

Engineering, Ethics and Society: Computing Ethics 3 – Internet Connectivity

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Engineering 183EW, UCLA SEAS
Lecture 13

Lecture Contents

- Connectivity Milestones
- Societal Effects
 - Information, entertainment & social
 - Work & business
- Social Media
- Crime on the Cyber Highway
- Internet of Things
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- Case 2: Access, grouping & hate
- Case 3: Weaponization
- Case 4: Individual Behavior
- People Fighting Back
- Case 5: Too Much Connectivity
- New Industry Ethics

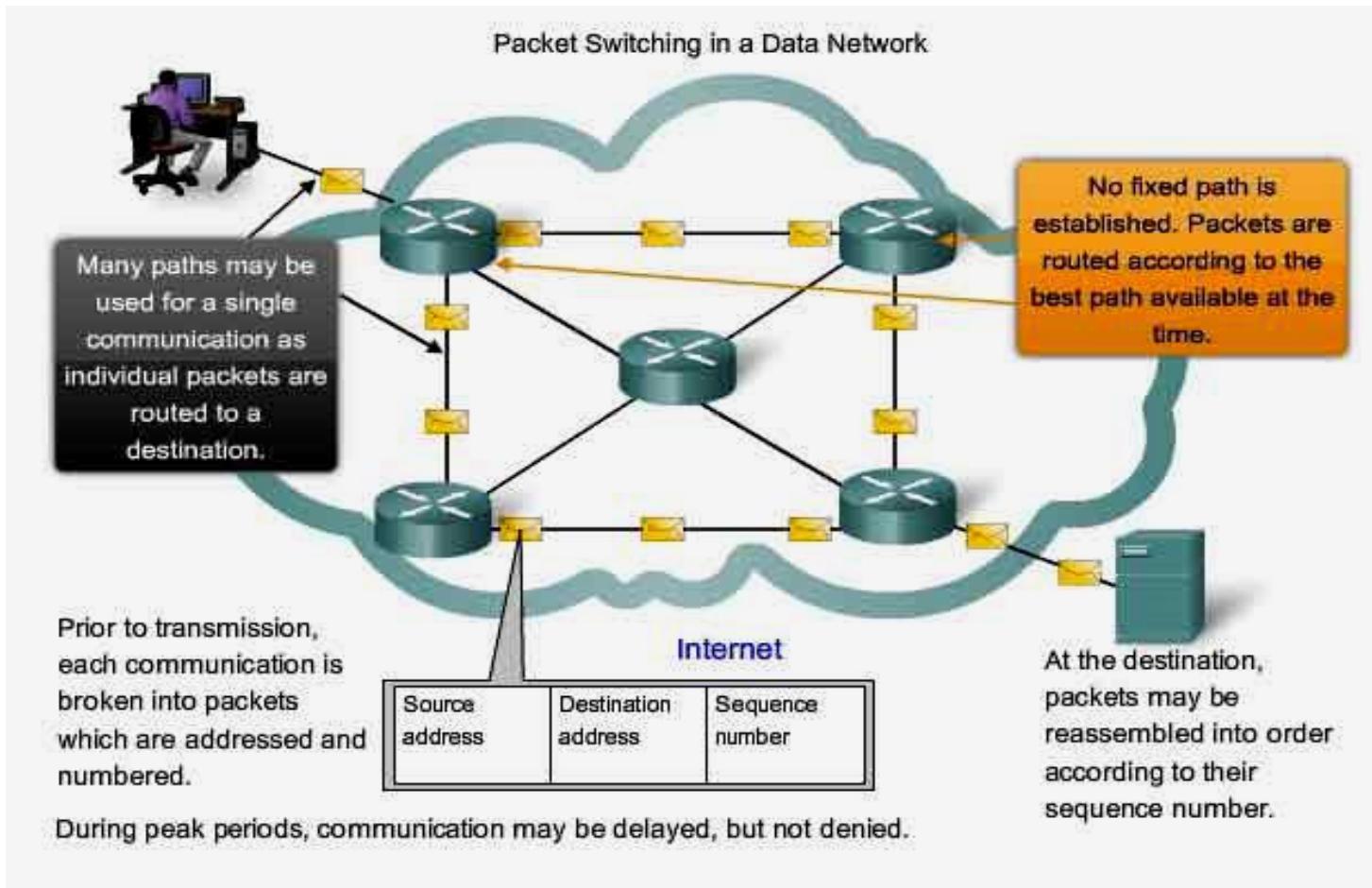
Connectivity Milestones

- Two Periods
 - Before Internet (BI) vs. After Internet (AI)
 - Broadcast Media vs. Interactive Media
 - Audiences vs. Active Online Communities
- The Internet Begins
 - 1962 ARPA computer network vision
 - 1969 ARPANET (ARPA, BBN, UCLA)



Professor Leonard Kleinrock and the first Internet Node located at UCLA

Packet Switching



Connectivity Milestones

- Two Periods
 - Before (BI) vs. After (AI)
 - Broadcast Media vs. Interactive Media
 - Audiences vs. Active Online Communities

- The Internet Evolves
 - 1962 ARPA computer network vision
 - 1969 ARPANET (ARPA, BBN, UCLA)
 - 1981 Internet backbone evolves
 - 1984 Domain name system (>1000 hosts)
 - 1990 Hyper Text Markup Language (CERN)
 - 1991 World Wide Web (CERN)
 - 1993 Mosaic GUI (NCSA and Illinois University)
 - 1994 25 Year Anniversary: >3,800,00 hosts
 - 2004 35 Year Anniversary: >550 million users
 - 2019 50 Year Anniversary: Universality!



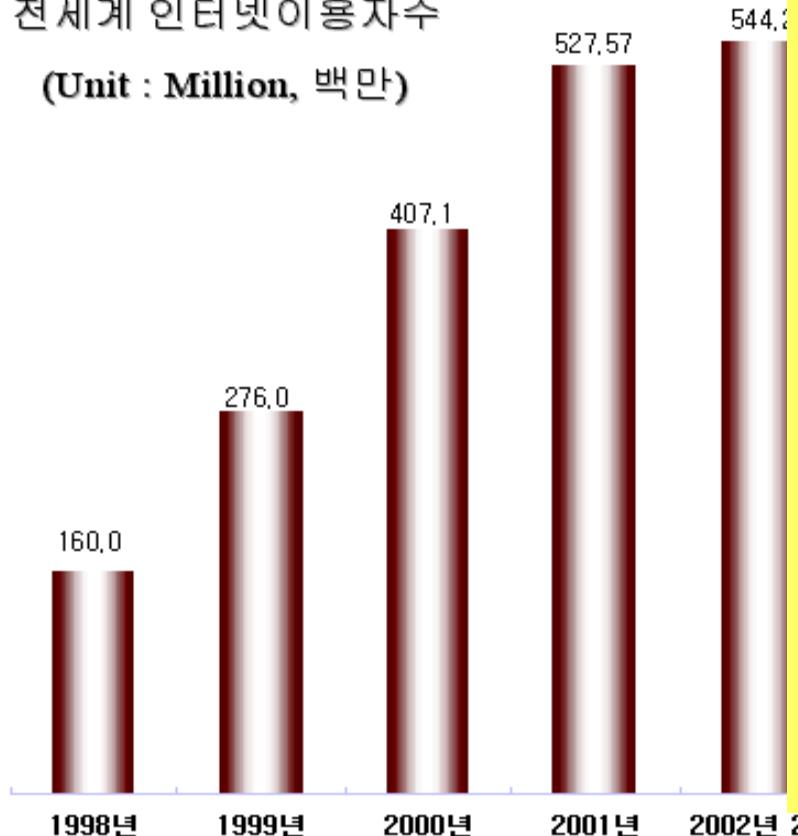
Internet Users Worldwide

The Number of Internet Users all over the world

Date : 2002.3.31

Source : Nua (www.nua.ie)

전 세계 인터넷 이용자수
(Unit : Million, 백만)



2022 Estimates

Region	Million	%	2000-2022
• North America	347	93	208%
• Asia	2,917	67	2,452%
• Europe	747	89	611%
• Latin America	535	81	2,858%
• Middle East	207	77	6,194%
• Africa	601	43	13,233%
• Oceania	31	70	301%
• Worldwide	5,386	68	1,392%

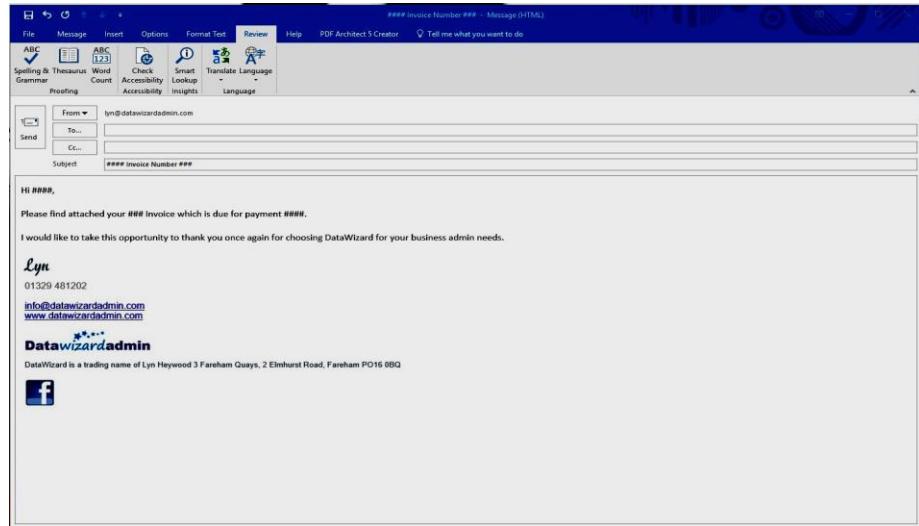
<https://www.internetworldstats.com>

 **KNIC** Korea Network Information Center

Societal Effects I

- Internet Services
 - Email
 - Browsers

*First email in 1971 on ARPANET
Ray Tomlinson creates @ designator*



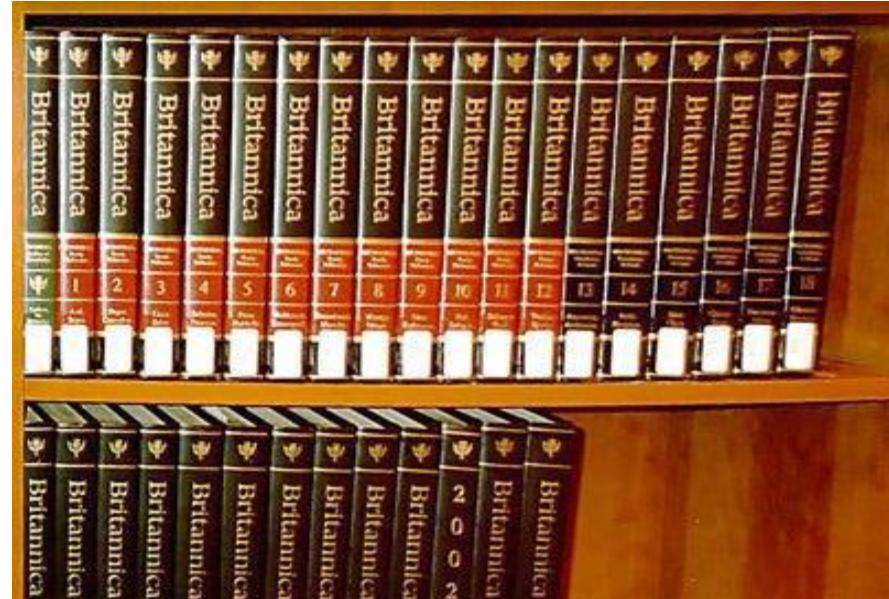
*First browser in 1990
Tim Berners-Lee creates WorldWideWeb*



Societal Effects I

- Internet Services
 - Email
 - Browsers
- Information Distribution
 - Humongous repository
 - Virtually unlimited access

