we no theory. I propose to begin the development of a theoretical understanding

KNOW what you are talking about:



And insist others know what they are talking about



Hollywood should call out lying politicians. Jimmy Kimmel shows how

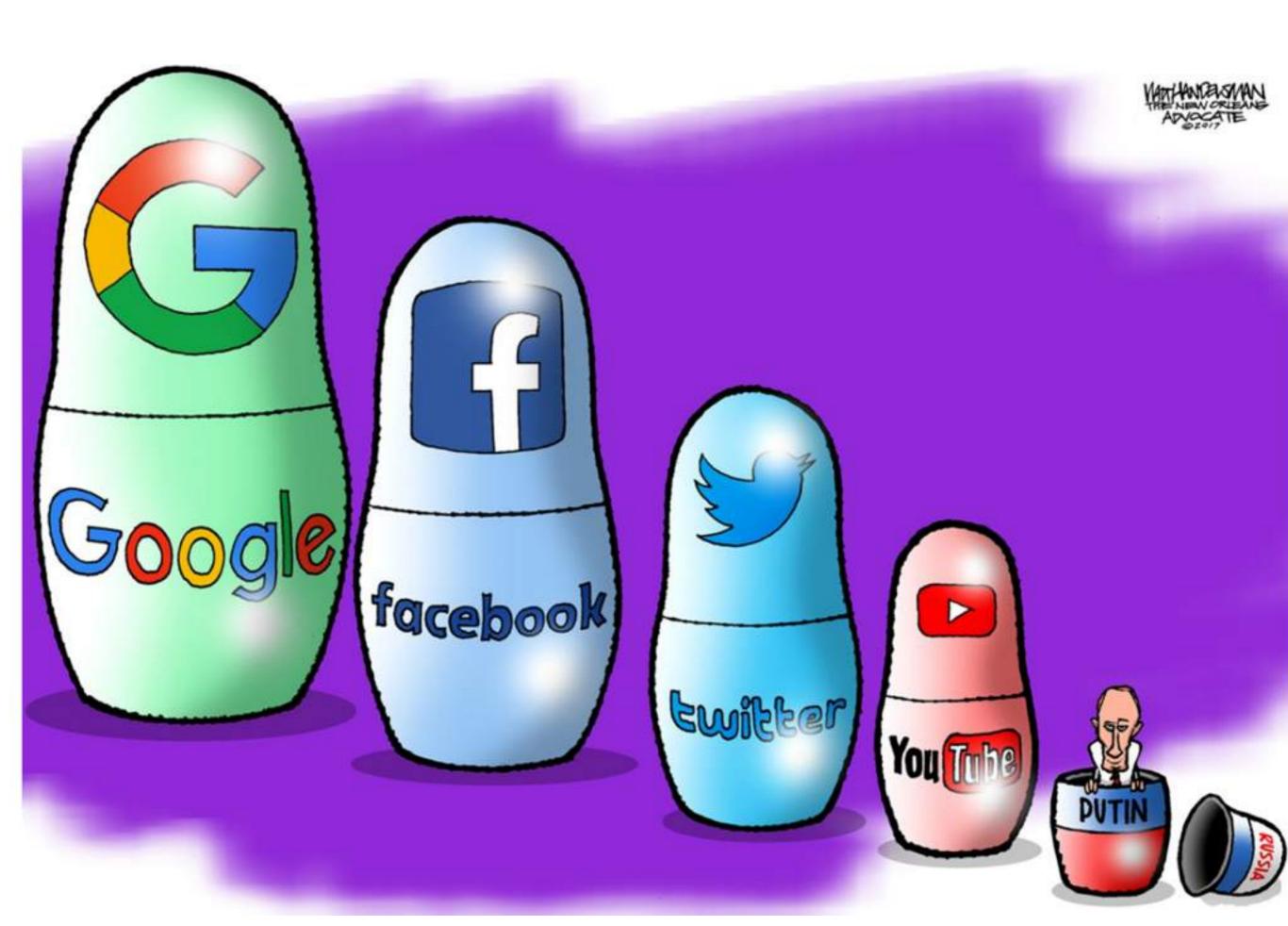
Arwa Mahdawi

Celebrities are the unofficial legislators of American public opinion. Kimmel is using his platform to fight for better healthcare

Wednesday 20 September 2017 13.34 EDT

old the front page: in today's breaking news, it would appear that politicians are liars. We've got late-night host Jimmy Kimmel to thank for this shocking revelation. Kimmel opened up Tuesday's show by calling out Louisiana senator Bill Cassidy for lying to him about his plans to remove healthcare for millions of Americans.

In May, "after my son had open heart surgery, which was something I spoke about on the air [Cassidy] was on my show and he wasn't very honest," Kimmel said. "He said he would only support a healthcare bill that made sure a child like mine would get the health coverage he needs, no matter how much money his parents make."



Senators Demand Online Ad Disclosures as Tech Lobby Mobilizes

By KENNETH P. VOGEL and CECILIA KANG OCT. 19, 2017











Senator John McCain on Wednesday on Capitol Hill. Al Drago for The New York Times



