

THE INFORMATION APOCALYPSE

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“We are careening towards a future where the ability to distort reality shakes the foundations of democracy”

Aviv Ovayda

Abstract

The Information Apocalypse is evidenced by the unraveling of trust in American institutions. This phenomenon is affecting not only democratic institutions, their products and outputs, but also news, information and most critically, ideas and values. The decay in public trust goes beyond institutions and also affects individuals. Personal data and identity are at risk. At the same time, the ever-expanding role of technology is not only omnipresent in our lives, it also acts as an accelerant, speeding up not only change but our abilities to keep pace and to control our responses.

Keywords: Information Apocalypse, Strategic Communication, Strategic Leadership, Cyberattacks, Trust in Institutions, Fake News, Artificial Intelligence (AI), Gaming

1. Introduction

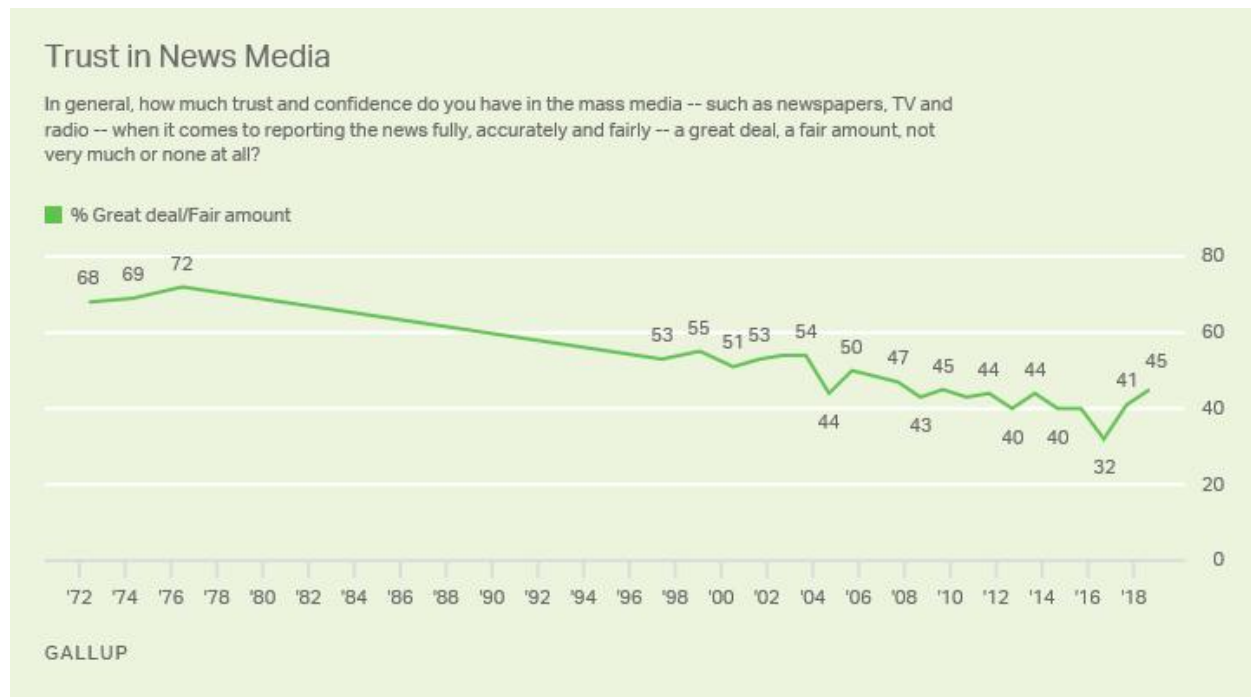
The character of the information domain is changing rapidly, driven by the dizzying pace of change in technology and the perversion of the norms in communications. No, there aren't any zombies. But there are bots and trolls, cyber attackers and hackers, hijacked accounts, propaganda, and pretenders of all sorts. Lies and liars abound. It isn't just the nature of national security that is changing, the Information Apocalypse is broader than that. It goes directly to our ability as citizens to perceive, understand, and respond to reality.