*Encyclopedia Britannica
65,000 articles, English language*

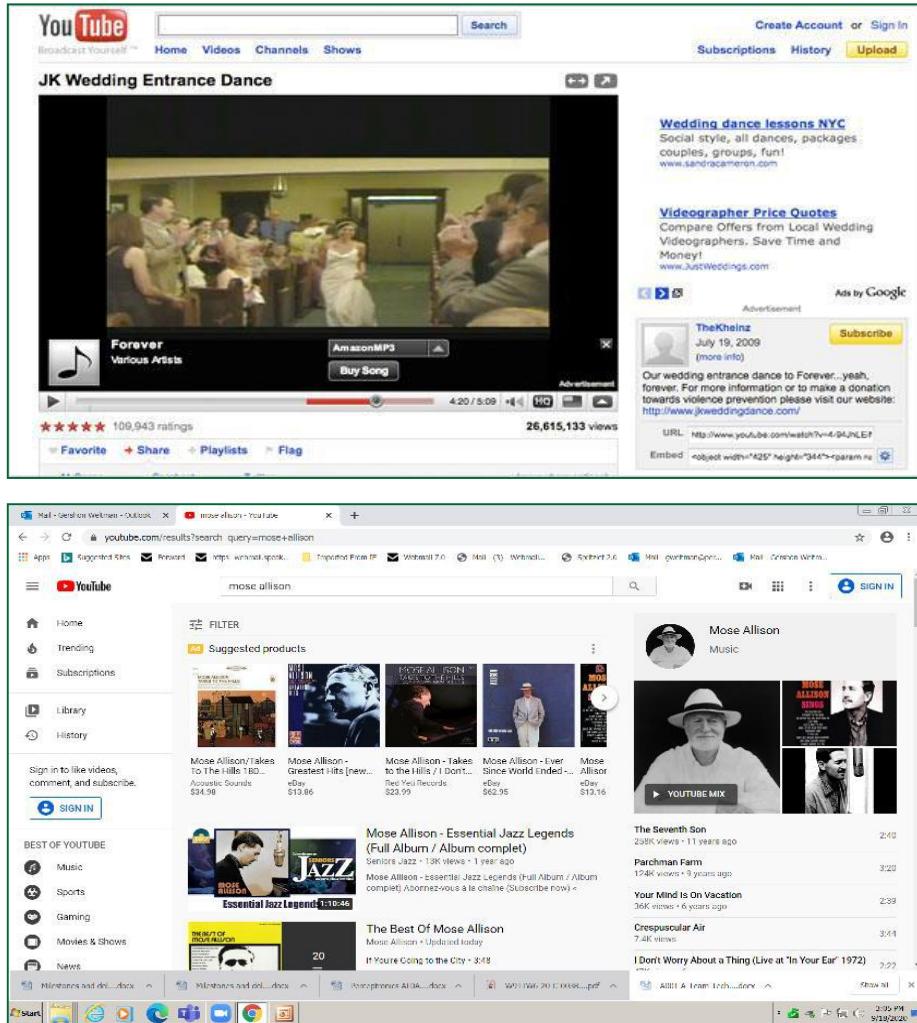


*Wikipedia
55,000,000 articles, 313 languages*



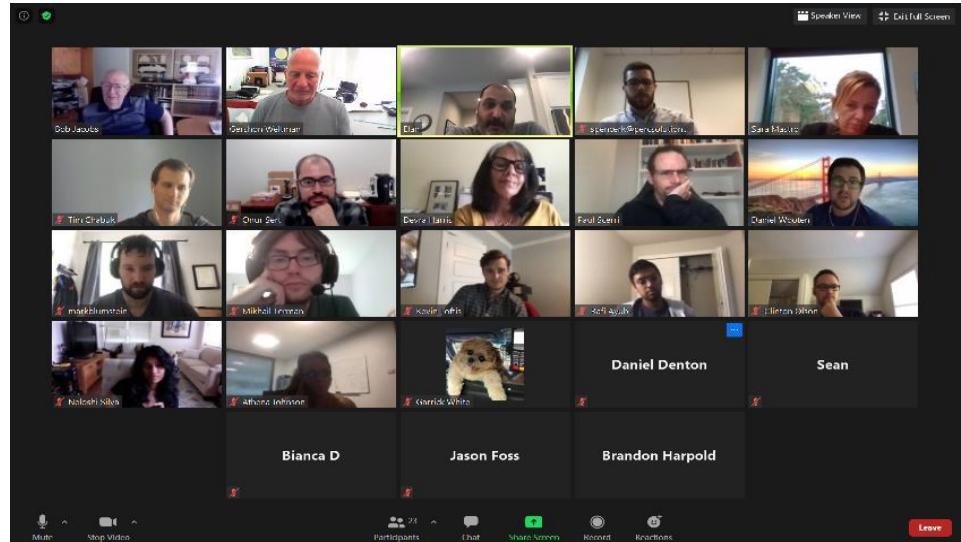
Societal Effects I

- Internet Services
 - ❑ Email
 - ❑ Browsers
- Information Distribution
 - ❑ Humongous repository
 - ❑ Virtually unlimited access
- Entertainment Modes
 - ❑ Online gaming
 - ❑ Video & music distribution
 - ❑ Personal publishing
- Social Networking
 - ❑ Friending and messaging
 - ❑ News sourcing
- Publishing and Grouping
 - ❑ Unlimited access
 - ❑ Group reinforcement
 - ❑ Hate amplification
 - ❑ Weaponization
- Cyber Crime
 - ❑ Illegal products/services
 - ❑ Ransomware



Societal Effects II

- Work Models
 - ❑ Real-time collaboration
 - ❑ Distributed enterprises
 - ❑ Online meeting



2020: Pandemic Acceleration



CRN ON | 2020: The Year Tech Changed the World

↳ On-demand event

Dear Gershon,

[CRN](#) has an insightful on demand conference made for you. [2020: The Year Tech Changes the World](#) in partnership with Agilitas.

[>> VIEW CONFERENCE ON-DEMAND](#)

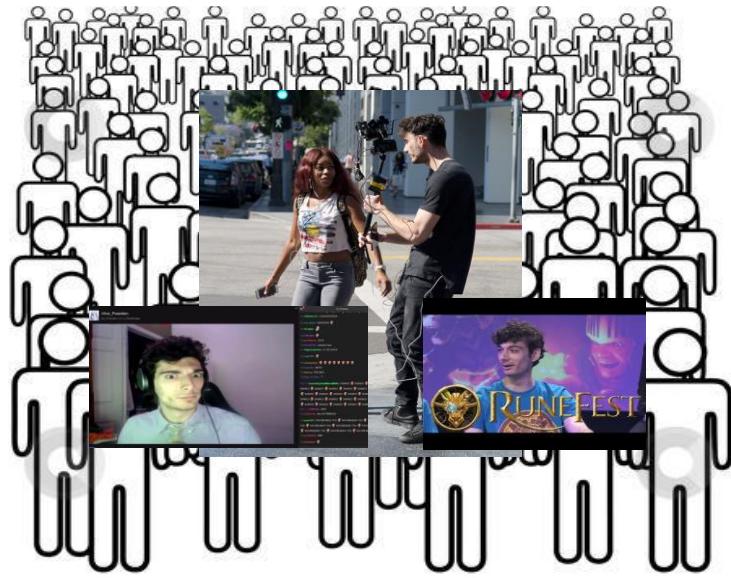
The world has changed significantly in 2020. Overnight employers had to implement sweeping changes to their working methods to make remote working a viable option for their business.

Where do we go from here? What are customers expecting from technology, and those that supply it, in this 'new normal'? And what is the channel's role in all of this?

“The world has changed significantly in 2020. Overnight, employers had to implement sweeping changes to their working methods to make remote working a viable option for their business.” Schools had to adapt similarly.

Societal Effects II

- Work Models
 - ❑ Real-time collaboration
 - ❑ Distributed enterprises
 - ❑ Online meeting
- Education and Training
 - ❑ Serious games
 - ❑ Online courses & degrees
- Medicine
 - ❑ Digital Patient Records
 - ❑ Remote consulting/treatment
- Business Models
 - ❑ Search engines
 - ❑ Directed advertising
 - ❑ Distributed fund raising
 - ❑ Cryptocurrencies
 - ❑ *Gig Economy*
 - ❑ *Sharing Economy*
 - ❑ Influencing & live streaming
 - ❑ Click brokering



Social Media: “A Place for Friends”



Social Media: “A Place for Friends”

facebook 

Search 

Home Profile Account ▾



Mark Zuckerberg

Has worked at Facebook Studied Computer Science at Harvard University Lives in Palo Alto, California From Dobbs Ferry, New York Born on May 14, 1984



Education and Work

Employers

 **Facebook**
Feb 2004 to present · Palo Alto, California
[FBX Profile](#)

College

 **Harvard University**
Computer Science · Psychology

- [CS182. Intelligent Machines](#) with Andrew Bosworth
- [CS121. Introduction to Computational Theory](#) with James Wang and Kang-Xing Jin

High School

 **Ardsley High School**

 **Phillips Exeter Academy**
Class of 2002

Philosophy

Favorite Quotes

"All children are artists. The problem is how to remain an artist once he grows up."

You and Mark


3 Mutual Friends

Sponsored [Create an Ad](#)

Police Auctions [gsaauctions.gov](#)



Like a slick deal? Now you can get up to 90% retail with police seized auctions. Get in on the action.

SF Bucket List [partners.livingsocial.com](#)



Things to do in San Francisco before you die. One huge coupon emailed daily.

Stay close to your team



Check the score and see highlights from the big game with AT&T High Speed Internet for only \$14.95/mo.

Craft Beer Attorney



Need legal assistance with your California craft beer?

Social Media: A Place for Messages

The screenshot shows the Twitter homepage with a light blue header. The Twitter logo is on the left, followed by a search bar with the placeholder "Search for a keyword or phrase..." and a "Search" button. Below the header, the tagline "Discover what's happening right now, anywhere in the world" is displayed. A dark blue navigation bar contains links for "Sunday", "Earth Hour 2010", "Ben & Jerry's", "TRENDING TOPICS", "Easter", "Justin Bieber", "Erase Debt Legally", and "Justin B".

See who's here

A grid of 16 small profile pictures representing various entities: Interactive MEDIA, a man, D3, a woman, SILICON ALLEY INSIDER, a woman, theONION, a cat, a cartoon face, a beach scene, a man, SCIENTIFIC AMERICAN, a man, GOOD, a woman, ART BEAT, and CBOE.

Friends and industry peers you know. Celebrities you watch. Businesses you frequent. Find them all on Twitter.

Top tweets [View all >](#)

JDBismylove Dear @twitter. I think you can officially change your name to justinbieber.com. Kthanks(:
3 hours ago

Film slashfilm We're Getting OLD -- Teenage Mutant Ninja Turtles Live-Action Movie Was Released 20 Years Ago Today
<http://bit.ly/cOJgmE>
4 hours ago

BRIANMBENDIS listen, do NOT yell: "release the kraken!!" before any sort of intimacy with your better half. you'll get the laugh, but that is about it.
4 hours ago

Social Media: A Place for Politics I



Protestors in Egypt, as in many other countries, were drawn together by Internet media

Social Media: A Place for Politics II



Image from itn.co.uk, February 2011

President Trump used ~35,000 Tweets to talk directly to the US and world population

Social Media: A Call to Violence...



Social media messages reportedly have helped incite racial, religious, anti-gay and political violence in India and Indonesia as well as in other countries.

...Even in America



January 6, 2021 insurrectionists were organized on social media and encouraged by President Trump during his rally to “show strength and fight” at the US Capitol.

Social Media Reaction

Facebook bans Trump

CEO Zuckerberg says 'the risks ... are simply too great.' Other online platforms rebuke the president.

BY ANDREA CHANG

A day after the mob he urged on stormed its way into the U.S. Capitol seeking to disrupt a count of electoral votes, President Trump faced the suspension of his Facebook account through the end of his term in office, the lingering threat of a similar action by Twitter and freezes or suspensions on other valuable social media and e-commerce channels under his control.

Facebook Chief Executive Mark Zuckerberg announced the suspension Thursday morning in response to Trump's messages condoning the rioters the day before. As members of Congress sheltered in place and law enforcement officers sought to secure the building, Trump posted a message saying his "sacred landslide election victory"



FACEBOOK CHIEF EXECUTIVE Mark Zuckerberg, shown in 2018, on Thursday of President Trump's account in response to his messages condoning rioters at the

TWITTER SHUTS DOWN TRUMP'S ACCOUNT

Company cites risk of violent incitement after warnings over president's rhetoric.

BY ELI STOKOLS,
ANDREA CHANG
AND SUHAUNA HUSSAIN

WASHINGTON — There are still 11 days remaining of the Trump administration, but Silicon Valley has ended the Twitter presidency.

Facing pressure from the public, high-profile figures including Michelle Obama and its own outraged employees, the San Francisco company said it "permanently suspended" President Trump's account Friday afternoon, two days after his rhetoric and social media posts were blamed for sparking a violent siege of the U.S. Capitol that left five people dead.

First of term

content," he said in a statement.

In a scathing statement Thursday afternoon, Michelle Obama called upon tech companies to do their part for "true patriotism."

"Now is the time for Silicon Valley companies to stop enabling this monstrous behavior — and go even further than they have already by permanently banning this man from their platforms," she said. Obama urged the companies to enact "policies to prevent their technology from being used by the nation's leaders to fuel insurrection."

Even prominent executives who had previously supported allowing the president to remain on the platforms have reversed course.

"I have long been a vocal defender of @Twitter's permissiveness of @realDonaldTrump's otherwise-violations of Twitter Rules," Adam Sharp, a former Twitter executive who started the company's government handle, wrote in a thread Thursday. He explained its stance as being based on "newsworthiness" exception" and a belief that

The Dark Net: Illegal Business Activities

 **Silk Road**
anonymous marketplace

Welcome meggyd!
messages(0) | orders(0) | account(\$0.00) | settings | log out

Shop by category:

- Drugs(1225)
- Benzos(73)
- Cannabis(505)
- Dissociatives(29)
- Ecstasy(63)
- Opioids(76)
- Other(168)
- Psychedelics(121)
- Stimulants(91)
- Apparel(4)
- Books(51)
- Collectibles(1)
- Computer equipment(3)
- Digital goods(36)
- Drug paraphernalia(28)
- Electronics(7)
- Food(2)
- Forgeries(4)
- Home & Garden(3)
- Lab Supplies(7)
- Medical(1)
- Money(43)
- Musical instruments(1)
- Convincer(1E)

 420g Pecunix \$150.20	 25c-NBOMe 1mg Blotter x50 881.28	 Island Sweet Skunk quarter ounce \$29.13
 20g Standard commercial Hash \$42.96	 GPS tracking device 821.44	 DNA Genetics Recon Breeders pack... \$30.29
 Paradise Seeds Dutch Dragon Breeders...	 1g Northern Light =SAMPLE ORDER=	 5g Top Swiss Quality Hash

News:

- New shipping and display **features**
- Site **glitches**
- Missing **deposits**
- Site **restored**
- Forum bugs **addressed**
- Pricing and hedging **improvements**
- Escrow hedging **update**
- New feature to help protect **sellers**
- Seller ranking and feedback **overhaul**

The Dark Net or Dark Web is defined as those parts of the Internet not accessed by conventional search engines – the underworld of the Net.

Cyber Highway Robbers

'Electronic stickups' raise alarm

The trend of hackers demanding ransoms to unlock malware troubles officials and inspires legislation.

BY RICHARD WINTON

When hackers took control of a small Boston-area police department's computer system last year, officials decided to pay \$500 to get back control.

A sheriff's department in Maine paid a \$300 ransom when its system was hijacked.

But when it comes to malware ransoms, Hollywood Presbyterian Medical Center paid a much bigger price. The hospital said it

Hackers tend to target smaller companies and government agencies that are less likely to have sophisticated computer protections.

Katherine Keefe, global head of Breach Response Services for Beazley, a specialty risk insurer, said her clients have seen an increase in ransomware attacks targeting a variety of fields, including higher education, finance, government, hospitality, retail, real estate and law.

Those attacks are made when a malware program [See Malware, B5]



Demands for ransom range from \$300 for households to \$25,000,000 for corporations

A Recent Ransomware Attack

Pipeline cyberattack spotlights vulnerabilities

Use of ransomware is on the rise, and the hack of Colonial shows infrastructure in U.S. remains at risk.