Russian Hacking and Influence in the U.S. Election

Complete coverage of Russia's campa to disrupt the 2016 presidential electi

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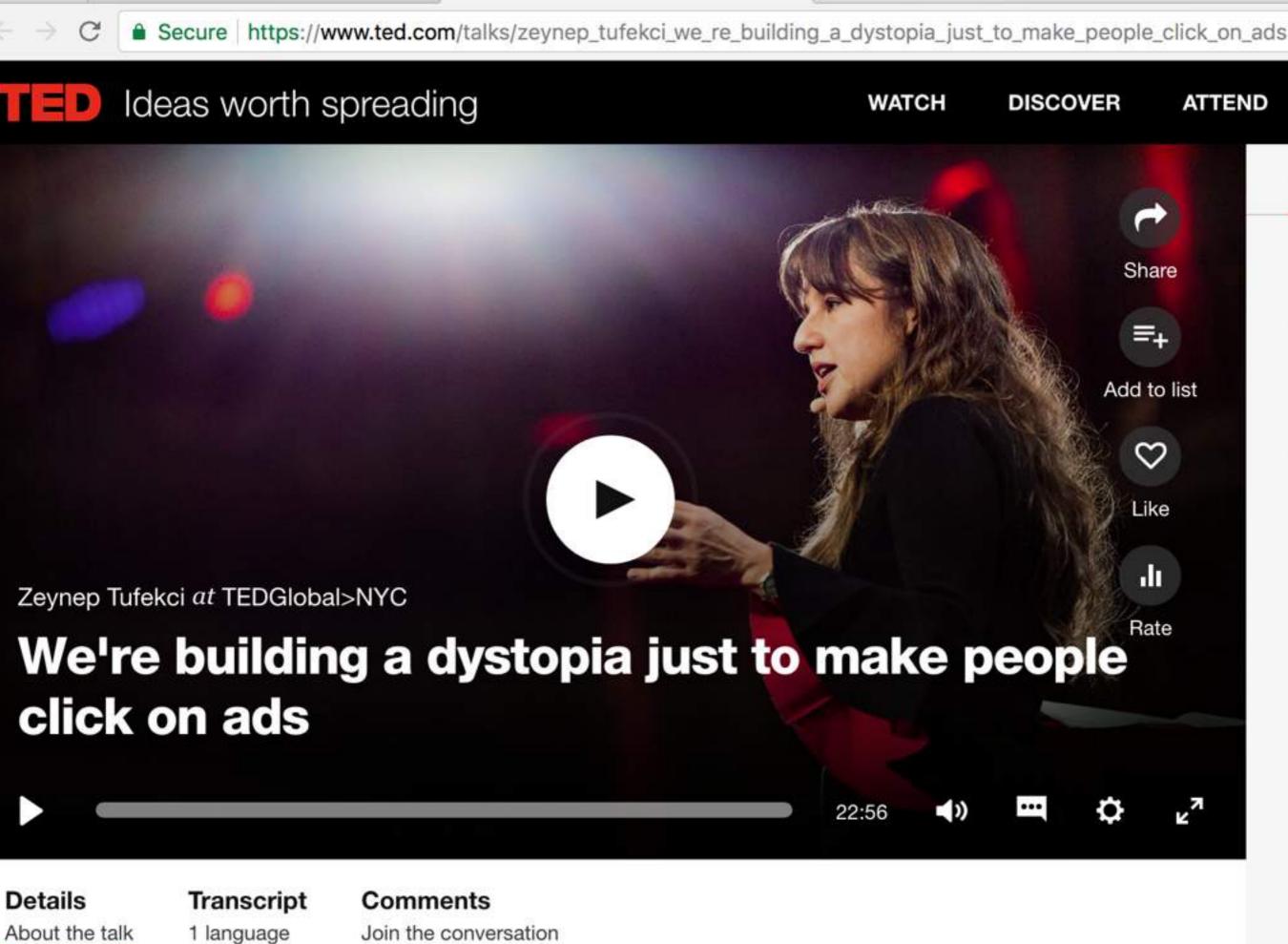
Ex-White House Chief of Staff Is Interviewed by Special Counsel

Senate Intelligence Heads Warn That Russian Election Meddling Continues

Facebook to Deliver 3,000 Russia-Linked Ads to Congress on Monday

Senator Berates Twitter Over 'Inadequate' Inquiry Into Russian Meddling

0 1



Join the conversation

Google Serves Fake News Ads in an Unlikely Place: Fact-Checking Sites

By DAISUKE WAKABAYASHI and LINDA QIU OCT. 17, 2017









SAN FRANCISCO — The headlines are eye-catching. Melania Trump is leaving the White House! Home renovation cable star Joanna Gaines has abandoned her HGTV show and husband Chip Gaines! Televangelist Joel Osteen is leaving his wife!





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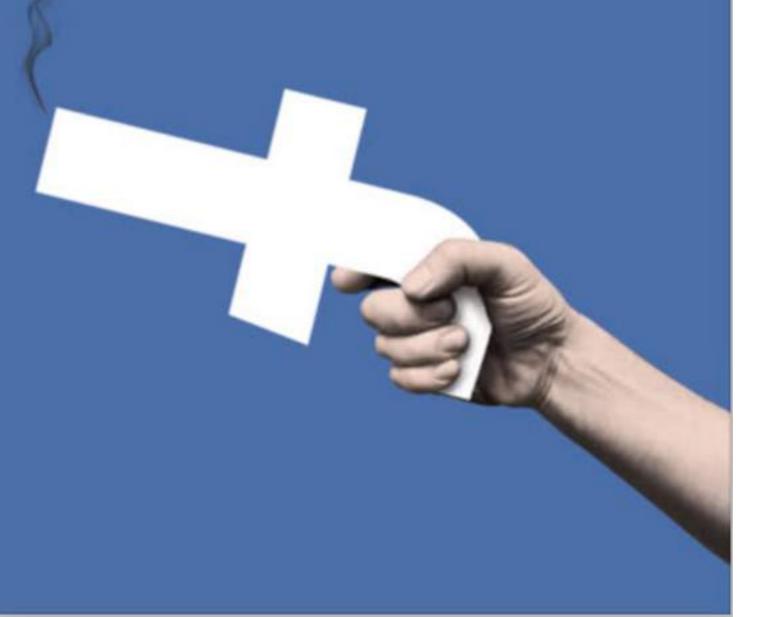
Mueller's misunderstood mission

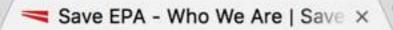
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NOVEMBER ATH- SOTH DOES

Social media's threat to democracy





① saveepaalums.info/who-we-are/?subscribe=success#blog_subscription-3



Save EPA - Who We Are

We are a volunteer organization made up of retired and former employees of the Environmental Protection Agency. We have expertise in environmental science, law and policy. We are based in Colorado, have members from across the USA, and collaborate with like-minded groups all over the country.

We are using our collective expertise to educate and advocate about environmental science, environmental protections and the current Administration's assault on EPA and our public health. We work to-

A PRACTICAL GUIDE FOR RESISTING THE TRUMP DE-REGULATORY AGENDA

Former agency staffers reveal best practices for "making agencies listen"



Greenpeace Photo - Used by Permission

Save EPA - http://www.saveepaalums.info/

Bystanders are complicit in sexual harassment

have never met Harvey
Weinstein. I have no interest in talking with
him. If half the stories
circulating in the media
are true, then Mr. Weinstein represents the very
worst of male behavior.
His actions are best left to
prosecutors and the courts.

