

INFORMATION TECHNOLOGY AND THE FALL OF THE AMERICAN REPUBLIC

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ABSTRACT: A number of long-term trends, many reflecting the emergence of new information and artificial intelligence (AI) technologies, are undermining the social and political stability and fundamental institutions of Western democracies such as the United States. While some of the short-term challenges are being recognized and addressed, the long-term implications for democratic forms of government are neither recognized nor well understood. This Article identifies several emerging potential challenges to democratic norms and institutions and suggests several potential responses as a first step.

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We are facing increased global disorder, characterized by decline in the long-standing rules-based international order—creating a security environment more complex and volatile than any we have experienced in recent memory.¹

—U.S. National Defense Strategy, 2018

So long as we do not, through thinking, experience what is, we can never belong to what will be.²

The flight into tradition, out of a combination of humility and presumption, can bring about nothing in itself other than self-deception and blindness in relation to the historical moment.³

—Martin Heidegger

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1. JAMES N. (JIM) MATTIS, SEC'Y OF DEFENSE, U.S. DEP'T OF DEFENSE, SUMMARY OF THE 2018 NATIONAL DEFENSE STRATEGY OF THE UNITED STATES OF AMERICA 1, 1 (2018), <https://www.defense.gov/Portals/1/Documents/pubs/2018-National-Defense-Strategy-Summary.pdf> [<https://perma.cc/Y8Q3-AKVC>].

2. MARTIN HEIDEGGER, THE QUESTION CONCERNING TECHNOLOGY AND OTHER ESSAYS 49 (William Lovitt trans., Garland Publishing, Inc. 1977).

3. *Id.* at 136.

As I observed in a previous work: “[T]he original Enlightenment . . . with its emphasis on scientific observation and experiment, and applied rationality—has succeeded spectacularly.”⁴ Despite continuing and obvious challenges, most metrics of human flourishing have improved significantly over the past centuries.⁵ But this very success has led to a world of accelerating technological, psychological, institutional, social, cultural, and geopolitical change that has, in turn, rendered many assumptions and operating models of the original Enlightenment obsolete.⁶ Nowhere is this more obvious than in the current growth of weaponized narrative, and psychological and information warfare. Such strategies are enabled by dramatic and continuing advances in information and communication technologies, and applied to all aspects of target societies by adversaries such as Russia.⁷ The effect is to undermine not just social and political stability, but also the fundamental institutions and ideas of countries such as the United States.⁸

The resulting challenges fall into two categories. The first, which is being addressed by everyone from Facebook and Twitter to U.S. government and military forces, involves immediate and foreseeable offensive and defensive considerations around rapidly evolving political, technological, and adversarial

4. Brad Allenby, *The End of Enlightenment 1.0: Why Weaponized Narrative Won't Go Away*, in WEAPONIZED NARRATIVE: THE NEW BATTLESPACE 15, 18 (2017).

5. These metrics include global economic and demographic growth, human health and well-being, reductions in organized and localized violence, and technological and scientific evolution. See generally GREGORY CLARK, A FAREWELL TO ALMS: A BRIEF ECONOMIC HISTORY OF THE WORLD (2007) (ebook) (discussing world economic history from before 1800 through the 2000s); RONALD FINDLAY & KEVIN H. O'ROURKE, POWER AND PLENTY: TRADE, WAR, AND THE WORLD ECONOMY IN THE SECOND MILLENNIUM (2007) (discussing world economic history from the first millennium through the twenty-first century); STEVEN PINKER, THE BETTER ANGELS OF OUR NATURE: WHY VIOLENCE HAS DECLINED (2011) (detailing how violence has declined over time and how the past was plagued with much more violence than the modern era); NATHAN ROSENBERG & L.E. BIRDZELL, JR., HOW THE WEST GREW RICH: THE ECONOMIC TRANSFORMATION OF THE INDUSTRIAL WORLD (1986) (discussing world economic history from the Middle Ages through the modern era).

6. See Brad Allenby, *The Age of Weaponized Narrative or, Where Have You Gone, Walter Cronkite?*, ISSUES SCI. & TECH., Summer 2017, at 65, 69–70 [hereinafter Allenby, *The Age of Weaponized Narrative*]; Braden Allenby, *The Dynamics of Emerging Technology Systems*, in INNOVATIVE GOVERNANCE MODELS FOR EMERGING TECHNOLOGIES 19, 19 (Gary E. Marchant et al. eds., 2013) [hereinafter Allenby, *The Dynamics of Emerging Technology Systems*]. See generally THE GROWING GAP BETWEEN EMERGING TECHNOLOGIES AND LEGAL-ETHICAL OVERSIGHT: THE PACING PROBLEM (Gary E. Marchant et al. eds., Int'l Library of Ethics, Law & Tech., Ser. No. 7, 2011).

7. See, e.g., P.W. SINGER & EMERSON T. BROOKING, LIKEWAR: THE WEAPONIZATION OF SOCIAL MEDIA 103–17 (2018) (ebook) (discussing Russia's use of “weaponized narrative” to influence world events since the time of the Cold War up until the 2016 U.S. Presidential Election).