BY DEL QUENTIN WILBER

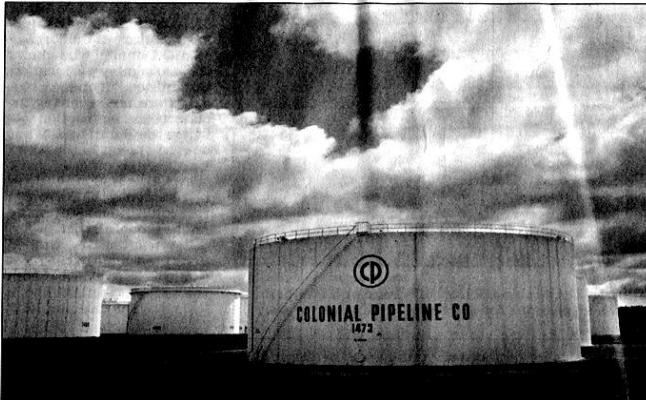
WASHINGTON — A major fuel pipeline supplying the East Coast was shut down Friday after the Georgia-based company operating it became the victim of a ransomware attack.

Friday's hack forced Colonial Pipeline to halt operations in what it called an abundance of caution. The company said the ransomware attack targeted its information technology systems. White House officials said Monday that the pipeline did not appear to suffer any damage.

Cybersecurity experts have been warning for years about the threat posed by a ransomware attack on U.S. infrastructure in the wake of thousands of successful hacks of computer systems operated by governments, school districts, companies and hospitals. To combat such cyberattacks, governments and businesses must beef up their defenses, better prepare to respond to intrusions and put diplomatic pressure on countries harboring cybercriminals, the experts say.

What happened?

Ransomware is malware that infects and locks computer systems until victims pay hackers a fee to unlock them. Hackers typically infect such systems by tricking unwitting computer



COLONIAL Pipeline storage tanks in Woodbridge, N.J. A ransomware attack last week forced Colonial to halt operations in what it called an abundance of caution.

SETH WENIG Associated Press

a ransomware attack that locked up its business-side computers. The company said in a statement that on Friday it "proactively took certain systems offline to contain the threat, which has temporarily halted all pipeline operations." The cyberattack did not appear to infect systems operating the pipeline.

By Monday, the company reported, it was bringing back online segments of the pipeline, which supplies about 45% of jet fuel, gasoline and heating oil consumed on the East Coast. White House officials and industry analysts said the shutdown was not likely to cause fuel shortages or lead to a rise in gas prices.

"It is relatively easy to hack a business network," said James Lewis, a senior

thing right after it was hacked. But we don't yet know if Colonial made the right move to prevent the hackers from crossing over."

How big a problem is ransomware?

The Colonial hack shouldn't surprise anyone, said Bruce Schneier, a cybersecurity expert and lecturer at Harvard University's Kennedy School of Government.

"This happens hundreds of times a day," Schneier said. "These hackers, this time, just happened to land a big fish."

A task force of more than 60 experts from industry, government and nonprofits issued a report last month that called ransomware "a flourishing criminal industry" that not only risks the

Security and Technology, estimated that nearly 2,400 governments, healthcare facilities and schools were victims of ransomware attacks last year. Ransom payments rose to \$350 million last year, a 300% increase over 2019, the report said. The average such payment topped \$300,000.

The problem is growing, experts said. A cyber insurance firm told the task force that it tallied a 260% increase in ransomware attacks of its policy holders. A cybersecurity firm estimated that ransomware hacks spiked 700% in 2020 over 2019.

Christopher Krebs, the former head of the Department of Homeland Security's Cybersecurity and Infrastructure Security Agency, testified before

Why are ransomware attacks on the rise?

Cybersecurity experts say two trends are behind the increase in ransomware assaults. The first, they said, was the growth of difficult-to-trace cryptocurrency, which has allowed hackers to easily obtain large ransom payments under the nose of financial regulators.

Meanwhile, they said, foreign governments have recognized the value in allowing hackers to operate inside their borders. Such hackers pay bribes to officials and agree to target only victims overseas. Russian operatives, in particular, believe such hackers help advance their foreign policy goals by causing trouble for adversaries, according to law enforcement officials and cybersecurity experts.

President Biden told reporters Monday that it did not appear that Moscow was behind the attack but there was evidence the "actor's ransomware is based in Russia."

"I'm going to be meeting with President Putin," Biden said, referring to his Russian counterpart. "They have some responsibility to deal with it."

Who targeted Colonial Pipeline?

The FBI on Monday attributed the attack to DarkSide ransomware, which is produced by an eponymous criminal organization that U.S. officials and cybersecurity experts say operates in Eastern Europe or Russia.

DarkSide is a "ransomware-as-a-service"

The group's malware packs a dual punch: It not only locks networks but also siphons data. This kind of attack is effective even if a company or government backed up its information to mitigate the damage from ransomware because hackers can still threaten to release the data they are holding publicly or to competitors.

Cybereason, a Boston-based cybersecurity firm, reported that DarkSide's approach "effectively renders the strategy of backing up data as a precaution against a ransomware attack moot."

In a statement obtained by multiple media organizations, DarkSide said its "goal is to make money, and not creating problems for society."

What's next?

The U.S. government is taking steps to address the ransomware threat. The Justice Department last month formed a task force to combat ransomware, and the Biden administration says it is formulating a plan to tackle the problem.

Cybersecurity experts said they expect high-profile hacks like the one on Colonial Pipeline to prod potential victims to heighten security, create backups of data and come up with response plans.

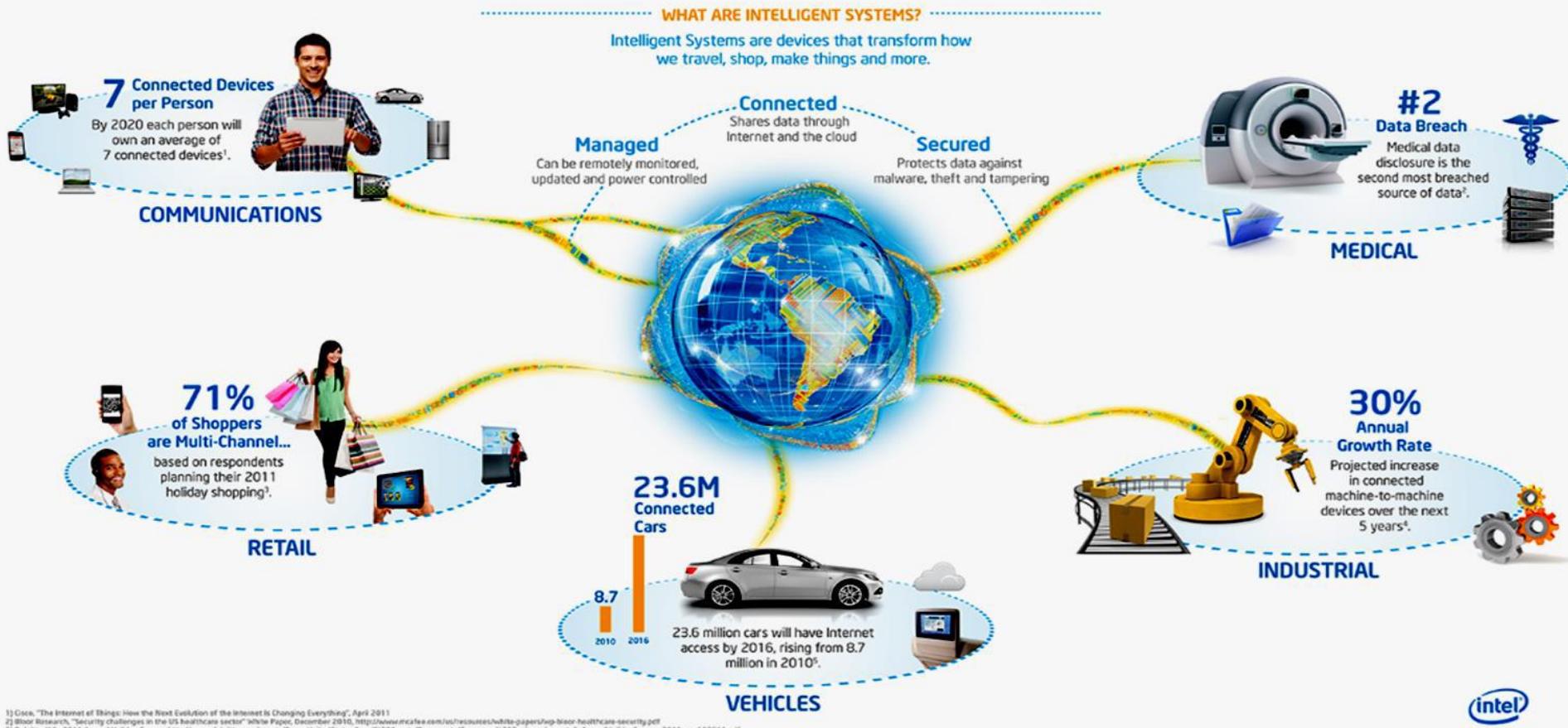
"This problem will be greatly reduced over the next year because there is so much attention being paid to it," predicted Lewis, the cybersecurity expert at the Center for Strategic and International Studies.

Other experts are not so sanguine, saying hackers

Darkside cyber robbers from eastern Europe say they're only in it for the money

The Next Stage: The Internet of Things (IoT)

Intelligent Systems for a More Connected World



The attempt to connect everything that's part of modern life via the Internet raises serious new issues of device security – even of murder by hacking.

The attempt to connect everything that



IoT Security Danger

Sounding the alarm on Ring

Reports of hacking expose privacy risks of the video doorbells



RING has come under fire from legislators, security experts and users for what critics say are its own suspect security procedures.

MICHAEL HILTZIK

For a company that says its goal is to help people secure their homes from criminals, Ring hasn't had an enjoyable last few months. The Santa Monica company, which sells internet-enabled video doorbells and home security cameras and was acquired by Amazon in 2018 for a reported \$1 billion, has come under fire from legislators, security experts and customers for what the critics say are its own suspect security procedures.

In November, Sen. Edward J. Markey (D-Mass.) upbraided the company for making deals with law enforcement agencies that could expose customers and their neighbors to "invasive or even discriminatory information-gathering practices" by police.

Separately, Markey and four Democratic Senate colleagues raised questions about technical flaws in Ring products that "left customer video feeds vulnerable to eavesdropping and manipulation by malicious actors."

[See Hiltzik, C3]

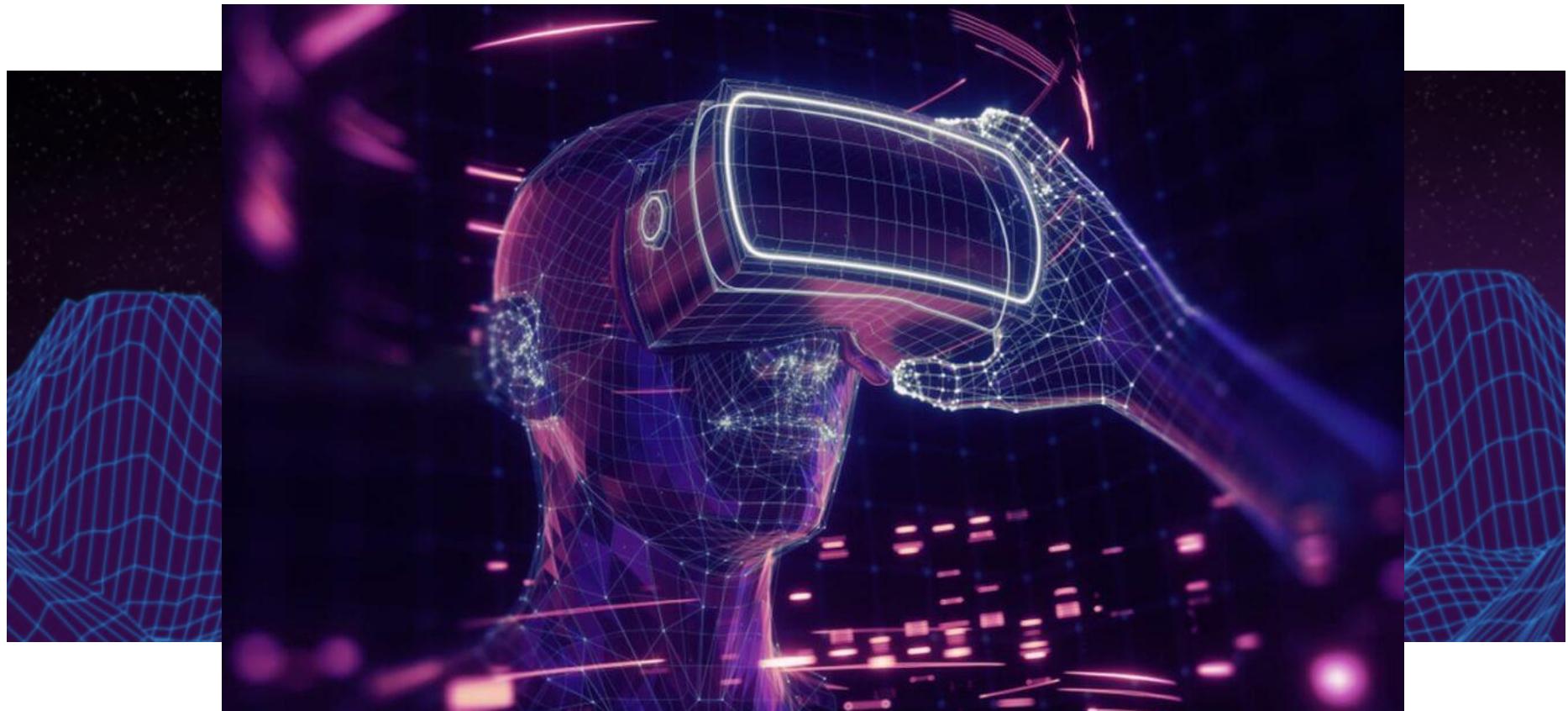


Los Angeles Times, January 12, 2020

- Hackers broke into Ring products to yell obscenities at customers in their homes, peep at and harass children, utter racial slurs and make violent threats and extortion demands
- In mid-December 2019 over 3,000 Ring account holders were hacked, exposing personal information
- Law enforcement has open access to Ring video with no restrictions on sharing users' footage with third parties and no legal need to delete
- Ring has acted to increase its security but similar dangers face other IoT products and services