The allegations against Mr. Weinstein are horrific. What is of equal concern, however, is the behavior of those who stood by to let the abuse of power by Weinstein continue for decades.

At the moment, those who enabled and facilitated Weinstein's abhorrent behavior are trying to lessen their role by issuing self-serving reports of surprise and disgust through their various spokespeople, agents and representatives. Each statement presents varying justifications for the enabling behavior. Some suggest they were forced to standby because of Weinstein's financial power and ability to make — or break — a career.

Those enablers and facilitators — whether they saw, heard, understand — are complicit in Weinstein's



AMOS N. GUIORA

egregious behavior. Some of them, as we have come to learn, bystanders. Many knew but made the deliberate decision to ignore.

The issue of bystanders ignoring moral dilemmas in society is nothing new. I addressed the crime of complicity in the context of the Holocaust in my book, "The Crime of Complicity: The Bystander in the Holocaust." I did so for two reasons: to honor my parents who survived the Holocaust and to directly address the question of complicity in sexual assaults. In the crimes I researched - the rape and murder of Sherrice Iverson in Las Vegas and the rape and sodomy of a college student at Vanderbilt University — bystanders

Please see GUIORA, 04

- Apathy, uninvolvment, sideline sitting is Complicity.
- UU Law Prof Amos Guiora book:
- The Crime of Complicity, 2017
- Catalyst, amplify, 'viral'
- Give \$\$, give time, give brains



How to get involved?: Speak up, Speak out Support good candidates RUN!!





My One-Year Experiment in Democracy by Joe Andrade



Climate modeller and Canadian politician Andrew Weaver.

POLICY

Getting political

Is running for office the next step for researchers in the fight against climate inaction?

BY PETER FAIRLEY

It's moving day at the Legislative Assembly of British Columbia on a sunny summer morning in Victoria, Canada, and climate

championed fossil fuels and neglected climate policy. He negotiated climate-friendly terms with the NDP to install John Horgan as the party's first premier in 16 years.

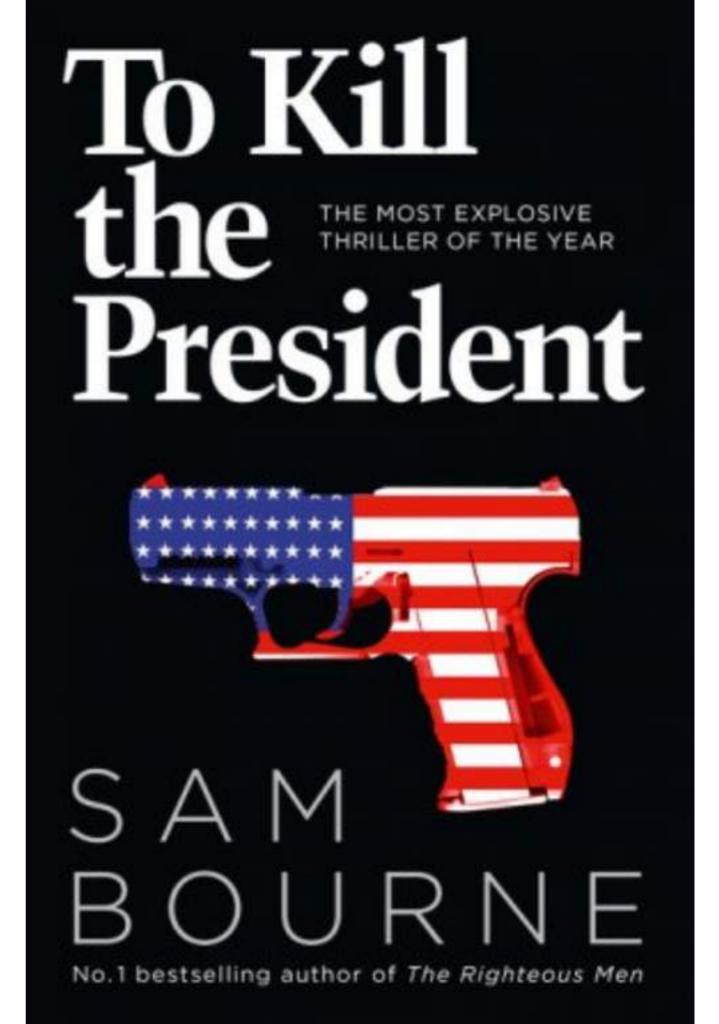
Weaver is an internationally recognized

everywhere: in classrooms and churches, factories and farms. We're on sidewalks, in cafes, on the airwaves and in your Twitter feeds," declared Jacquelyn Gill, a palaeoecologist at the University of Maine in Orono, in *The Washington Post*

With politicians absorbing misinformation from blogs and other non-credible sources, says Weaver, scientists have no choice but to play the political game. "We can't just have a march here for science and a march there for science — we need scientists to step up and start running. We need to actually have them at the table."

Peter Fairley is a freelance science writer based in Victoria, British Columbia.

You could also write a novel, but do be careful!



STATE



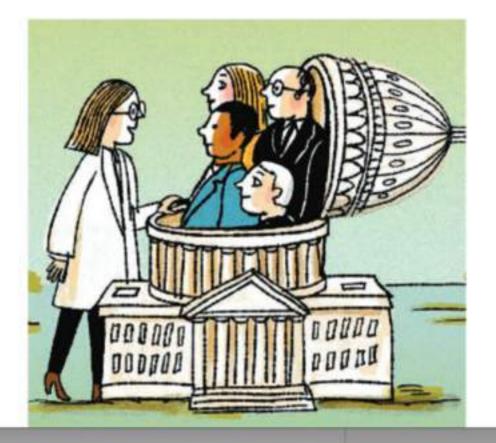
CHANGE

By Gabrielle Kardon

Step out of the lab and engage

ast month I found myself sitting on a leather couch, my black dress smoothed over my knees, in a hushed wood-paneled room in Washington, D.C. The silence was broken by a group of lob-byists for the aerospace industry bantering about labor costs. I panicked for a moment. "Why am I here waiting in the anteroom of this senator's office?" I asked myself. I had a mission—advocating for science funding—but I felt out of my element. Normally, I would be sitting in jeans and a T-shirt peering down a microscope at sections of muscle tissue. But I reminded myself that scientists have an important role to play in public policy.