This is the Information Apocalypse paradox, presenting both challenge and opportunity: the challenge is that the norm of information domain itself appears to have deteriorated to such an extent that on every level direct communication and trust are unfeasible. It seems as though opportunity can only be realized by adherence to a values set that is not only outdated but useless. News outrages occur daily and people are becoming numbed by the onslaught of falsehoods and deceptions, disappointed and disgusted to the point they simply give up, and disengage from public discourse entirely. The absence of trust results in chaos. Meanwhile, behind the scene, other forces are at work to divide us further.

2. The Argument

We are on the cusp of witnessing a major change in the rules of engagement as regards international relations, diplomacy, and the role of tech. This challenge comes down to the ways and means of telling truth and preserving trust even as the Information Apocalypse threatens to drown out civility, destroy productive public discourse and threaten the national interest.

Traditionally there have been three broad 'estates' or institutions that defined the separation of powers in a democratic state; in medieval times these were the clergy, the nobles and the commoners. Over time the definition of these estates evolved, to the European model of legislative, executive, and legal branches of government. Today these institutions are broadly defined as government, business, and non-governmental organizations (NGOs). But the institution of the Fourth Estate has been and remains outside that model. The press is separate, retaining its traditional role of a watchdog over government, as the institution which acts on behalf of the people.



The Gallup management consulting company annually publishes the results of its poll on the most trusted institutions in the country. While trust in newspapers and broadcast media has fallen in recent years, other American institutions have fared even worse. In 2016, internet news, a new category, was rated fairly low, although recent privacy issues and manipulation of content may make that figure drop even more. According to Edelman, a national public relations agency, their annual online survey of trust in institutions continues to show an alarming trend. The 2018 survey revealed the news media is the most distrusted institution in the world (Edelman 2018)

The Fourth Estate must take responsibility for its obvious role in the eroding loss of confidence in news and news reporting. Since the 1990s mainstream media in the United States has lost its focus, seemingly unable to provide news without bias, influence, or even attitude, with opinion or personal viewpoints woven in. Instead the mainstream news media has slid unwittingly into sensationalism and a rush to judgement about events, and political, and public figures.

This lack of focus coincides with a substantial rise in propaganda. Propaganda, as defined by Encyclopedia Britannica is a systematic effort to manipulate people's attitudes and beliefs through emotional means, including both words and symbols. Propaganda has a purpose and a goal and is typically used selectively and emphatically to promote those goals (Smith). From its demise from the lexicon following World War II, propaganda was confined for decades to political advertising, and was easily recognizable. In the past twenty years propaganda insinuated itself back into the mainstream, promoting particular points of view and causes with limited information of a factual nature (Patrikaros, 2017).

The perversion of news from the factual to the entertaining is a form of propaganda itself and an accelerant for the Information Apocalypse. Like most erosions of the values based information domain, celebrity news coverage has exploded in recent years, diverting attention from the important to the insignificant, from reality to fiction. This manipulation of perceptions of success has twisted what was once a defined American cultural tendency to place public figures on a pedestal and revere them for their accomplishments.

The list of those who have been toppled from those pedestals since the 1990s is a long one, packed with prominent names, from almost every institution, including: the clergy, think the Catholic Church abuse scandals, sports – from athletes being expelled from the Olympics to pro football's deflate-gate, politics – the lineup starts with governors like Schwarzenegger, Spitzer, and Sanford, among others who were ousted following extramarital affairs and use of

public funds for illicit purposes. The list of those fired or publicly shamed from the world of entertainment is a very long list indeed. Finally, celebrities from the mainstream news media itself come crowding in.

While disgraced public figures are nothing new, the volume, pace, and numbers of their transgressions has exploded in the past few years, accelerating our lack of trust in the institutions they represent. As we have witnessed a souring of ethics in public life, we have become inured to our loss of confidence in those reporting that news. And the trend for national-level print and broadcast journalists to become major celebrities has also accelerated, with fans and followings of their own. Inevitably some betray the public trust and fall, like earlier authors of fabricated stories and sources, to those more recently departed the likes of Brian Williams, Charlie Rose, and Matt Lauer, victims of their own arrogance and exaggerated sense of invincibility.