While the use of the Internet as a platform to connect and provide access to everything is tempting technically it exposes the public to many new dangers

Beyond the Internet and the IoT: The Metaverse

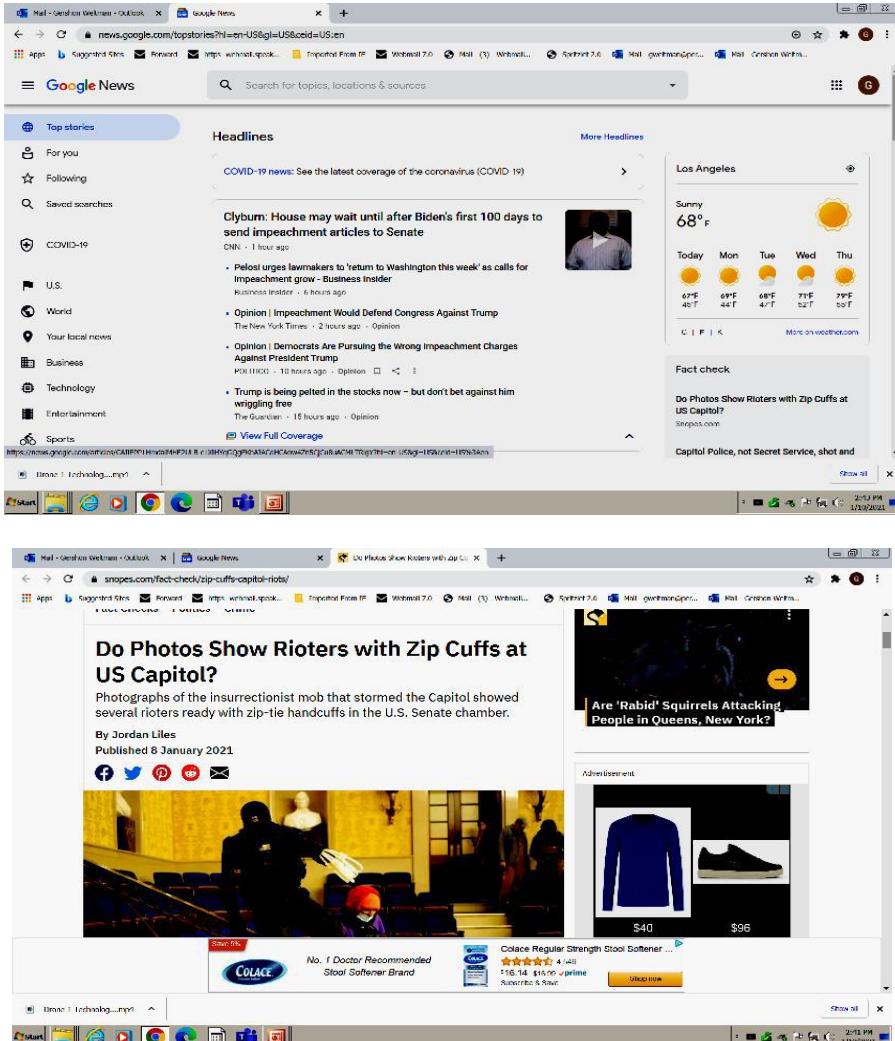


The Metaverse is a set of multi-purpose virtual environments accessed by augmented reality headsets and other devices. The term was coined by Neal Stapleton in his sci-fi novel “Snow Crash.” Meta, the parent company of Facebook, is investing billions in creating the Metaverse.

Ethical Issues of Connectivity

- **Case 1: News and Publication**
- **Case 2: Groups and Hate**
- ***Case 3: Weaponization***
- **Case 4: Modes of Individual Behavior**
 - **On-line vs Off-line personalities**
 - **Fictitious presence**
 - **Destructive comments, gossip and attacks**
- **Case 5: Cyber Dependency**

Ethical Case 1: News and Publication



Characteristics of new News

- ❑ Immediacy + Interactivity
 - ❑ Crowd Sourcing
 - ❑ Fake News vs. Real News
- ## New Standards for Publication
- ❑ Books, articles, movies, music
 - ❑ Ambiguous authority/accountability
 - ❑ Misinformation and information

Ethical Case 2: Groups and Hate

- Characteristics of News
 - Immediacy + Interactivity
 - Crowd Sourcing
 - Fake News vs. Real News
- Standards for Publication
 - Books, articles, movies, music
 - Ambiguous authority/accountability
 - Misinformation and information
- Groups Benign, Bizarre, Dangerous
 - Ease of recognition and association
 - Conspiracy theories prevail
 - Internet of hate has emerged



Example: A Flat Earth – Revelation Revived

The screenshot shows a Microsoft Internet Explorer browser window with the following details:

- Address Bar:** https://www.thedailybeast.com/inside-the-flat-earth-conference-where-the-worlds-oldest-conspiracy-theory-is-hot-again?via=newsletter&source=Weekend
- Toolbar:** Includes icons for Back, Forward, Stop, Refresh, Home, and Favorites.
- Header:** The Daily Beast logo, followed by "FOLLOW", "JOIN", "LOG IN", and a search icon.
- Navigation Bar:** CHEAT SHEET, POLITICS, ENTERTAINMENT, WORLD NEWS, HALF FULL, ARTS AND CULTURE, U.S. NEWS, TECH, HUNT FOR THE CURE, SCIENCE, SCOUTED, TRAVEL.
- Advertisement:** An Intel Optane SSD DC P4800X advertisement with the text "ACCELERATE PERFORMANCE EXPAND DATASETS ELIMINATE BOTTLENECKS".
- Article Section:** LINEAR THINKING
- Article Title:** *Inside the Flat Earth Conference, Where the World's Oldest Conspiracy Theory Is Hot Again*
- Text:** Thanks to YouTube, an idea discredited thousands of years ago attracts die-hards, grifters, and trolls. They even have their own convention.
- Author:** Kelly Weili | 11.17.18 9:00 PM ET
- Share Buttons:** Facebook, Twitter, Email, Print.
- Image:** A small thumbnail image of a flat Earth diagram.
- Right Sidebar:** READ THIS LIST, featuring the headline "California Fire Victims Burned Alive In Cars As They Fled" by ALLIN YOUNG.
- Taskbar:** Shows icons for Start, File Explorer, Edge, and Google Chrome. The system tray shows the date and time as 9:21 AM 11/19/2018.

Example: Platforms for Conspiracies

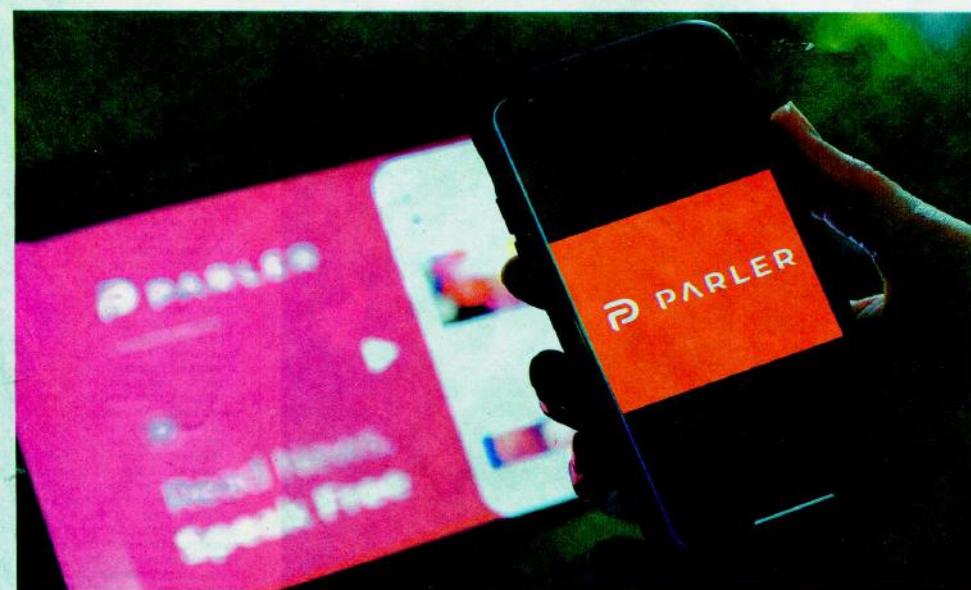


Qanon is a wide-ranging conspiracy theory that has become a political movement

Example: Platforms for Conspiracies

Just as Gamergate provided a forum for proponents of game violence, the Parler social media platform is providing a forum for proponents of numerous conspiracy theories, with little or no fact checking.

LATIMES.COM/CALENDAR LOS ANGELES TIMES SUNDAY



OLIVIER DOULIERY AFP via Getty Images

EXTREMISM BY DESIGN

SOME CONSERVATIVES, UPSET OVER SOCIAL MEDIA'S FACT CHECKS, ARE MOVING TO PARLER, WHERE CONSPIRACIES AND POT STIRRING TEND TO BE AMPLIFIED

CAROLINA A. MIRANDA
ARTS AND URBAN DESIGN COLUMNIST

Example: A Hate Filled Web



Example: The Case of “Tay” Bot

- The chatbot Tay was developed by teams from Microsoft and Bing and targeted at 18 - to 24 -year -olds in the US to “conduct research on conversational understanding.”
- But Tay’s conversation soon extended to racist, inflammatory and radical political statements ... with Tay being encouraged to repeat variations on “Hitler was right” as well as “9/11 was an inside job.”
- Tay was only repeating other users’ inflammatory statements, but AI learns from those interactions.
- It’s therefore surprising that Microsoft and Bing didn’t factor in the Twitter community’s fondness for hijacking brands’ attempts at engagement

<https://www.theguardian.com/technology/2016/mar/24/tay>



Industry Awareness

The Washington Post *Democracy Dies in Darkness*

Misinformation on Facebook got six times more clicks than factual news during the 2020 election, study says

Right-leaning pages also produce more misinformation, the forthcoming study found.



Listen to article 7 min

By Elizabeth Dwoskin

Yesterday at 12:01 p.m. EDT



Industry Response: Hate Awareness

The screenshot shows a web browser window with the URL http://oecdobserver.org/news/archivestory.php?aid=422/Fighting_hate_on_the_Internet.html. The page is from the OECD Observer, a publication of the Organisation for Economic Co-operation and Development (OECD). The main navigation menu includes Home, Sections, General, Countries, Data, People & events, and Archive. The article title is "Fighting hate on the Internet" by Dr. Elliot Sacerdote, Professor of Criminal Law, International law and Criminology. The article discusses the spread of hate material on the Internet and the challenges of addressing it. It features a cartoon illustration of a figure holding a flag labeled "HATE". To the right of the article, there is a sidebar titled "Economic data" showing GDP growth, consumer price inflation, trade, and unemployment statistics. Below that is a chart titled "Composite leading indicator (CLI)" showing a long-term average from May 2010 to March 2014. The chart shows a peak around 2011 followed by a decline. A "Related articles" section at the bottom links to "Korea's digital governance", "Getting smart: Korea's creative economy", and "The innovation wave".

Fighting hate on the Internet

Dr. Elliot Sacerdote, Professor of Criminal Law, International law and Criminology

Hate material is spreading on the Internet. The question is what, if anything, can be done about it. What are the technical, legal and strategic options available?

The Internet is wonderfully versatile, which is why everyone is turning to it for information and trade. The trouble is, so are criminals. All sorts of crimes are committed using the net, from straightforward hacking to industrial espionage, sabotage, fraud, infringement of copyright, illegal gambling and trade in narcotics, medicines and armaments. The web is also used to peddle child pornography. And it is a vehicle for the dissemination of hate literature.

Neo-Nazi groups have taken advantage of the internet to spread their doctrine. Their campaigns, which specifically target young people, encourage racist violence and propagate revisionist lies about the Holocaust. Hateful songs and children's games can be downloaded; one game allows the child to assume the role of a concentration camp commandant.

The producers of this material – like others who misuse the Internet – are often not brought to book. This is mainly because the anonymity of the Internet makes it difficult to identify those responsible. If offenders are traced, they are frequently to be found in foreign countries, and prosecuting them requires lengthy co-operation and extradition procedures. In any case, such

Economic data

GDP growth: 10.5% Q3 2010 year on year
Consumer price inflation: 2.1% Jan 2010 annual
Trade: +0.0% exp, +0.7% imp, Q2 2010
Unemployment: 5.3% Jan 2010

Composite leading indicator (CLI)

Amplitude adjusted, long-term average = 100, May 2010 – Mar 2014

OECD

Last update: 12 Mar 2010

Related articles

- > Korea's digital governance
- > Getting smart: Korea's creative economy
- > The innovation wave

Facebook Says the Right Things...

Sharing Our Actions on Stopping Hate



Facebook is committed to making sure everyone using our platforms can stay safe and informed. As part of our ongoing effort, we're making changes to our policies, investing in system transparency and sharing work we're doing to address the 10 recommendations outlined by the Stop Hate For Profit boycott organizers. Below are some of the updates on progress that we've shared:

Other platforms as well have increased their efforts and ability to detect and remove hate messaging; as companies they have substantial leeway to do so.