My path to active policy engagement began when a graduate student and I stumbled into studying a common but relatively unstudied birth defect. Congenital diaphragmatic hernia (CDH), in which the diaphragm muscle does not develop properly, ultimately kills 50% of afflicted infants. After the excitement of publishing our research, I realized that I knew little about how this birth defect actually affects people's lives. So I reached out to Cherubs, a community of CDH patients and parents, which enthusiastically embraced my



many people I employ and the effects of a flatlined NIH budget on the lab's personnel and productivity, and I realized that few nonscientists understand the practical realities of conducting scientific research.

Did my visits to Congress make any difference? I know that Sessions's office made yearly inquiries into NIH funding for birth defects when he was a senator and that Representative Stewart now knows that a developmental biology lab is like a small business, but I'm not sure how much further the impact extends. A "... replacing just one coffee hour a month with an outreach activity is a reasonable goal."

Gabrielle Kardon

Yes, I hear you - what can YOU do? Listen up.

BUTTERFLY POLITICS

CATHARINE A.
MACKINNON



"The butterfly effect" was coined in 1972 by Konrad Lorenz in a talk titled "Does the flap of a butterfly's wings in Brazil set off a tornado in Texas?" It charmingly models (mathematically by many, not by me) how some extremely small simple actions, properly targeted, can come to have highly complex and large effects in certain contexts. Yes: a butterfly opening and closing its wings in Brazil *can* ultimately produce a tornado in Texas, according to chaos theory's understanding of complex causality in dynamic unstable systems.

Butterfly politics means the right small human intervention in an unstable political system can sooner or later have large complex reverberations. As an organizing metaphor and central conceit for this

Internet in a Minute!

Over 2 Million Google searches over 300,000 Tweets about 3 Million YouTube views over 20 Million WhatsApp messages

If you Facebook, Tweet, post, blog, comment, like, follow then
'You are a publisher!' says Adam Sharp.
'You are part of 'the media''

Twitter Followers

@neiltyson	10 M
------------	------

@ProfBrianCox
2.5 M

@RichardDawkins 2 M

@LKraus1 300K

@MichaelEMann 50K

@PaulREhrlich 10K

@JoeAndrade2012 <100!

Social media: More scientists needed

Social media need more practicing scientists to learn how to properly engage online and to then spread accurate, informative, scientific messages. The training of scientists on the proper use of social media for the purpose of outreach is in its infancy...

Sarah Mojarad letter to SCIENCE 11-3-2017

Teaching social media to scientists

A handful of courses help researchers navigate the landscape of internet communication

BETHANY HALFORD, C&EN BOSTON

t wasn't so long ago that scientists had only a couple of ways to share their work with the world: publishing in a research journal or presenting at a scientific meeting. This often limited exposure to a relatively small sphere of scientists. Today, with carefully crafted posts on social media channels such as blogs, Twitter, and Facebook, scientists can now widely spread the word of their latest publication, share daily results from their laboratory, debunk shoddy studies, and even find collaborators.

Staying social

For one assignment, students in "Social Media for Scientists," also known as #caltech107, were tasked with creating a tweet about their research.

study's lead author. "Some used it as a forum to share their research directly with the public and media, but most saw it as a tool to share research within their field and to stay updated with science outreach and communication."

Diving into social media can be intimi-



"Make Your Research Viral: Social Networks and Science" at Barcelona Biomedical Research Park, a coalition of research institutes that houses 1,500 scientists and support staff. Martín Morris, a social media activist, and Martínez-Campos, a biologist who works in scientific communication, first teamed up three years to teach the course.

"Social media isn't only for communicating with friends or for liking a video with kittens," Martín Morris says. "Scientists are starting to realize how important it is to know what research other people are doing and to let them know what you are doing."

During the course, which is taught in two four-hour sessions, students learn how to use different social media platforms, such as Twitter and Facebook. Martín Morris and Martínez-Campos say they are con-



Major Science/IBE Societies: Twitter handles and membership

Amer. Chem. Soc.	@AmerChemSociety	160,000
AAAS	@AAAS	120,000
Union Concerned S	cientists @UCSUSA	100,000
NSTA	@NSTA	50,000
Amer Physical Soc.	@APSPhysics	50,000
IBE	???	200
BMES	@BMESociety	7,000
Soc. for Biomaterials	s @SFBiomaterials	1,000
IEEE	@IEEEorg	400,000

he democratization of journalism through crowd sourcing, blogging, and social media has proven to be a sharp, double-edged sword. The internet has vastly expanded the sourcing of news and information, capturing stories that might otherwise go untold and delivering a diversity of perspectives that no single media outlet could hope to offer. At the same time, this new and open model has given any-

one with web access a global platform to propagate information that is mistakenly or intentionally false. This is especially problematic when it comes to scientific information, which is critical to rational policy-making in areas like health, environmental protection, and national security, and at its best is often misinterpreted by the lay public. Yet recent years have seen a reduction in specialized science pages and reporters in the nation's newsrooms in favor of reliance on general assignment staffers, even as deadlines have grown shorter-reducing opportunities to ensure accuracy and clarity before publication.

Postpublication fact checking is helping. From the "Pinocchios" that the WashMoreover, a number of diverse organizations, including the Royal Society, the Wellcome Trust, and the Howard Hughes Medical Institute, are experimenting with new models for bolstering science journalism, as is the American Association for the Advancement of Science (AAAS, the publisher of *Science*). Just today, AAAS launched a new such endeavor called "SciLine," a free service that provides timely access to articulate scientific ex-

> perts for journalists and other communicators who cover science-related issues. In the weeks and months ahead, SciLine will also offer clear, accessible summaries explaining the methods and experimental evidence behind newsworthy scientific advances. And it will gather and release on-therecord, insightful, contextual comments from researchers and scholars on issues in public discourse for which the relevant science can be informative-all for use by time-stressed reporters and others before they file their stories.