Brian Williams was an NBC News anchor, fired after it was discovered he lied about his experiences in a helicopter in Iraq (Burrough, 2015). Charlie Rose was a CBS 'This Morning' anchor, fired in 2017 by CBS and PBS following multiple sexual-misconduct allegations (McDermott, Puente, 2017). Matt Lauer was fired from NBC's Today Show in 2017 following complaints of 'Inappropriate Sexual Behavior' in the workplace (Time.com).

Celebrity culture has always been a part of society. Yet, like other factors influencing the Information Apocalypse, the difference is the rapid pace of coverage and commentary. The debasement of language in movies, television, and song further feeds into the Information Apocalypse. Yet we still watch and read, unable to look away. And celebrities, who once touted products that improve one's attractiveness, continue to adapt and improvise (Novella, 2018). Like a virus, they continue to find a way to retain their place in the forefront of our conversations. Today, the celebrity influences more than personal choices in attire and cosmetics. Their influence extends from politics to policy issues and can affect markets.

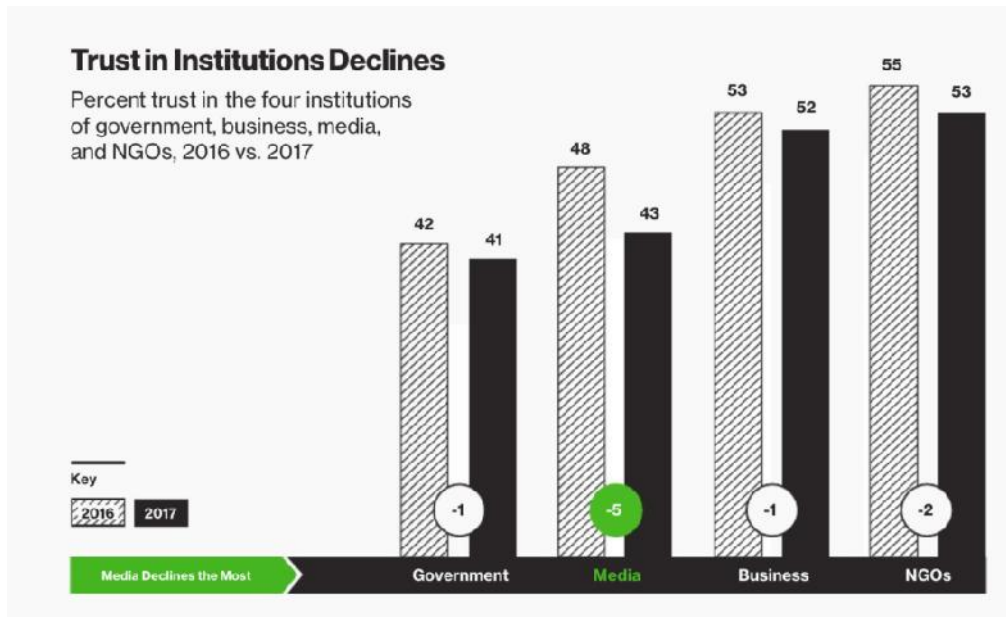
Celebrity Kim Kardashian has taken her focus on prison reform to the White House and is now advocating for a death row inmate, convicted of murder. The response has not been positive (Seemayer, 2019). In February, 2018 Snapchat shares fell six percent in response to a tweet by celebrity Kylie Jenner who said, "Soooo does anyone else not open Snapchat anymore?" (Wells, 2018).

The result of the toxic mix of American culture and apparent lack of standards is an appalling slurry of political excess, overindulgence, and hubris. To some extent this negative atmosphere existed prior to the last presidential election. Yet that event marked the beginning of a new era and a significant drop in social norms, inviting new lows in civil discourse, the standards for public service, and promoting excesses in personal behavior. In one of the initial interviews regarding his new book, former FBI Director James Comey stated, "We are living in a dangerous time in our country with a political environment where basic facts are disputed, fundamental truth is questioned, lying is normalized, and unethical behavior is ignored, excused, or rewarded (Comey, 2019)."