...But Doesn't Always Act Accordingly

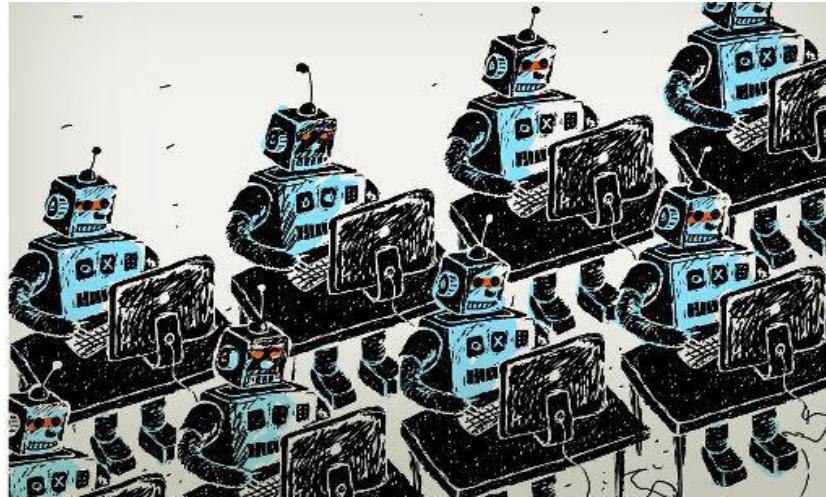
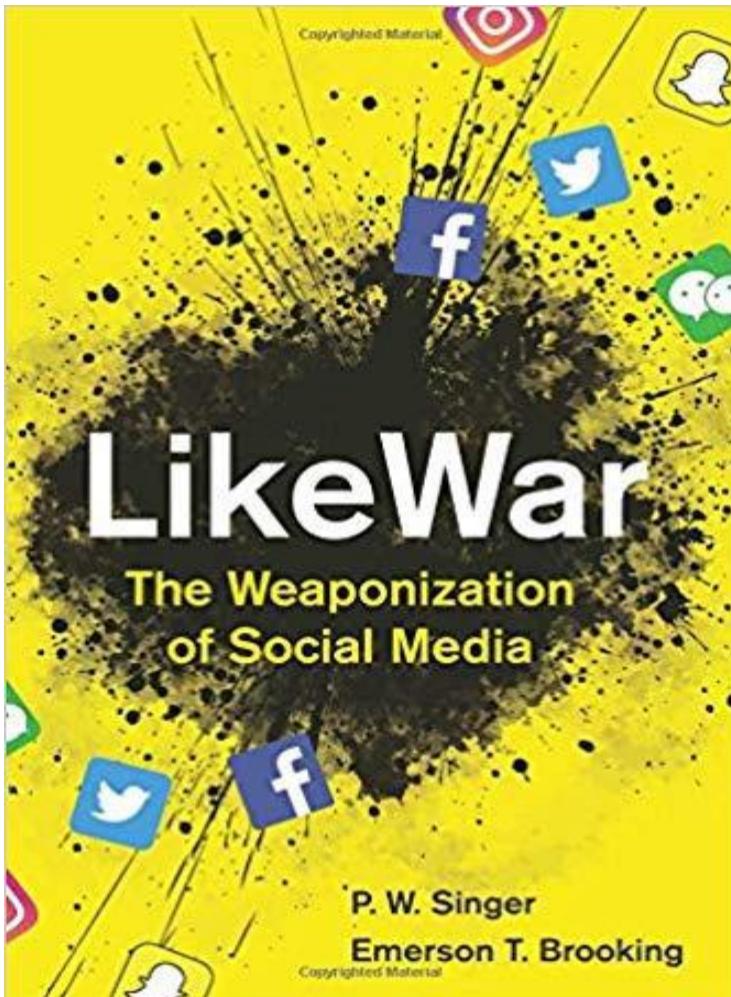


Frances Haugen, former Facebook employee and head of its civic-integrity team, testifying before the Senate on October 5, 2021

Haugen testified that Facebook knowingly used algorithms that:

- Enhanced political divisiveness
- Led users to extreme conspiracy theories
- Were particular effective on teenagers

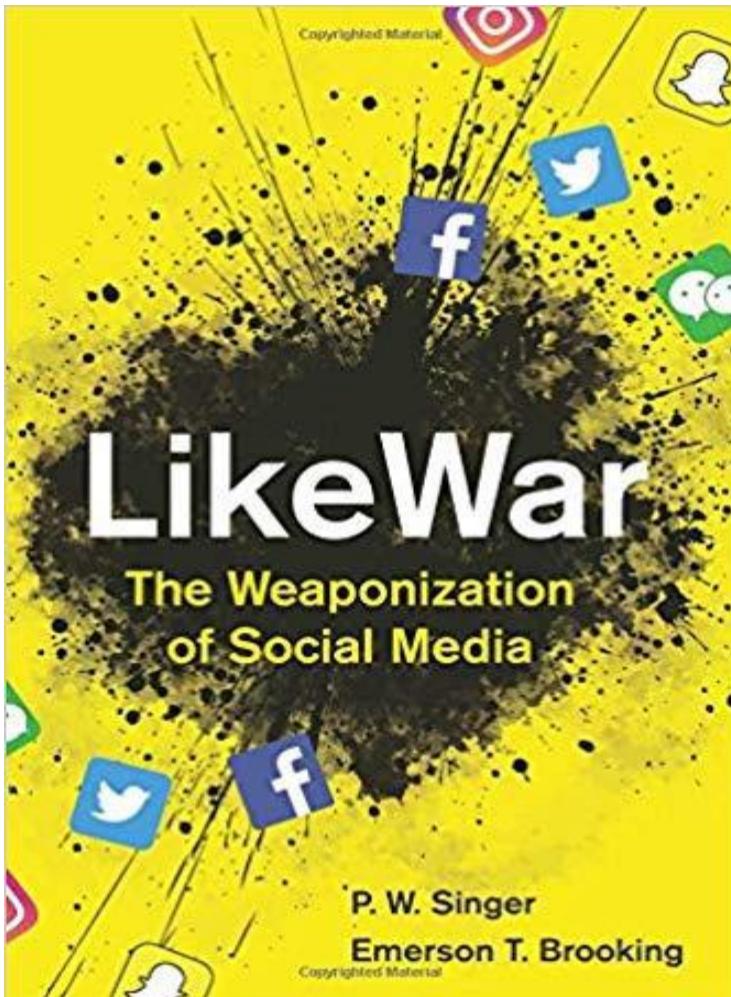
Ethical Case 3: Weaponization



Mass social media messages are used to influence personal preferences.

An estimated 30% are created by bots with some degree of AI.

Ethical Case 3: Weaponization



- Terrorist Movements
- Political Campaigns
- Economic Campaigns
- Societal Movements
- Gang Conflicts

Mass social media messages are used to influence personal preferences.

An estimated 30% are created by bots with some degree of AI.

Example: Russian Fake Election Post



Posts manufactured in 2016 by "troll factory" Internet Research Agency in St. Petersburg, Russia created a demonstration outside a mosque to protest a visit by presidential candidate Clinton. It was all fake news to inspire discord.

Example: Diverse Russian Sites



The objective was to divide the electorate by setting groups against each other.

Example: COVID Misinformation

TOP NEWS REGIONS TOPICS

"virtually everyone who is in the hospital sick with covid 19...is vaccinated" - V.P. Kamala Harris

4:14 PM · Nov 7, 2021 · Twitter Web App

Screenshot of a tweet taken on November 8, 2021.

More tweets with the clip – part of a trend of inaccurate information about Covid-19 vaccines spreading across the internet -- appeared [here](#) and [here](#).

DARPA Fights Back with New R&D Program

Influence Campaign Awareness and Sensemaking (INCAS)

- Problems with Current Countermeasures
 - Manual and ad hoc primarily
 - Social listening and limited number of inputs are main sources
 - “Low and slow” campaigns are difficult to detect
 - Assessing influence with specific groups is very difficult
- Proposed New Approach
 - *TA1: Automated Influence Detection*; identify influence indicators
 - *TA2: Population Response Characterization*; segment by psychographic and demographic attributes, worldviews, values and develop correlation statistics
 - *TA3: Influence Campaign Modeling*; techniques for analyst-machine sensemaking
 - *TA4: Data and Testbed Development*; provide data feeds from many sources and testbed for demonstrating TA1, TA2, TA3 technologies

INCAS will primarily use publicly available data sources including social media, online news sources, and online reference data sources. *INCAS will not intentionally process text from US persons. If US person data inadvertently collected, they will be deleted.*

DARPA Fights Back with New R&D Program

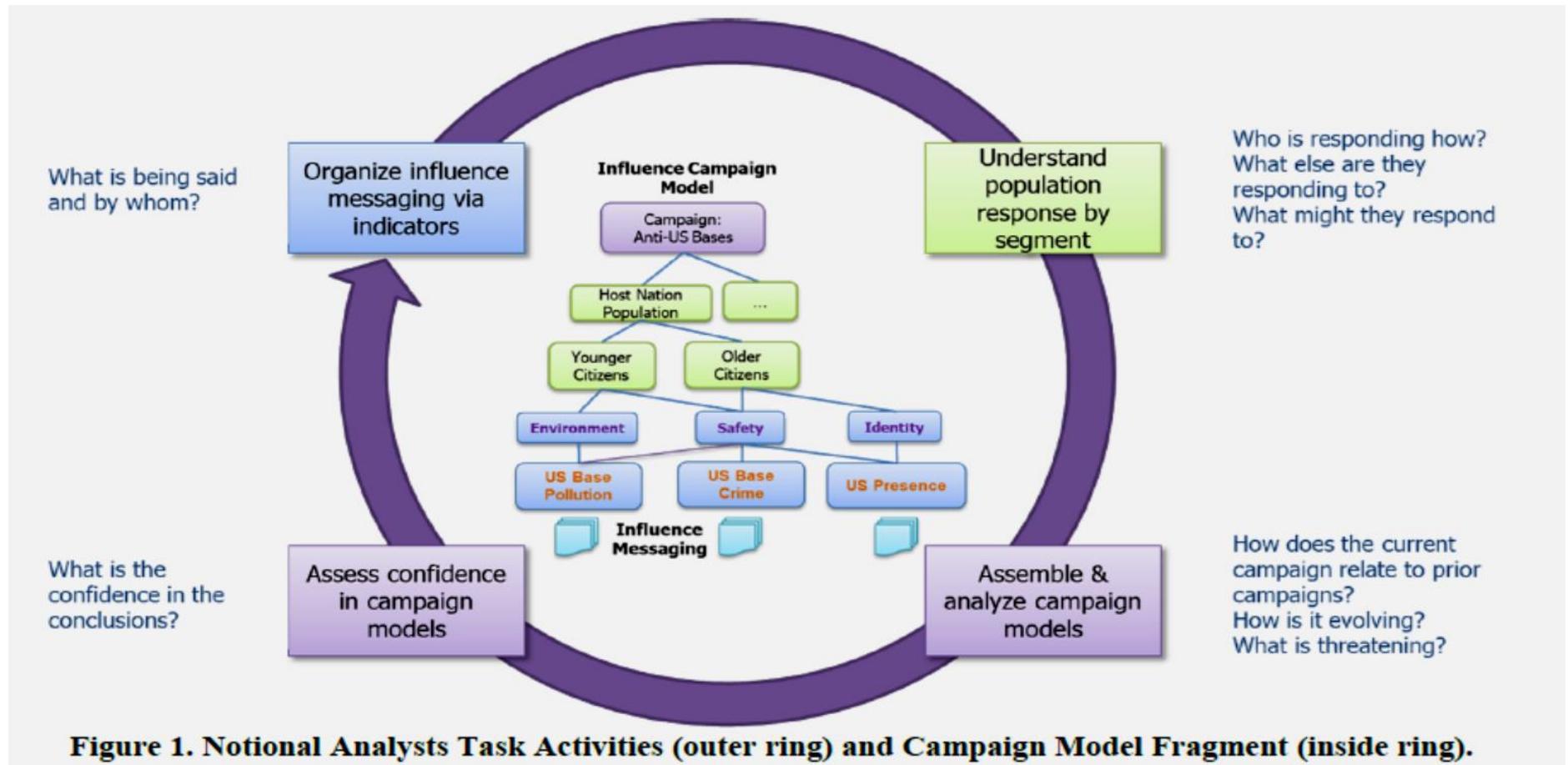


Figure 1. Notional Analysts Task Activities (outer ring) and Campaign Model Fragment (inside ring).

Ethical Case 4: Individual Behavior

People say it's easier to lie on a Blackberry or other messaging device

- Feel less guilty lying remotely 51%
- Have lied remotely at the workplace
 - About something 67%
 - About being sick 43%
 - To hide incomplete work 23%
 - To hide a big mistake 18%
- Have lied remotely in personal life
 - To family or partner 40%
 - About clothing and costs 37%
 - About looking good 35%
 - About eating and drinking 35%
 - About weight 32%

* From survey by UK firm 72 Point (<http://news.yahoo.com>, December 28, 2006)

One Can Be Anonymous as a Sender...



"On the Internet, nobody knows you're a dog."

...Causing Untraceable Harm to the Receiver

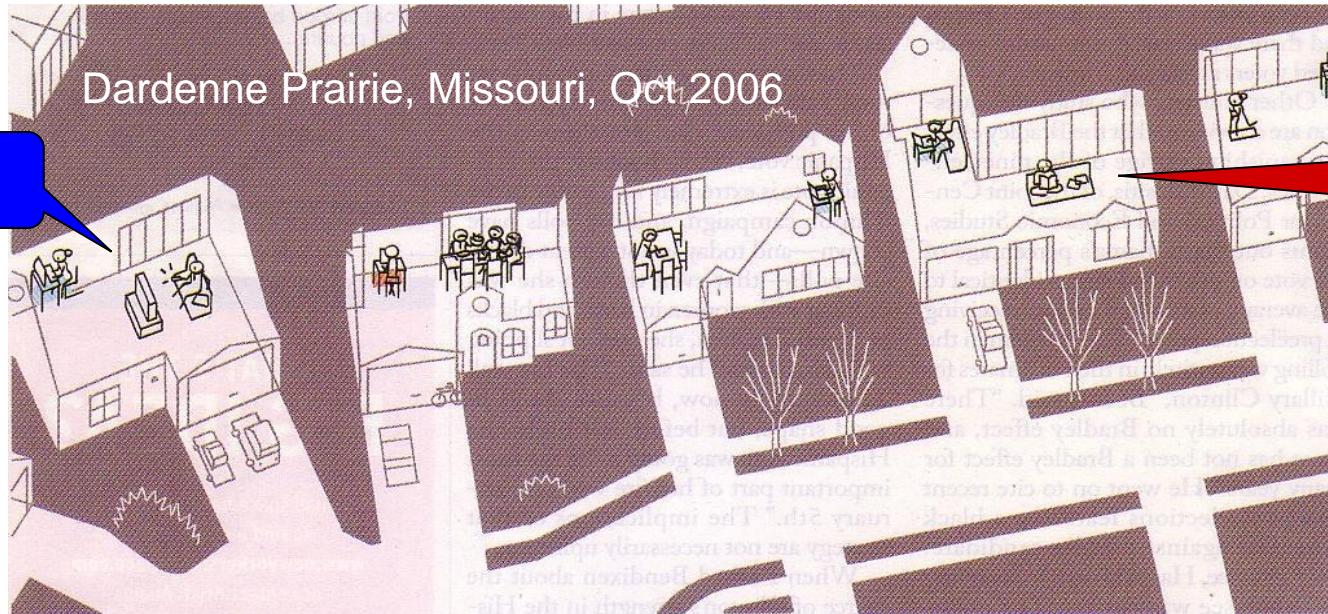


Example: Malicious Presence (Disturbing)



Internet Trolls use the power of anonymity to target and harass individuals who most frequently are not personally known to them.