In my recent experience leading strategic communications about advanced tech nologies in the U.S. Department of Defense, I learned



Rick Weiss is the director of SciLine at the American Association for the Advancement of Science, Washington, DC. rweiss@aaas.org



"...fact checking is often too little, too late."



Pat Bagley

@Patbagley

Editorial Cartoonist for The Salt Lake Tribune. I am what Utah has instead of a Democratic Party. **Tweets**

Tweets & replies

Med



Pinned Tweet



Pat Bagley @Patbagley · Feb 15 Let's keep in mind Obama had scandals



Jim Dabakis 📀

@JimDabakis

Utah State Senator and art lover.

- O Utah, USA
- S utahprogressives.org
- ::: Joined March 2011

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Tweets & replie



Jim Dabakis @ @JimDabal Rep. Marino out as drug cz opioids Senate sponsor, Or





Tweets 43.4K

Following 2,797

5,296

Todd Weiler

@gopTODD

I tweet about #utleg, #utpol and #BYUfootball. RTs are RTs. Love books and #cycling. Snarky on #Twitter -- nicer in person.

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Twitter is a sarcastic outlet for a
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13







Todd Weiler @gopTODD · 5h

Not sure this whole Russian co



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Tweets 6,327 Following 3,617

Followers 14.5K

Likes 4,786 Lists

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Tweets Media Tweets & replies



USU Aggies ♥ @USUAggies · 2h Dia de los Muertos | Utah State





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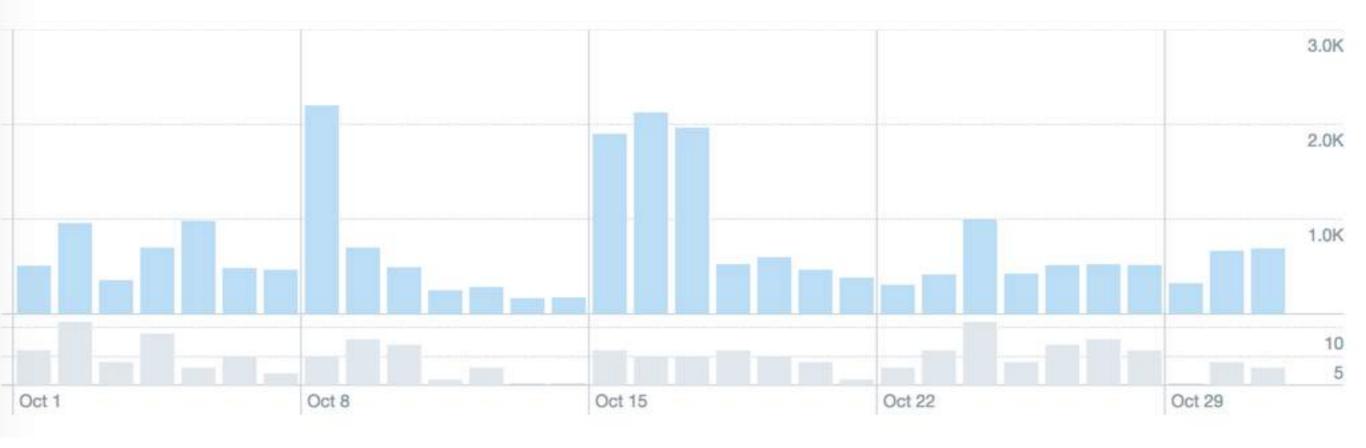
semi-novel: about 70%



Joe Andrade @JoeAndrade2012 · 2h

.TY @LFFriedman @lisamurkowski nytimes.com/2017/11/01/cli #tundra #sea rise #earthquakes #spills. Lil boom Huge bust #Al

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	.TY @CourtneyLTanner sltrib.com/news/politics/ @kathieallenmd She'll be a great #Utah			
	#Congresswoman @emilyslist Spread the word			
	View Tweet activity			Promote
	Joe Andrade @JoeAndrade2012 · Oct 20	361	5	1.4%
	.#paideia is great word: TY			
	@nytdavidbrooks:nytimes.com/2017/10/19/opi See			
	#Eleusinian rites for #citizenship in statechange.us View Tweet activity			Promote
	Joe Andrade @JoeAndrade2012 · Oct 23 .TY @marcodellacava @USATODAY on #SalvatorMundi	263	7	2.7%
	auction. Perhaps a story on @the_leonardo - a museum			7
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Get a Twitter account and Tweet me at:

@JoeAndrade2012

Direct your Tweet to one or two who need the input, the education.

It may only be a 'nano' effect, but they add up.

Be a Maxwell's Demon via social media.

Increase the Pressure!

Start with this afternoon's workshop



Lower pressure



Higher pressure

Every Tweet is like a gas molecule Need lots to increase the pressure Recruit friends, coworkers, have Tweet competitions. RAMP UP THE PRESSURE for facts, truth, reality.

What Else?

Do you have teen age kids? Time for quality time!

What are they reading?

What are their concerns, interests?

Get them fact-checking

Teach them to separate fantasy from reality, to diagnose ignorance, to call out lies.

Follow your Congressperson, contact her regularly.

Ditto for Governor, local legislators

Correct local officials, reporters, politicians.

Don't tolerate lies, BS, or hypocrisy - call it out.

How about 15 minutes/day - every day?!

WORLD VIEW A personal take on events



Keep on marching for science education

Scientists might have made a difference, had they protested against laws that now threaten what can be taught in our classrooms, argues **Brandon Haught**.

The new school year is beginning in the United States, and science education in Florida is at risk from laws that passed earlier this summer. It leaves me wondering: where have those who joined April's March for Science gone?

That global action was probably the most popular science-advocacy event of this generation. I took part in Titusville, Florida, and was impressed with the attendance, enthusiasm and creative slogans. In the speeches that followed, I warned against pending legislation that would allow any citizen to demand a hearing to challenge instructional materials. Both critics and advocates see this as a way to stifle teaching about evolution and climate change. We had the summer to make our case

The science-advocacy group Florida Citizens for Science — for which I volunteer as a board member and communications officer — led the battle to kill, or least modify, those bills. We lost on all fronts. The bills are now law.