CEOs and military leaders have likewise not been absent from this stage. Facebook CEO Mark Zuckerberg has been on the hotseat with the U.S. Congress and the European Union for the past several years. Google CEO Scott Thompson was fired in 2012 for lying on his resume (Money.CNN). In 2018 Wayne Pacelle, CEO of the Humane Society resigned following allegations of sexual harassment (Bosman, Stevens, Bromwich). These are only few; there are hundreds, if not thousands more such public falls, if not from grace, certainly from trust.

Sensationalized stories about the very public fall of Generals David Petraeus, Stanley McCrystal, and Michael Flynn come immediately to mind. These falls are different from those of the past in several ways. First, the news media treats military leaders like celebrities in the style and negativity of their coverage. Second, the reasons for their ouster are indicative of the larger problems previously mentioned. Petraeus had an extramarital affair with his biographer. McCrystal publicly criticized civilian leadership and Michael Flynn politicized his role as National Security Advisor and lied under oath. These senior leader failures, and others like them, reveal a new level of debasement and hubris, further eroding our faith in the institutions they represent. We need our leaders, while not perfect, to live up to the standards they spent their careers espousing, despite the toxic information and external pressures and attacks.

This toxic environment is the perfect breeding ground for an Information Apocalypse. Can we believe much of the news we see and read? While 2019 has seen a massive rise in consumer engagement with news, this comes with the caveat that people are more insistent on fact checking, seeking confirmation that the information they seek is true. This is a singularly important question since most consumers have the inherent tendency to seek out news that confirms beliefs they already hold (Edelman Trust Barometer 2019). Our culture has created the perfect storm for an Information Apocalypse to occur.



This environment has laid open the doors for our adversaries (nation states, political and criminal organizations and individuals) to increase not only their threats but their attacks, through propaganda, use of compromised social media platforms, information operations, and outright cyberattacks. Physical and diplomatic threats are growing ever more dangerous and provocative; they take place daily on land, sea, and in the air and cyberspace. From Chinese ship incursions in the South China Sea to the growing Russian presence in the Arctic to the omnipresent saber rattling in North Korea, and Iran, threats to nations and institutions continues unabated.

The Information Apocalypse continues to grow, accelerated by mainstream media deficiencies, public pessimism and mistrust, and by social media, which globally has become the greatest source of disinformation (Edelman Trust Barometer, 2019). In the U.S., the issue of Russian interference in the 2016 presidential election has alarmed members of both parties and magnified the issue of social media responsibility. In Special Prosecutor Robert Muller's recent statement before Congress he said, "As alleged by the grand jury in an indictment, Russian intelligence officers who were part of the Russian military launched a concerted attack on our political system...they used sophisticated cyber techniques to hack into computers and networks used by the Clinton campaign. They stole private information, and then released that information through fake online identities and through the organization WikiLeaks. The releases were designed and timed to interfere with our election and to damage a presidential candidate" (Timmons 2019).