Example: Malicious Presence (Deadly)



- Troubled teenager Megan Meier has argument with teenage girl friend
- Mother of Megan's friend contacts Megan through Megan's MySpace site
- She pretends to be a boy who befriends Megan -- then cruelly drops her
- Megan commits suicide in her despondency
- Local police and courts find no law under which to charge neighbor mother
- CA convicts mother for violating MySpace conditions; overturned in appeal
- Will new online ethical considerations bring new regulations and laws?

The Legal and Ethical Issues are Open

Jamey Rodemeyer Suicide: No Charges For Death Of Bullied Gay Teen, Police Say



CAROLYN THOMPSON 11/22/11 05:49 PM ET Associated Press

React



AMHERST, N.Y. — Police investigating the suicide of a gay teen who reportedly faced harassment online and at school couldn't be considered criminally responsible.

Amherst investigators last month sent 14-year-old Matthew Woods to a psychiatric hospital to determine whether anyone should be prosecuted. Woods had been hospitalized earlier this year after he interviewed Jamey's family, friends and neighbors about his death. He had just begun his freshman year, Chief John Askey told reporters during a news conference.

"He was exposed to stresses in every aspect of his life," Askey told reporters during a news conference.

But neither the in-school bullying nor the "inappropriate" online comments that led to his death will help prove harassment or other criminal charges.

Britain wrestles with free speech on Web

BY HENRY CHU

CHORLEY, England — Everyone agrees that his "jokes" making fun of two kidnapped girls crossed the line. Matthew Woods swiftly became an object of contempt after he posted the crude and offensive comments on his Facebook page,

But did he deserve to be locked up for them?

A judge thought so, and ordered the 19-year-old to spend 12 weeks in jail, essentially for overstepping bounds of good taste. Woods now sits behind bars — and

also in the middle of a growing clash in Britain between freedom of expression, social

revolution, and the digital

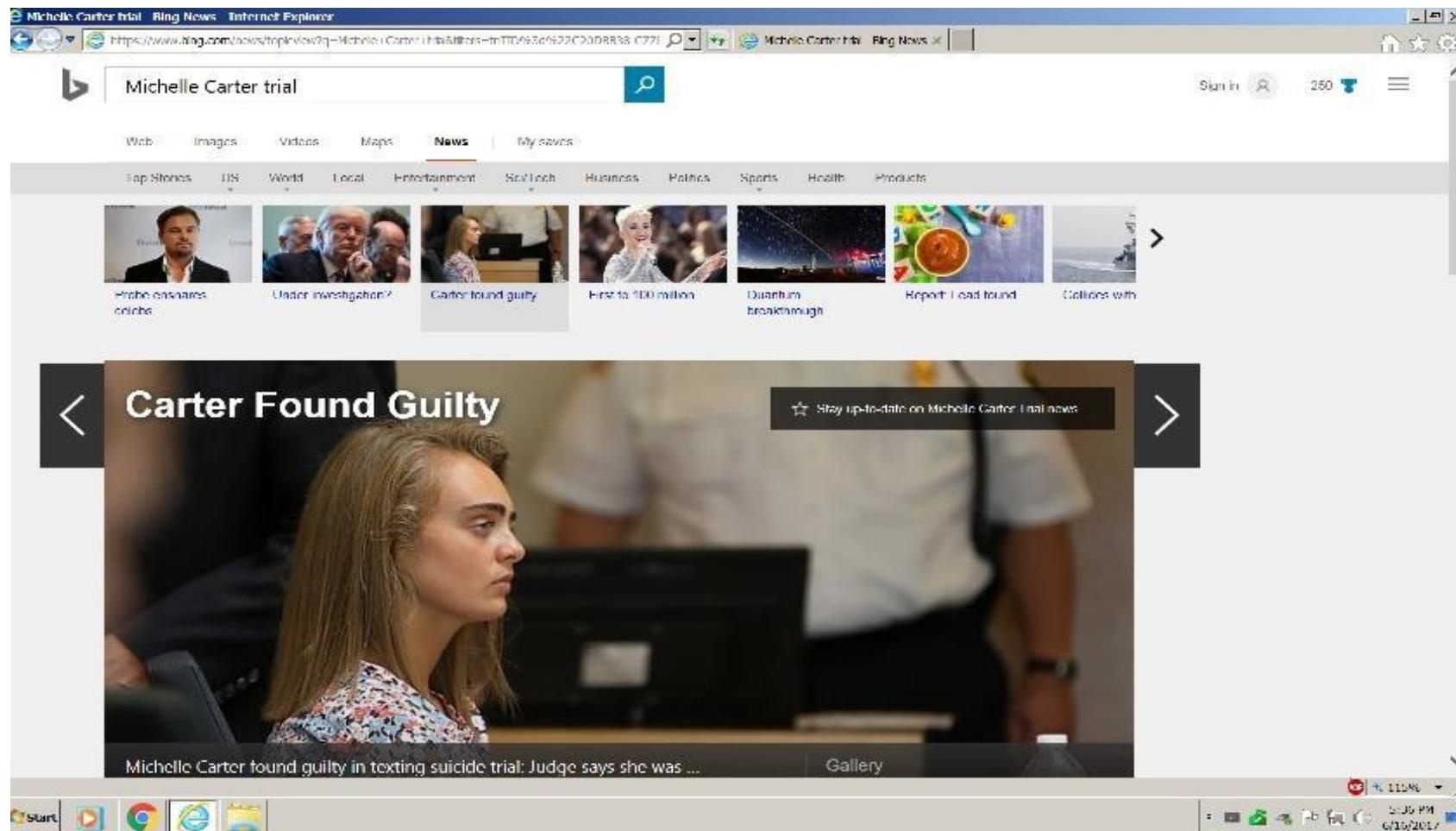
Woods is one of several people whose use of social media has landed them on the wrong side of the law. They've been arrested or otherwise subjected to public censure for posting distasteful opinions or malicious statements online, remarks that would've

The Legal and Ethical Issues are Open

A screenshot of the USA Today website. At the top, there is a navigation bar with links for File, Edit, View, Favorites, Tools, and Help. Below this is a toolbar with icons for Forward, Back, Stop, Refresh, and various browser controls. The USA Today logo is prominently displayed. A search bar with a magnifying glass icon is located at the top right, along with a 'SUBSCRIBE NOW' button offering '3 MONTHS FOR \$25'. The main menu includes categories like NEWS, SPORTS, LIFE, MONEY, TECH, TRAVEL, OPINION, CROSSWORD, ELECTIONS 2016, OLYMPICS, VIDEO, STOCKS, APPS, and MORE. A red banner at the bottom of the menu bar displays 'BREAKING NEWS' followed by the headline 'Islamic State claims responsibility for attack on Bangladesh capital' and a link to 'Read Story'. The main content area features a large headline 'Court: Teen who texted boyfriend urging suicide to stand trial'. Below the headline is a photo of a young woman (Michelle Carter) looking down. To the left of the photo are social media sharing icons for Facebook, Twitter, LinkedIn, and Email. The text of the article discusses a Massachusetts girl who urged her boyfriend to commit suicide via text messages and was found guilty of involuntary manslaughter. The article also mentions that the Supreme Judicial Court ruled that a grand jury had probable cause to indict Michelle Carter, then 17, in the 2014 death of Conrad Roy III. The text concludes that Carter's lawyer argued that her texts were protected by the First Amendment. To the right of the article is a sidebar advertisement for Southern California Edison (SCE) with the headline 'Tools to Help Manage Usage?' and the slogan 'WE'RE ON IT'. The advertisement features a man working on a laptop. At the bottom of the page, there is a 'MORE STORIES' button and a zoom control set at 100%.

Michelle Carter was presented as an evil, manipulative influence on Conrad Roy

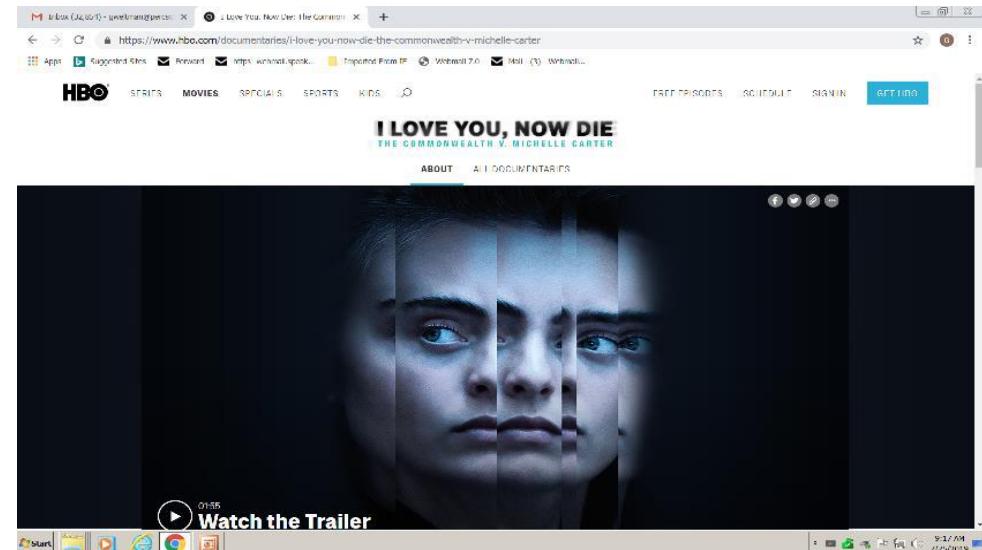
The Legal and Ethical Issues are Open



Michelle's confessed "get back in" directive was a strong factor in her conviction

The Legal and Ethical Issues are Open

- An HBO documentary describes a more complex and nuanced case
- Conrad Roy had attempted suicide four times before
- Michelle Carter was a troubled teen who may have been trying to help a boy she believed she loved
- No corroborating evidence that Michelle had urged Conrad to continue his suicide attempt
- **What apparently weighed heaviest in the jury's verdict was the 1000s of previous text messages the two had exchanged!**



The idea of “Internet dependency” made this a crime and not just a tragedy

People Fight Back: Against the Platforms

Woman sues tech firms over son's suicide

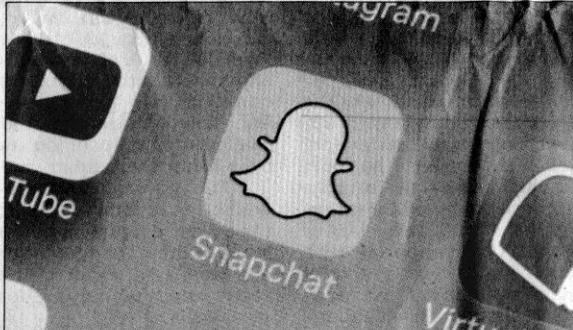
Mother of 16-year-old who was cyberbullied blames Snapchat and two anonymous messaging apps.

BY SAM DEAN

One of the last things that Carson Bride did before taking his own life was look to his phone for help.

The 16-year-old had been receiving anonymous messages for months, according to a federal lawsuit filed Monday in California, through a popular Snapchat app called Yolo. The messages included sexual comments and taunts over specific incidents, such as the time he'd fainted in biology class at his Portland, Ore., school.

The messages had to be coming from people he knew, but the app's design made it impossible for him to know who was behind it. If he replied to the taunts, Yolo would automatically make the original message public, revealing his humiliation to the world.



RICHARD DREW Associated Press

CARSON BRIDE, 16, received anonymous messages on Snapchat for months before he killed himself.

vent bullying by the family of Tyler Clementi, who took his own life at age 18 in 2010 after experiencing cyber harassment by a dorm mate at Rutgers University.

Snap declined to comment on active litigation. Yolo and LMK did not respond to requests for comment.

The lawsuit seeks to have Yolo and LMK immediately banned from Snap's platform, along with any other apps that have failed to set up safeguards against cyberbullying, and seeks damages for the alleged harms

panies — and Snap in particular — can be held responsible for building or enabling features that are so clearly dangerous to its users that the product is essentially defective.

That case centered on a Snapchat filter that automatically detected how fast the user was moving and let them add that number to a post on the platform. Plaintiffs in the suit argued that the feature incentivized driving at high speeds, leading to a fatal 2017 car crash in Wisconsin, in which a 17-year-old passenger pulled

ing a 2007 study that found that students who experience bullying, online or in real life, are nearly twice as likely to attempt suicide.

But the suit also pursues a line of argument that draws from consumer protection law, arguing that Snap, Yolo and LMK failed to live up to their terms of service and other commitments to users.

A recent decision in the 2nd Circuit Court of Appeals in New York City showed that this consumer protection argument might have legs. In that case, the plaintiff argued that the gay dating app Grindr should be held responsible for harassment he received on the app from a former boyfriend, who set up a fake account for the plaintiff and sent a stream of 1,400 male strangers to his house looking for sex over the course of 10 months.

The court dismissed the case, citing Section 230 protections, and wrote that it was unclear that Grindr was in violation of its terms of service for a number of reasons. But the judge's ruling indicated that a case showing a more clear-cut viola-

ting and resulting death. Yolo never responded, according to the suit.

Months later, Bride and her husband, Tom, again tried to contact Yolo through its website and via an email address provided for reporting emergencies, demanding that the company remove the bullying users from its platform. The email carried the subject line "Our Son's Suicide — Request for Help." The emergency reporting account replied only with a bounce-back message, saying that the recipient could not be reached due to an invalid address. Two subsequent attempts to contact the company also went unanswered, according to the suit.