Where were those marchers when we needed them? I know several science cheerleaders who took some concrete steps to forestall the legislation (by phoning elected representatives, for example), but I can count on one hand the number of working scientists who offered their expertise to our group. And I didn't hear of any who approached lawmakers on their own.

Having the scientific community more actively involved might have had an impact. The final vote in the state senate was tight. Advocates of the law were widely quoted as claiming that evolution is just a theory and that anthropogenic

global warming is in doubt. It would have been invaluable if scientists at local universities had issued simple statements: yes, evolution is a fact; the word 'theory' is used differently in science from how it's used in casual conversation; and the basics of human-caused global warming need to be taught. Perhaps authoritative voices from the state's universities would have swayed a senator or two.

Since the laws were passed, dozens of articles about them have been published statewide and even nationally. Social media has been buzzing. But the scientific community is still woefully quiet.

Hey, scientists, beleaguered high-school science teachers could use your support.

Other US states have endured attacks on science education. Legislatures in Alabama and Indiana passed non-binding resolutions that encourage 'academic freedom' for science teachers who cover topics — including biological evolution and the chemical origins of life — that the lawmakers deem controversial.

In Iowa, state lawmakers proposed a law requiring teachers to balance instruction on evolution and global warming with opposing views. That effort dwindled without concrete action, but not because of pressure from the scientific community. We have had some help in our efforts: Jiri Hulcr and Andrea Lucky, scientists at the University of Florida in Gainesville, spoke out with me against these bad educational bills in a newspaper opinion piece. We argued that the choice was stark: training students for careers in the twenty-first century, or plunging them into the Middle Ages.

And Paul D. Cottle at Florida State University in Tallahassee is unrelenting in pursuing his goal of preparing elementary and high-school students for their adult lives. He's an integral part of Future Physicists of Florida, a middle-school outreach programme that identifies students with mathematical ability and guides them into courses that will prepare them for university studies in science and engineering. More generally, he makes sure that students, parents and school administrators hear the message that the path to high-paying, satisfying careers using skills acquired in mathematics and science starts long before university, and depends on accurate instruction.

Plenty of issues need attention. The pool of qualified science and maths teachers is shrinking. Florida students' performance in state-mandated science exams has been poor and stagnant for nearly a decade. This year, the state's education department will begin to review and select science textbooks that will be used in classrooms across the state for at least the next five years.

We need scientists who are willing to take the time and effort to push back against the textbook challenges that these new laws will encourage. We need expert advisers eager to review and recommend quality science textbooks for our schools. We need bold scientists ready to state

unapologetically that evolution, global warming — and, yes, even a round Earth — are facts of life.

You're busy. I know. And some of you are uncomfortable in the spotlight. But doing something, even on a small scale, is better than doing nothing. Sign up for action alerts from the National Center for Science Education and your state's science-advocacy group, if you have one. Be a voice within any organizations you belong to, urging them to make statements supporting science education as issues arise. Introduce yourself to teachers at local elementary and high schools.

Even if all you have to offer are ideas and emotional support, we'll take them. Politicians, school administrators, business leaders, parents and even children need to know that you support high-quality science education.

The March for Science was a beneficial, feel-good event. It's over. But we need you to keep on marching! ■

Brandon Haught is a high-school science teacher in Volusia County, Florida, and author of Going Ape: Florida's Battles over Evolution in the Classroom (Univ. Press Florida, 2014). e-mail: bhaught@flascience.org

HEY, SCIENTISTS,
BELEAGUERED
HIGH-SCHOOL
SCIENCE TEACHERS
COULD USE YOUR
SUPPORT.

11-5-11

By the Tribune Editorial Board

Teaching science

Are we gluttons for punishment?

t's time to update science education standards, and that means another burst of hysteria. We were here just a couple of years ago with middle schools, and now we're back again for elementary and high school standards.

While most of the effort is spent on noncontroversial advances in learning, there are a few bot buttons like evolu-

vances in learning, there are a few hot buttons like evolution and climate change that inevitably slow things down. It looks like this round will be no different. With no Utah standards to discuss yet, some Utah Board of Education members are already launching pre-emptive attacks on national science education standards.

"There's a heavy emphasis on global warming," board vice chairwoman Alisa Ellis said of the national standards. "There's a heavy emphasis on evolution as a fact and not a theory."

"I am not in favor of furthering an agenda," board member Lisa Cum-

Intelligent
design is
biology's version
of fake news. It
is propagated
to undermine

miprove science and cumate education in schools

By H. Sterling Burnett For the Deseret News

Published: Nov. 9, 2017 3:25 p.m.

Updated: 17 hours ago











Facing Public Outcry, New Mexico Restores Evolution and Global Warming to Science Standards

Students will learn the age of the Earth, too.

ANDY KROLL OCT. 18, 2017 5:42 PM

















Automakers Y

Alt. Transport Y

Autonomous Driving Y

Energy ~







PTEMBER 7

As part of these continued attacks, Tesla is now the target of attacks by the same "merchants of doubt" behind tobacco industry lobbying and global warming deniers.

We are talking about "The Heartland Institute". The organization presents itself as a conservative and libertarian public policy think tank, but they are better known for being used by companies to push ideas based on profit rather than scientific facts, like when they took money from Philip Morris to question or deny the health risks of secondhand smoke or with some disgusting campaigns to deny climate change.

As it often goes with those kinds of organizations, they try to hide who is financing their efforts, but internal Heartland Institute documents leaked in 2012 and exposed some backers including the Koch Brothers, General Motors, ExxonMobil, the Walton family (WalMart), and several others.

Now, they are going after Tesla.

H. Sterling Burnett, a former advisor of the oil industry friendly National Center for Policy Analysis, which was also backed by the Koch brothers, and now a "research fellow" at The Heartland Institute, published a scathing op-ed titled 'Middle class bearing Tesla subsidy' in the **Detroit News**.

The piece is filled with so much misrepresentation of the truth that I can barely read a sentence without finding a blatant falsehood.

SPEAK UP, WRITE

KNOW what you are talking about:



And insist others know what they are talking about

IF YOU DON'T, THEN YOU ARE COMPLICIT, GUILTY

Trump's temporary disappearance from Twitter was very scary. Here's why.