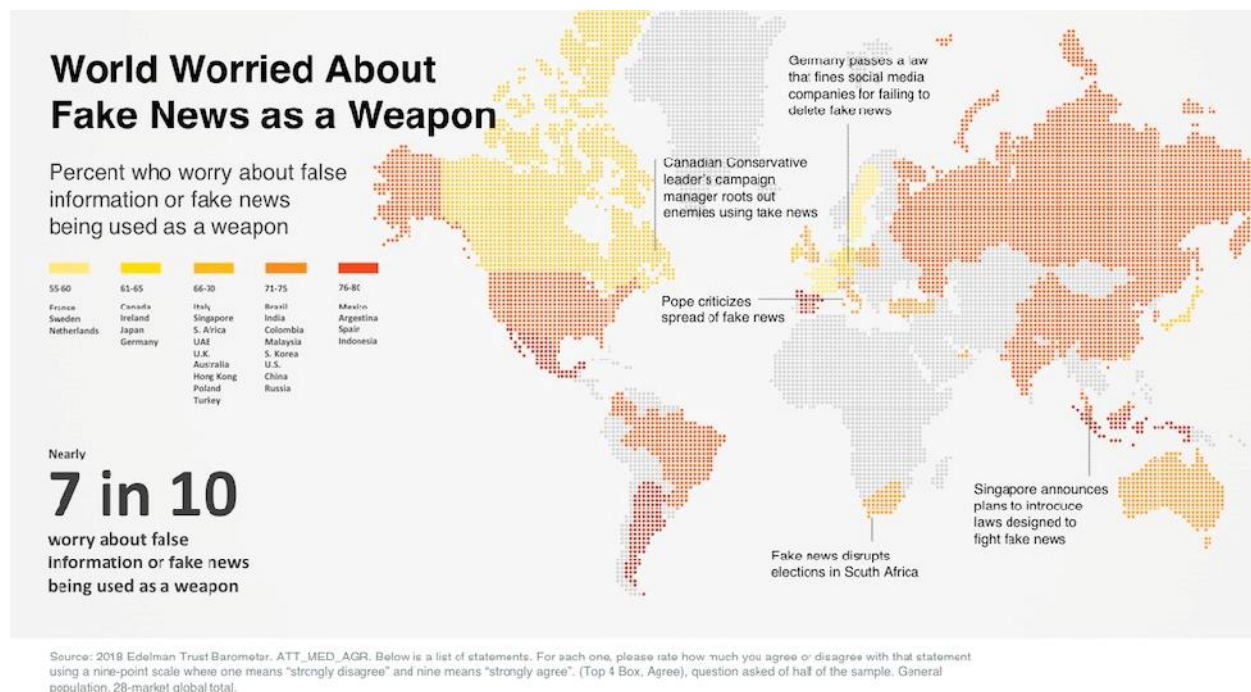
The result is undeniable. Following the conclusion of the U.S./Baltic Summit, U.S. National Security Advisor, Lt. Gen. H.R. McMaster said, "Russia brazenly and implausibly denies its actions, and we have failed to impose sufficient costs. The Kremlin's confidence has grown, as its agents conduct their sustained campaigns to undermine our confidence in ourselves and in one another" (McMaster, 2018).

Americans look uneasily towards the next national election and while Facebook has recently claimed it has deleted 2.2 billion fake accounts in three months, new accounts, bots and trolls multiply even faster. Technology will only continue to enable both nation states and individuals to more easily fake audio, videos, distort images to incite response, and force public figures to defend themselves against online attacks fueled by false information (Li, 2019).

The threats are not only political, but can be termed military aggression. Future cyber-attacks could well be considered an act of war. In April, 2019, American and Japanese officials said that a cyber-attack on Japan could be viewed as an 'armed attack,' under a binding, bi-lateral security treaty. Secretary of State, Mike Pompeo said, "The United States and Japan affirmed that international law applies in cyberspace and that a cyberattack could, in certain circumstances, constitute an armed attack under Article 5 of the U.S. Japan Security Treaty" (Olson, 2019). This legal reading might well apply to NATO and could have major implications for the Alliance's defense posture concerning mutually assured defense for its members.

The Edelman Trust Barometer goes further, beyond issues of information manipulation by foreign governments, trolls, political operatives, or false flag organizations to the more primal fear that information can be used as a tool of warfare itself. Global statistics on trust are fairly static but in the U.S. there has been a staggering 37% drop in trust in all institutions *in 2017 alone*. According to the 2018 barometer, nearly 60% of adults said “I am not sure what is true and what is not.” Over 56% say “I do not know which politicians to trust” and 42% say “I do not know which businesses to trust.” In 2017 the most widely shared fake news story was one that former President Barack Obama had signed an executive order banning schoolchildren from repeating the pledge of allegiance. It was read more than two million times. In the last election, fake news was circulated nearly 40 million times (Harris, 2017).

Perhaps even more worrisome is the portion of the Edelman trust study that reveals, despite the EU and other nations taking actions to protect privacy and prevent the spread of false information, there are rising global concerns regarding fake news as a weapon.



In February, the British Parliament said that Facebook and other tech companies should be subjected to a code of ethics that would govern privacy protection issues and the laws for protection of competition. Germany has already ordered Facebook to curb its data collection efforts there. In Italy, the government is working with the Ministry of Education to teach children how to spot fake news.