LMK, the other third-party app in the suit, made even stronger claims about user safety, writing in its terms of service that it would "go to great lengths to protect our community" from inappropriate usage, including using "artificial intelligence technology" and human moderation to police its content.

And Snap, the suit alleges, has failed to live up to

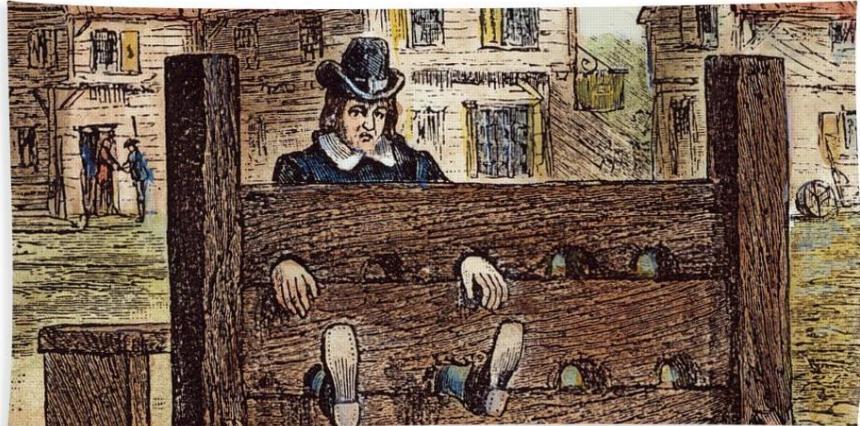
"The messages included sexual comments and taunts over specific incidents"

People Fight Back: Online Support



Crash Override is a crisis helpline, advocacy group and resource center for people who are experiencing online abuse

People Fight Back: Shaming Perpetrators



Public shaming has an American history going back to colonial times. Online shaming uses the great reach of social media and the propensity of users to focus on negative messages. It can involve call-outs, cancelation, and revenge porn.

People Fight Back: Doxing Perpetrators

On the left...



...On the right



Doxing is an extreme form of shaming in which a cyber-mob uses the Web to attack, harass and threaten personally individuals accused of undesirable behavior. It has been called the new social justice by people from the left and right, and has also been called the new vigilantism by civil rights advocates.

Ethical Case 5: Too Much Connectivity



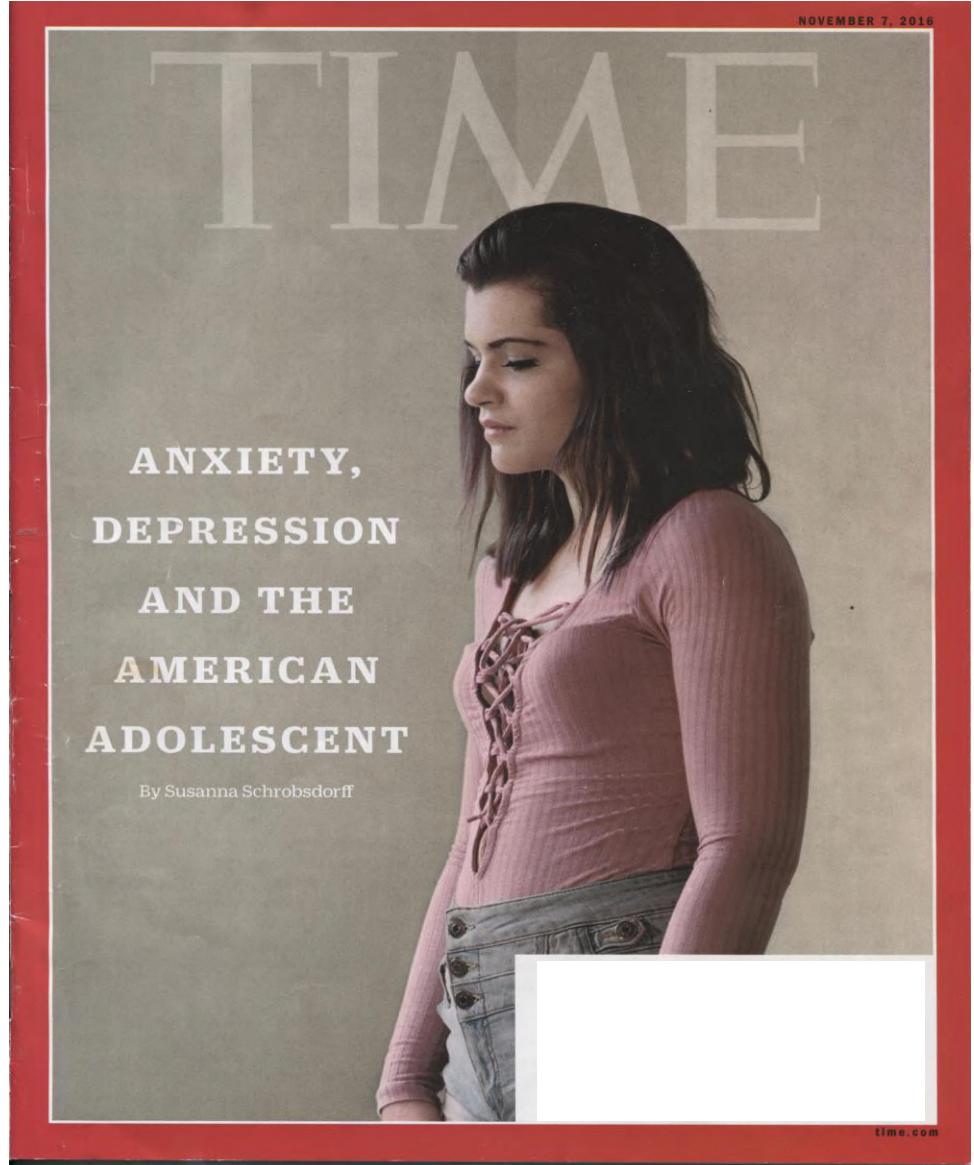
Ethical Issues Case 5: Too Much Connectivity



Commentators worry that we are losing the ability to “be in the moment” aside from posting our selfies, or to have normal people-to-people connections.

Causing Harm...

Research studies suggest that the great amount time spent in cyber-space and the overabundance of personal information may be major factors contributing the increase in serious psychological problems among teenagers and young adults



...Particularly to Young Children

DAILY BEAST

CHEAT SHEET®

AM EDITION

1. FEEDBACK LOOP

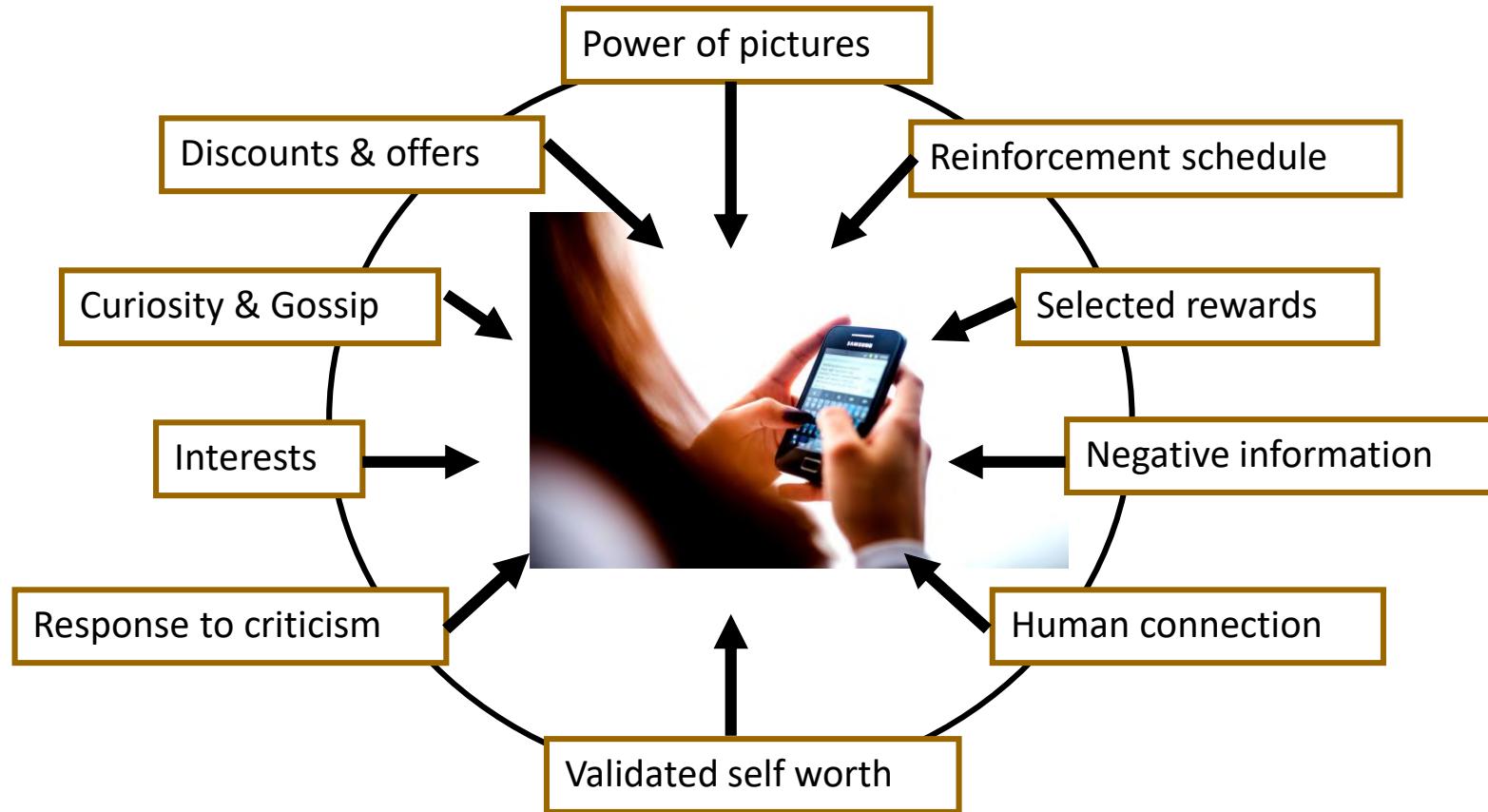
FB Founder: 'God Only Knows' How It's Affecting Kids' Brains



Sean Parker, the founding president of Facebook, said the social-media platform functions by “exploiting a vulnerability in human psychology.” At an event in Philadelphia on Wednesday night, the erstwhile 38-year-old Napster inventor told Axios, “It probably interferes with productivity in weird ways. God only knows what it’s doing to our children’s brains.” Parker said he now understands that a site as popular as Facebook “literally changes your relationship with society, with each other... The thought process that went into building these applications, Facebook being the first of them... was all about: ‘How do we consume as much of your time and conscious attention as possible?’”