For 11 minutes on Thursday evening, Donald Trump did not exist. Or at least, that's what his Twitter page said.

Twitter first attributed the temporary deletion of the president's feed to "human error." As it turned out, that was only half-right. An employee (presumably not a Trump supporter) on their last day on the site's staff decided to go out in style by expelling the commander in chief. To the many who called these hundreds of seconds "the happiest" of their lives, this customer support representative was a hero. To the president, tweeting again the next morning, it was a sign that "the word must finally be getting out-and having an impact."

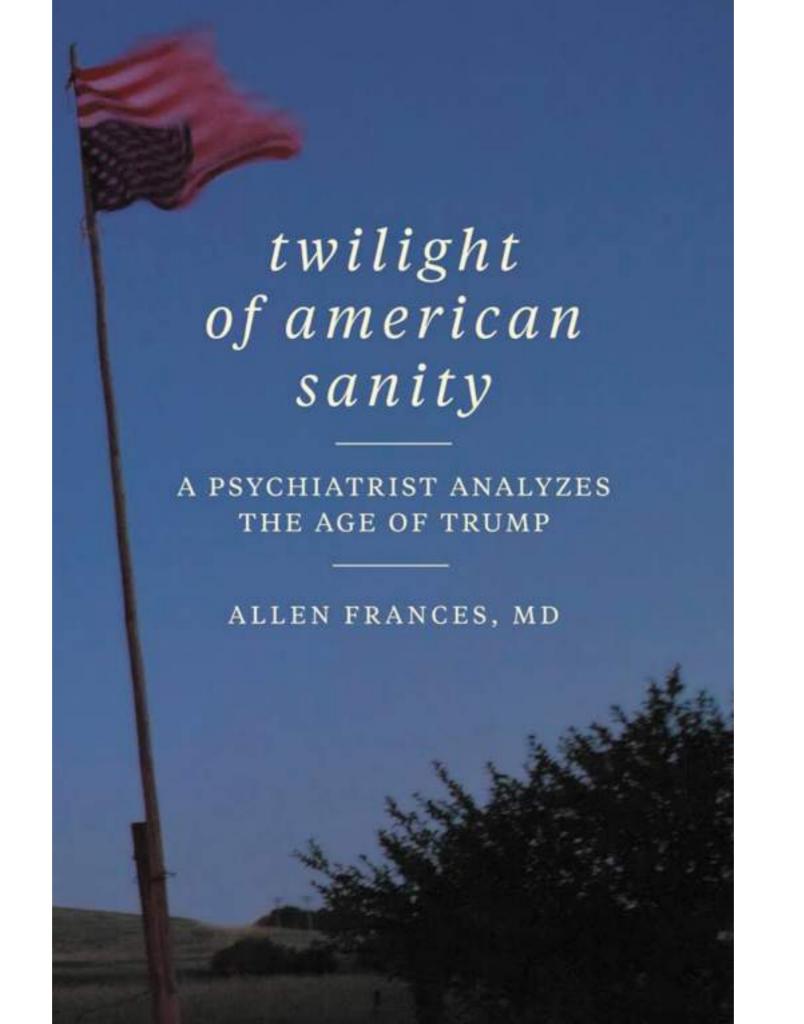


And that's what makes the 11 minutes of Trumpless Twitter so terrifying. A single employee was able to click the leader of the free world's unfiltered channel to its inhabitants into nonexistence. With his tweets, Trump has provoked North Korea's Kim Jong Un into vowing to "tame the deranged U.S. dotard with fire." He has caused stocks to drop. Thankfully, the Twitter prankster decided to take down the president's account rather than use it to challenge Kim to a nuclear duel. But he could have chosen differently, and countless hackers who have no trouble finding their way into other celebrities' accounts might not be so circumspect.

Twitter isn't treating Trump's account like anyone else's, and in some cases the site has been called out for it.

When commentators called for his suspension from the site for tweets about North Korea that violated terms of service forbidding "violent threats" and "wishes for the physical harm, death, or disease of individuals or groups," Twitter begged off on grounds of "newsworthiness."

But when it comes to the account's security, Twitter hasn't been so transparent. Observers have been speculating about what measures the site may be undertaking to protect what a bad actor could use as a weapon of mass destruction, and Thursday's incident offers an answer: not much. That's a huge security risk, and Twitter's executives will have to show its users they're prepared to do something about it.



THE DANGEROUS CASE OF DONALD TRUMP

27 Psychiatrists and Mental Health Experts Assess a President

Bandy Lee, M.D., M.Div.