France has fined Google \$57 million for breaching its new data privacy rules (Rosemain, 2019). French regulators said Google lacked transparency in gathering data to show targeted advertising and that user agreements were improperly executed. This is the first time a tech company has been fined since the EU's General Data Protection Regulation (GDPR) went into effect in May, 2018. There are certain to be many more. Many countries are beginning are not only passing laws designed to prevent the distribution of fake news, they are also beginning education programs designed to help individuals understand how to tell a lie from a true statement.

Even as fake news haunts U.S. elections, it has also disrupted elections in a number of other countries, including South Africa. In Singapore the government is considering new laws to combat fake news while Germany now fines media companies for failing to delete fake news. Perhaps one of the strongest responses to fake news is in Malaysia where the government is proposing a new law that makes spreading fake news a crime, punishable by up to ten years in prison (Ngui, 2018). Tech companies (including Facebook and Google), that make up the Asia Internet Coalition didn't agree.

There is no clear agreement on the best ways to manage technology's growth, protect privacy, curb data collection, and prevent attacking or hacking. No one path has emerged as the clear winner in building support for a way forward, not by governments, or within big tech firms themselves. These companies are in turmoil, dealing with issues from data breaches, to hate speech, hacking, and manipulation by foreign entities and non-state actors. They are still reacting (Mia. 2018).

Big Tech's naiveté in discovering that their creations can be used in ways they never programmed, designed, or conceived, is unsettling. They and we have a lot to learn to protect ourselves better and still function – not just in society but in the military where the CAC card is our primary entry key. One day, and that day may not be far off, our enemies will find a way to disrupt its use or get inside our systems. Will we be ready to deal with the incursion or stopped in our tracks?

There is a need for increased education, user awareness and a greater focus on individual as well as corporate responsibility. Tech companies should help users to determine the truthfulness of available information and be able to recognize sites and scams with ill intent, all without violating individual rights either to offer opinion or purpose. The bullies can be brought down but the rules of engagement here still aren't clear.

Trust issues are broader than that of influence or manipulation but go to actual distortion. Distortions in reality can take many forms, from a doctored photograph, to virtual, augmented or now, mixed reality. Artificial intelligence (AI) is a major factor in this area, from the long-criticized alteration of news photographs and digital video editing, to computer enhanced or even created images, often not designated as such. Associated issues include AI used for decision making in a military context, to direct drones, satellites or other weaponry, all when a certain set of criteria are met, and in conditions devoid of human oversight.

Artificial Intelligence has many definitions, but it broadly refers to how software has been programmed to make decisions or choices. It uses algorithms to make sense of data that is inputted and while science fiction movies often depict how disaster results from the machines taking over the humans, the role of AI in society at large is still relatively small. Yet it is already pervasive, and in use across a broad spectrum of business and government (Hutson, 2018).

China is investing heavily in developing AI and its related technologies. For example, future computers could direct swarms of bots or order satellites to attack other satellites and destroy them. The danger here is speed of application. Could warfare speed up to the point that people are unable to keep up with the decision making process? Or that they are no longer part of that process. We have a preview of that possibility from our front row seats here are at the beginning of the process, as we watch the evolution of the driverless car and its decision making capabilities. Not to mention its mistakes.

When asked about the long-term impacts of AI on the nature of war, then Secretary of Defense James Mattis said it could change warfare in a way never before seen. He commented, "I'm certainly questioning my original premise that the fundamental nature of war will not change. You've got to question that now" (Mehta, 2018).

The robots may already be here, but the emphasis on the human aspect of leadership, personal interaction with the machine, and leader involvement are only going to grow as the pace and applications for AI increase. The arrival of 5G networks will only increase the speed of many applications, and make other advances, such as gaming not only popular but inevitable.

Technology is truly more than the enabler for new realities. In 2018 we saw a global drop in the trust index, trust in institutions faltered, and distrust in the news media increased. There was a growing fear that overwhelmed by fake news, a coarsening of public life, and the proliferation of not only theft, but attacks on reputation and standing, that the majority of Americans would withdraw. It didn't happen. Instead, they are latching onto narratives that they want to believe, regardless of how untruthful they may be.