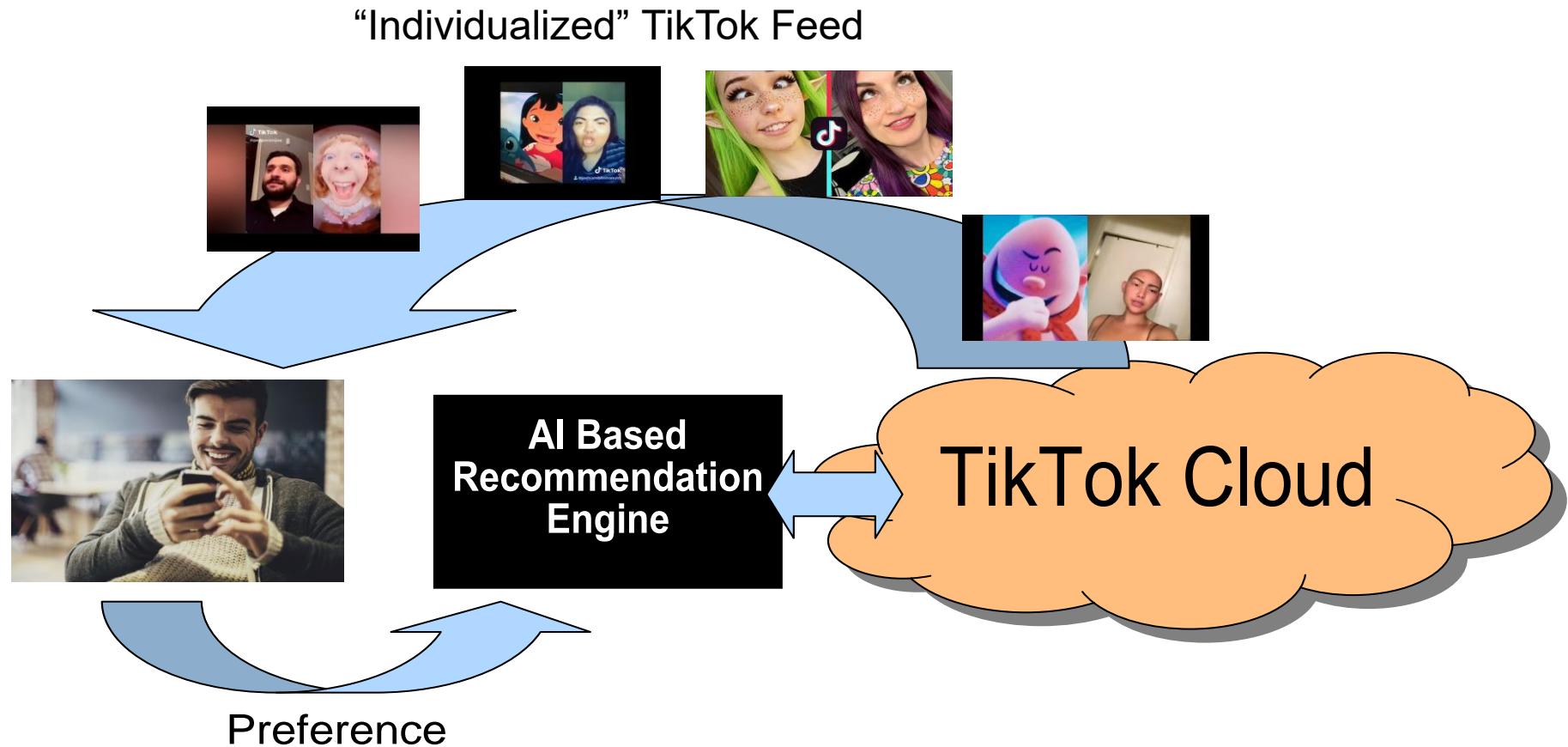
November 9, 2017

Addiction Is On Purpose

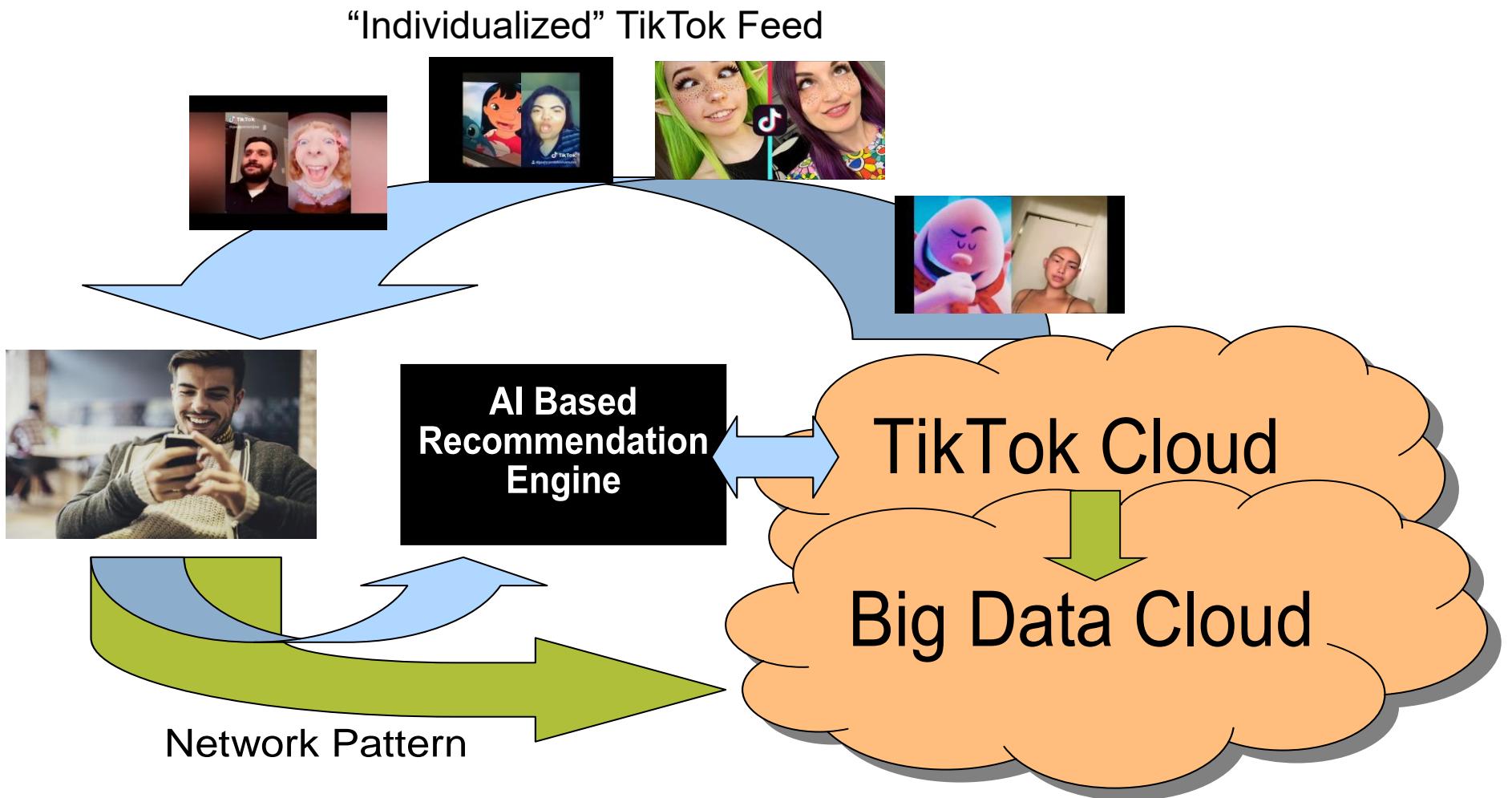


App designers apply psychological principles to keep users engaged

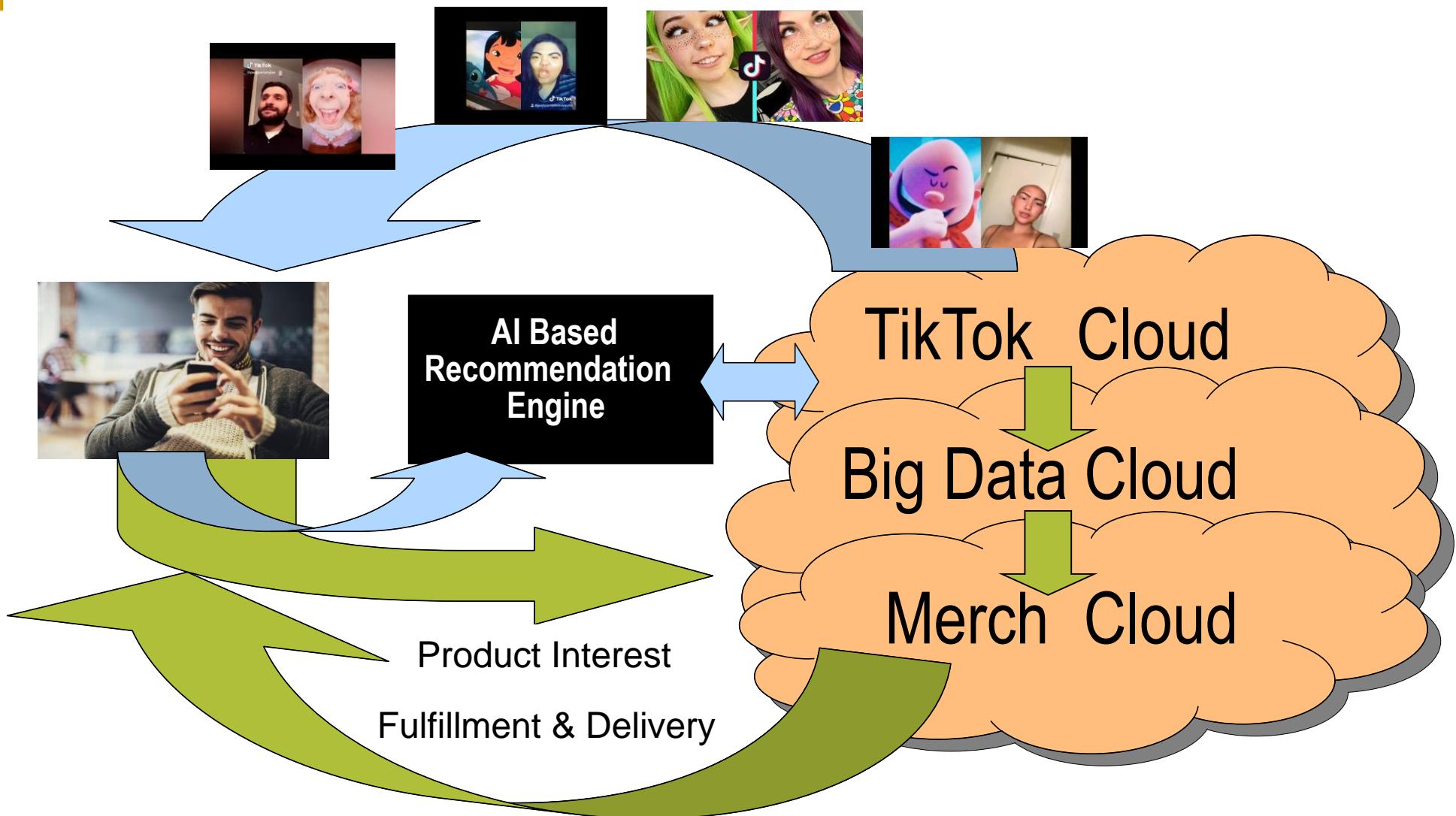
AI Can be Implicated: At the First Level...



...at the Next Level...



...and the Level Beyond



Is It Already Too Late?

Giant corporations from China to the United States are developing the apps and the many interconnections.

Can people fight back?

Do they really want to?

Seems like they're starting to do so.

Dianca DUSKE, THE AUDITUS, NOVEMBER 2010

Public Awareness



Netflix says:

"This documentary-drama hybrid explores the dangerous human impact of social networking, with tech experts sounding the alarm on their own creations."

New Industry Design Ethics



- Psychology should not be employed to promote app usage
- Success is not more ‘time in app’
- Success is a better quality of life

“Tristan Harris, an app developer from Silicon Valley, believes that a ‘Hippocratic Oath’ for software designers would stop the exploitation of people’s psychological vulnerabilities.”

Bianca Bosker, The Atlantic, November 2016

Self Regulation May Not be Enough

“Facebook will not fix itself!”

“We need laws to address three related problems across the entire technology world:
Safety,
Privacy,
Competition.

The truth is that the unregulated tech industry produces products that are unsafe.”



Roger McNamee, businessman, investor, venture capitalist and author of *Zucked: Waking Up to the Facebook Catastrophe*.

Newsweek, Oct 25, 2021

Regulation Begins

Cooperation of 44 state attorneys general is a very impressive event. It is likely that Facebook's CEO will take notice.

States assail Instagram for kids

A letter from 44 attorneys general asks Facebook's CEO to end plans to attract users younger than 13.

ASSOCIATED PRESS

A bipartisan group of 44 attorneys general has written to Facebook Chief Executive Mark Zuckerberg urging him to drop company plans for a version of Instagram for children under the age of 13, Massachusetts Atty. Gen. Maura Healey announced Monday.

The attorneys general in the letter said they are concerned about social media's effects on the physical and emotional well-being of children, the potential for increased cyberbullying, possible vulnerability to online predators, and what they called Facebook's "checkered record" in protecting children on its platforms.

"It appears that Facebook is not responding to a need, but instead creating one, as this platform appeals primarily to children who otherwise do not or would not have an Instagram account," said the letter, signed by the attorneys general of 40 states, the District of Columbia and three U.S. territories.

Children under 13 are technically not allowed to use the Instagram app in its current form due to federal privacy regulations. But Facebook in March confirmed a report by Buzz-



JENNY KANE Associated Press
"THIS PLATFORM appeals primarily to children who otherwise do not or would not have an Instagram account," the letter from the attorneys general states.

Feed News, saying it is "exploring a parent-controlled experience" on Instagram.

"It's shameful that Facebook is ignoring the very real threat that social media poses to the safety and well-being of young children in an attempt to profit off of a vulnerable segment of our population," Healey said in a statement.

Facebook said in a statement Monday that it is exploring Instagram for kids to give parents more control over what children who are already online are exposed to, will make every effort to protect children and will not show advertising on the platform.

"We are developing these

experiences in consultation with experts in child development, child safety and mental health, and privacy advocates," the company said. "We also look forward to working with legislators and regulators, including the nation's attorneys general."

Facebook also pointed out that it is a founding sponsor of the Digital Wellness Lab at Boston Children's Hospital, launched in March to study the effects of digital technology on kids' "brains, bodies, and behaviors."

The effort of the attorneys general is backed by Campaign for a Commercial-Free Childhood.

"Facebook faces a critical choice: will they plow ahead with their ill-conceived plan to ensnare young children, or will they listen to the growing chorus of parents, experts, advocates, lawmakers and regulators who are telling them that an Instagram kids' site will undermine young children's healthy development and right to privacy?" the organization's executive director, Josh Golin, said in a statement.

Facebook faced similar criticism in 2017 when it launched the Messenger Kids app, touted as a way for children to chat with family members and friends approved by parents.

Societal Effects: Replacement of Community

“Americans don’t seem to know how to interact socially anymore. **The internet has replaced what a community should do — offer norms and values, orient people towards a common good, provide a sense of shared interest.** And instead, it lets Americans live in tiny manufactured bubbles of pure self-interest. Who should I hook up with tonight? Hmm, what can I buy today? Do my pecs look good enough? Maybe I need more implants. Let me see what my fake friends think.”



—
Umair Haque
Aug 23, 2021

Umair Haque is a London-based consultant. He is director of Havas Media Lab, founder of Bubblegeneration and frequent tweeter and contributor to the online Harvard Business Review.

Societal Effects: Replacement of Community

Elon Musk mistook Twitter for the real world

The social media platform was never a public square, and its users are part of the problem.

JONAH GOLDBERG

THERE'S SOMETHING tragically poetic about Elon Musk's purchase of Twitter. There's a whole subculture of lamentation about modern society that can be fairly well summed up in Peter Thiel's roughly decade-old gripe that things such as Twitter were distracting us from greatness: "We wanted flying cars, instead we got 140 characters."

Today, we get twice as many characters on Twitter, but the complaint endures. Not just innovation, but also exploration has been subverted by screens and scrolling from our couches or porcelain thrones. Rather than go to Mars, our best minds focused on keeping you from putting down your phone.

Musk had many legitimate — and some farfetched — criticisms of Twitter under the old ownership. But what he seemed to miss is that Twitter was never a public square. Even in the Norman Rockwell version of the public square, there are enforceable laws and norms dictating what you can and can't do there. Twitter is more like a "commons," in economic terms, where different actors want to take advantage of it for their own purposes. That can work when everyone agrees on the rules, but when such consensus is missing, you get the "tragedy of the commons."

Los Angeles Times, November 8, 2022

Summary: Ethical Issues of Internet Connectivity

■ Anti-Social Behaviors

Can anti-social and harmful Internet behaviors be prohibited by laws, like other types of threatening behaviors? If so, how would such laws fit in with accepted 1st Amendment principles of free speech? And how would they be enforced?

■ “Vigilante” Actions

Can group actions such as *doxing* or *shaming* substitute for strong laws? Are such actions fair and equitable? Who decides/controls?

■ Web Addiction

Is limiting the amount of time people are spending online desirable? Is it possible? Is it a special case for children and teens? What is the most equitable approach?

■ Personal Ethical Framework

What can individual engineers do to help define and solve these problems?

It seems that more and more, society is realizing that laws and regulations are needed to provide protection against the serious personal damage possible via the Internet. The question is: *How can we do this legally, effectively and ethically?*