Organizer of the Yale "Duty to Warn" Conference

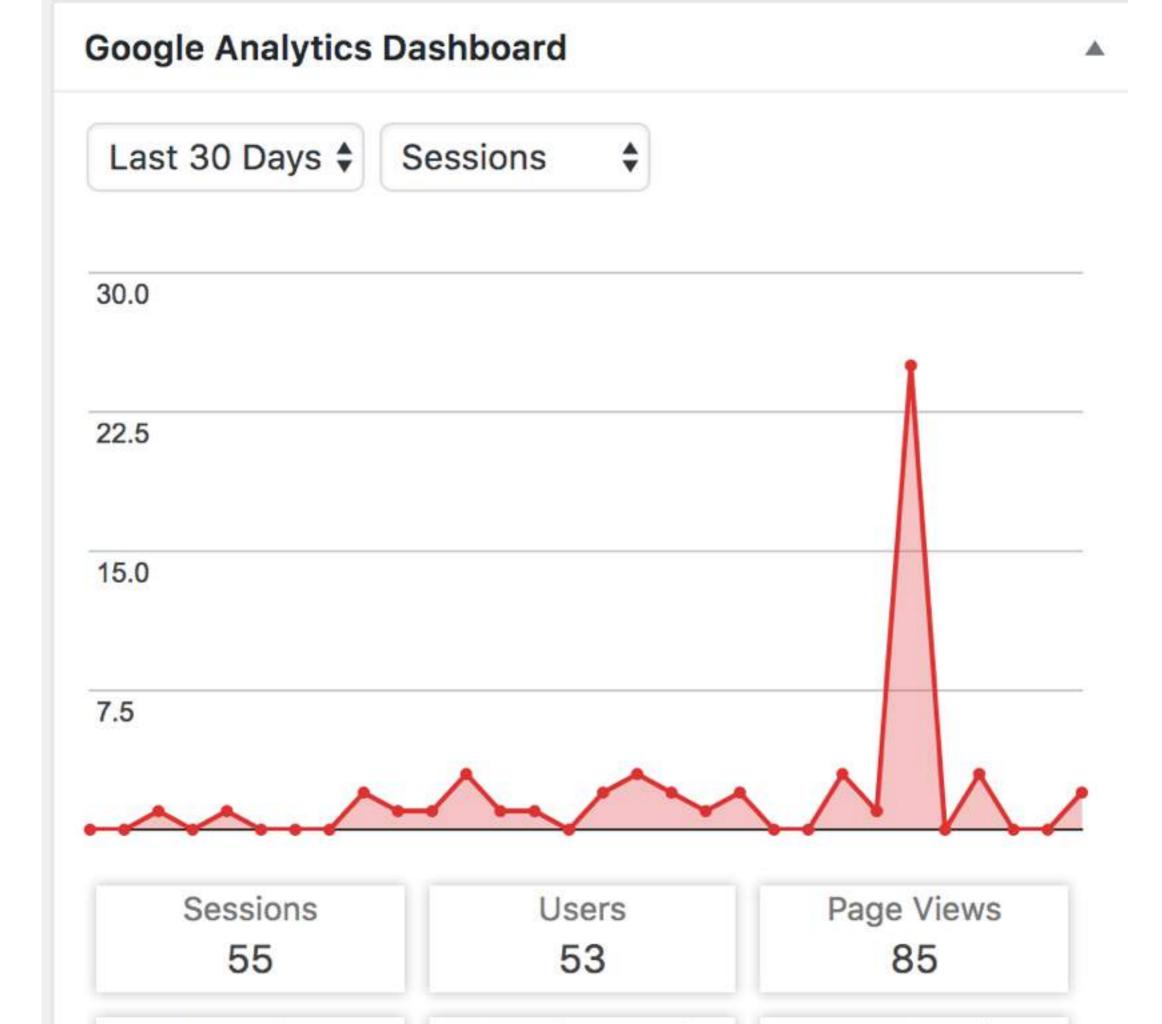


our Tweets earned 9.7K impressions over this 31 day period



Your Tweets earned 23.7K impressions over this 30 day period





Trump Is Stranger Than Fiction

A new political thriller imagines an erratic president whose aides plot against him.

By DAN BILEFSKY

LONDON - A mercurial American president is about to launch a nuclear war against North Korea after exchanging childish taunts with its dictator, prompting two senior aides to hatch a plot to assassinate the president.

Meanwhile, a powerful presidential adviser with a fondness for Mussolini woos the supremacist far right; a rampaging group of white men round up undocumented Latino immigrants in the American Southwest; and, in a final prophetic flourish, aides refer to the first daughter as "The Princess."

Jonathan Freedland, a columnist for the left-leaning Guardian newspaper, handed in the manuscript of his latest thriller, "To Kill the President," in late January - just 72 hours after Donald J. Trump took his presidential oath of office and eight months before Dotard vs. Rocket Man awakened fears of the apocalypse. And between then and its publication in June, he didn't change a word. But trenchant satire aside, parallels with the current president are so familiar that some readers have dubbed Mr. Freedland Nostradamus while others are begging him to choose their lottery numbers.

"We've seen this movie before," the writer Rachel Johnson wrote on Twitter, citing Mr. Freedland's book, published under the nom de plume Sam Bourne, a name that seems to self-consciously invoke the box-office hits of Dan Brown and Jason Bourne.

Yet for all of its spooky prescience at anticipating the headlines, critics - not least among them some of Mr. Trump's supporters - have accused Mr. Freedland of writing a morally repugnant literary recipe book for murder.

"Anti-white journalist Jonathan Freedland has written a thinly veiled assassination fantasy targeting Donald Trump," proclaimed an article on Altright.com, attacking Mr. Freedland for embracing, among other things, ethnic nationalism, multiculturalism and liberalism, "Its publication and promotion are symptoms of a sick and co-opted culture."

The book appears to be part of a growing cultural current of imagined assassinations

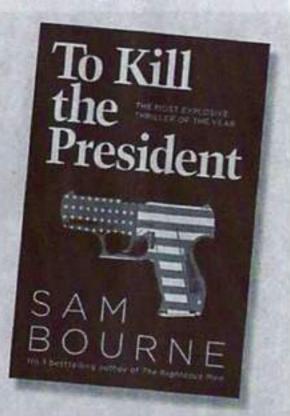


PHILIPPA CEDGE

of the president by liberal artists, directors and writers, which Mr. Freedland argues is predicated on a need for "catharsis" and revolt against a world turned upside down rather than any murderous intent.

The actor Johnny Depp recently drew condemnation from the White House after suggesting, however obliquely and in jest, the killing of President Trump, asking a crowd at the Glastonbury arts festival in southwest England, "When was the last Jonathan Freedland, a columnist for The Guardian, wrote as Sam Bourne.

NY,10-21-11



time an actor assassinated a president?"

The comedian Kathy Griffin is still recovering from the outcry that followed her posing with the fake decapitated head of the president.

And this summer a Shakespeare in the Park production of "Julius Caesar" in New York drew the opprobrium of Republicans for depicting a Caesar with overcoiffed strawberry blond hair who gets stabbed to death by a knife.

Perhaps wary of a backlash, 10 American publishers rejected Mr. Freedland's book. Mr. Freedland's literary agent, Jonny Geller, said that even efforts to sanitize the title by calling it "The Plot Against the President" failed to convince doubters.

American publishers, he noted, had also refused to publish the Trump-inspired novella "Pussy," by the Man Booker Prizewinning writer Howard Jacobson, about an idle reality show-loving prince who dreams as a child of bedding prostitutes and becoming a Roman emperor.

"The commercial view among publishers seems to be that people are living it and haven't got the head space for reading it," Mr. Geller said. "It is a lack of courage and imagination."