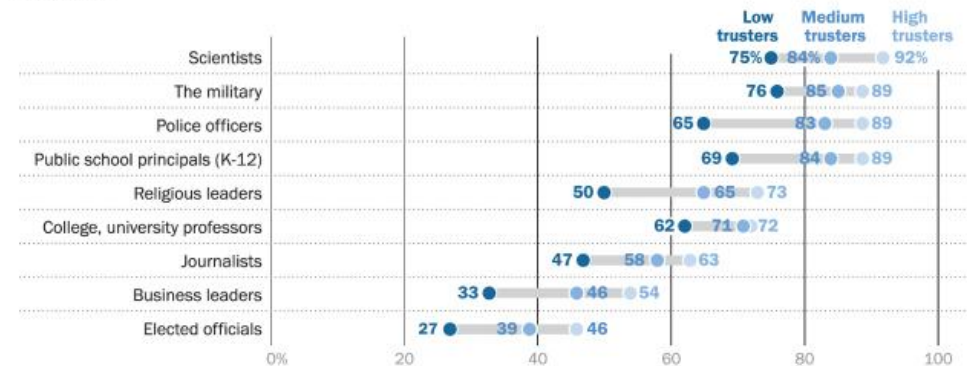
Technology can augment, distort or even destroy the ability to perceive and act on real situations or threats. Future developments must be considered strategically, and developed to support our institutions, and strengthen military capabilities, along with all other elements of national power.

Each institution in a democracy has an obligatory role in building trust or in many cases now, restoring it. Edelman states that employees typically trust their employers to do the right thing, with a global confidence level of 72%.

Government and NGOs have further to go in restoring trust. And perhaps, the institution that is in last place is the Fourth Estate. In order to fulfill its self-described missions to educate, inform and entertain, the broad institution of media must do more to guard information quality, discipline itself and protect the privacy of consumers.

Those with high personal trust have higher confidence in key leadership groups

% of U.S. adults in each group who have a great deal/fair amount of confidence that _____ will act in the best interests of the public



Note: The trust scale is built on questions about people's general trust or distrust in others; their sense of the exploitative tendencies or fairness of others; and their assessment of the overall helpfulness or selfishness of others. For details, see Chapter 2 subsection "People sort along a continuum of personal trust."

Source: Survey conducted Nov. 27-Dec. 10, 2018.

"Trust and Distrust in America"

PEW RESEARCH CENTER

According to a recent study by the Pew Research Center, nearly six-in-ten Americans (58%) say they prefer to protect the public's freedom to access and publish information online, including on social media, even if it means false information can also be published (Mitchell, Grieco, Sumich). That means individuals who reject regulation must do a better job of recognizing false information. This is becoming increasingly difficult as the Information Apocalypse continues to spread, and the sophistication of bad actors make spotting lies and falsehoods even more difficult.

Simple rules for consumers haven't changed. But challenging information is time consuming and often more frustrating than fruitful. The majority of fact-checking sites are themselves overrun by technological advances almost as soon as they are established. But here are the basics:

- Ask questions. Ask for evidence. Ask yourself if it is a joke.
- Check the source. Is the URL for the story legitimate? For example abcnews.com and whitehouse.gov are legitimate sites. Abcnews.com.co and whitehouse.org are not.
- Quotes by a public figure can also be fact checked and traced back to an event or statement.
- Photographs can be examined by reverse searching the url on Google.

Senior leaders are obviously communicators and producers of information. As such, our biggest challenge may be to build and maintain trust while developing communications systems that are secure and impervious to hacking. While that may sound simple, the act of maintaining consistency and transparency is challenging. And military leaders have an innate resistance to the spotlight and disinclination to engage. But a constant state of readiness to counter disinformation and lies must become second nature in the current environment. Leaders must:

- Respond early to lies, outrageous charges, or fake news. Even if a commander doesn't have all of the correct information or the right answers, it is more important to be able to say, "We are going to find out. We will share with you what we learn."
- Know when to pre-empt potentially negative news. There are times when internal briefings to family members – telling them first about a potential deployment, or a deployment extension, can go a long way to maintaining that bond of trust.
- Background sessions with local media that explain processes and procedures can also be helpful. "This is how official notifications work." "Here is how a court martial unfolds."
- As for fake news or alternative facts, leaders have a responsibility to call out falsehoods. No drama, no accusations, simply a correction.

There are many sites that bill themselves as fact checkers or scam debunkers but many of these also have problems. It seems that as though one site appears to be effective in uncovering a hoax, another type will crop up. But awareness is the most important step and the one that should result in false information being exposed and 'called out.' Engagement with news is up 22% from 2018 (Edelman Trust Barometer, 2019). One would expect this to bode well for journalism –greater public involvement should mean the more thorough the fact checking and increased awareness of scams, falsehoods, and hacks. Indeed, some of the news is encouraging. More Americans are involved in grassroots movements from #MeToo, to #NeverAgain. Last fall's midterm elections voter turnout was huge, and independent news sources are rallying. But populism and polarization continue to enable our enemies in this war on reality. The enemies are not the technologies themselves – social media, gaming, AI, or even augmented/virtual/mixed reality. Rather, they are the actors who use and misuse these technologies for their own purposes – to sow hate speech, to hack, to steal, to radicalize, incite violence, influence elections, or undermine democratic institutions. They, whoever *they* are, are the insidious and often invisible.

Enemy collaborators may, in some cases, also be those who are seemingly the most benign - the designers, psychologists and marketers who develop programs and games that seek to be so mindlessly entertaining and addictive they pervert perception, kill creativity and ambition, strangle decision-making, and lure people away from reality.

The future holds even more complex challenges as our enemies continue to exploit success and construct false or alternative realities that are even more attractive and lucrative than anything tangible. While the push to regulate Big Tech firms and enforce corporate responsibility may increase, our enemies will be versatile and pursue attacks and acquisition of private data through other means. For every hacker, bot, troll, false account, or influence campaign that is exposed and stopped, AI may generate dozens of new ones. The competition is heating up, luring in members of society whose trust in reality is broken beyond repair."

What to watch for in the ongoing war on reality:

- ✓ Increasing focus on regulation of tech firms, anti-trust cases and a major focus on corporate responsibility for safeguarding privacy and truth.
- ✓ Stepped-up government and business efforts to protect privacy, stop hackers, find and force out bots and trolls, delete false accounts, and call out influence campaigns.
- ✓ New applications for AI and the growth of facial recognition software applications.
- ✓ Continuing discussion in the diplomatic arena of how war in cyberspace can result in war in the physical domains. The second and third order effects concerning cyber rules of engagement and legal rulings regarding justification form declarations of war will dominate military discussions.

3. Conclusion

The role of truth is questionable in the new reality, both in the physical and the virtual world. Governments and institutions are trying to find a way to regulate and thus hold onto traditional standards for objective truth and maintain flat standards for determining the rules of engagement. Our enemies are legion and they simply don't care. They want to find a way into our programs, our bank accounts, classified plans, security systems, and ultimately into our heads. It's all about control.

Business executives, government officials, educators, and thought leaders must keep a finger on the pulse of change, use tech developments to develop force capabilities, capitalize on emerging opportunities to surge ahead, and build solutions for a more lethal force. Even as we look to forge the future, it is time to heighten our defenses. It is up to us to discern reality in these situations, depend on those institutions which have proven worthy of our trust, determine a course of action and then boldly move out. With the benefit of all of our experiences, professional judgement and strategic focus we can lead the way, despite the Information Apocalypse that threatens us daily.

4. Brief Biography of Author

Major General (Ret) Mari K. Eder is a strategic communications expert, consultant, and educator, located in the Washington, D.C. area. During her career, Maj. Gen. Eder served as the U.S. Army's Deputy Chief of Public Affairs and as the Director of Communications at the George C. Marshall European Center for Security Studies. She is the author of *Leading the Narrative: The Case for Strategic Communication*. Maj. Gen. Eder will keynote on "The Information Apocalypse" at the June 2020 West East Conference in Baltimore, Maryland.

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