8. See *id.*

Information Technology and the Fall of the American Republic

relationships, both internal and external.⁹ The challenges at this level have at least been recognized, and responses are being actively developed.¹⁰

The second category, however, is far more complex and long term. Although there is a strong reluctance to admit it, recent technological, social, and strategic developments threaten more than just short-term stability. They may also threaten many, if not most, foundational American institutions, including long-standing legal and indeed Constitutional structures.¹¹ Moreover, incremental improvements in existing structures and systems, while necessary in the short term, are not intended, and are unlikely, to be adequate to meet the long-term challenges. It is plausible that democratic societies will need to construct new or heavily modified institutions if they are to function ethically, responsibly, rationally, and successfully in the twenty-first century. This is especially true because the United States and other similar Enlightenment powers have been constructed with a cultural and intellectual framework of early Enlightenment thought and are thus uniquely at risk during such a period of change.¹² Indeed, this is precisely why the weaponized narrative is proving to be such a powerful and effective asymmetric weapon for Russia to deploy against the United States.¹³

This argument will be presented in several stages. First, the context within which these challenges arise, which involves rapid, complex, and unpredictable change across the entire frontier of society, will be sketched. Second, seven long-term trends that undergird these changes are identified. Taken as a whole, these trends suggest that current social, geopolitical, and political disruption is neither temporary nor reversible. Finally, these trends will be mapped back to institutions and values that underpin American ideas and institutions regarding governance. This comparison suggests in many cases that current institutions and practices are already obsolete, if not downright dysfunctional.

9. See, e.g., James P. Farwell, *Countering Russian Meddling in US Political Processes*, 48 *PARAMETERS* 37, 41–47 (2018).

10. See, e.g., KEIR GILES, *HANDBOOK OF RUSSIAN INFORMATION WARFARE* 19–30 (2016) (discussing various strategies and practices used in Russia’s informational warfare and how governments and other entities can respond to resulting challenges); OFFICE OF THE DIR. OF NAT’L INTELLIGENCE, NAT’L INTELLIGENCE COUNCIL, *INTELLIGENCE COMMUNITY ASSESSMENT: ASSESSING RUSSIAN ACTIVITIES AND INTENTIONS IN RECENT US ELECTIONS* i–iii (2017), https://www.dni.gov/files/documents/ICA_2017_01.pdf [<https://perma.cc/45TF-DCMQ>]; U.S. SPECIAL OPERATIONS COMMAND, *THE GRAY ZONE* 1–3, 9 (2015), <https://info.publicintelligence.net/USSOC-OM-GrayZones.pdf> [<https://perma.cc/DZ9B-VPGB>]. Of course, the Mueller Special Counsel investigation is an important part of the initial response. See, e.g., *Indictment* at 3–4, *United States v. Internet Research Agency LLC*, No. 1:18-cr-00032-DLF (D.D.C. filed Feb. 16, 2018).

11. Lex Rieffel, *Institutions Are Under Existential Threat, Globally*, BROOKINGS INST. (June 28, 2018), <https://www.brookings.edu/blog/up-front/2018/06/28/global-institutions-are-under-existential-threat/> [<https://perma.cc/D69D-843R>].

12. See generally JAMES MACGREGOR BURNS, *FIRE AND LIGHT: HOW THE ENLIGHTENMENT TRANSFORMED OUR WORLD* (2013).

13. See SINGER & BROOKING, *supra* note 7, at 112–17.

The discussion in this Article should not be taken as a prediction, especially because the rapid changes and chaos of this period of history make prediction essentially impossible. Rather, this Article presents an extended scenario, albeit one that is plausible, probable, and yet generally unrecognized. Additionally, while the technological trends and systems involved are potent and disruptive, these are highly complex systems, and technology alone is seldom, if ever, determinative of future states.¹⁴ Accordingly, any implication of technological determinism, especially in its popular dystopian guise, is unintended and inappropriate.

I. THE CONTEXT

It is easy to get lost in the noise and confusion that characterize the current era. But one should not let constant social media outrage and tsunamis of information distract from a fundamental point: the ideas, assumptions, and institutions behind today's democratic structures and practices may already be obsolete, if not simply failing.¹⁵ Indeed, many have already failed. If there is a way forward, it necessarily requires inventing new narratives, norms, and institutions, not hoping for old ones to return or stabilize.

It is difficult to overstate the degree to which the current geopolitical, technological, and strategic environment is chaotic. Politics around the world reflect an emerging contest not just between the traditional left and right, but between various authoritarian and democratic governance models.¹⁶ Populist and xenophobic elections took the United Kingdom out of the European Union and resulted in a host of illiberal governments from Eastern Europe to the United

14. See BRADEN R. ALLENBY & DANIEL SAREWITZ, *THE TECHNO-HUMAN CONDITION* 1–3 (2011) (ebook); Allenby, *The Dynamics of Emerging Technology Systems*, *supra* note 6, at 19–22.

15. The Brexit debacle provides one example; the degradation of the American presidency under President Trump another. See, e.g., *Three Strikes: Theresa May Is Set to Beg the EU for More Time. What Will She Do with It?*, *ECONOMIST* (Mar. 14, 2019), <https://www.economist.com/britain/2019/03/14/theresa-may-is-set-to-beg-the-eu-for-more-time-what-will-she-do-with-it> [<https://perma.cc/UH9W-C5DU>]; *The Race to Replace Theresa May*, *ECONOMIST* (Mar. 14, 2019), <https://www.economist.com/britain/2019/03/14/the-race-to-replace-theresa-may> [<https://perma.cc/27QU-CYV4>]. For a somewhat different perspective, see Karen DeYoung, *French President Macron Charms Both Parties in an Impassioned Speech to Congress*, *WASH. POST* (Apr. 25, 2018), https://www.washingtonpost.com/world/national-security/french-president-macron-charms-both-parties-in-an-impassioned-speech-to-congress/2018/04/25/bbd600ba-4894-11e8-827e-190efaf1flee_story.html?utm_term=.ce16e9a93b61 [<https://perma.cc/YYW5-NNNS>].

16. See, e.g., FRANCIS FUKUYAMA, *POLITICAL ORDER AND POLITICAL DECAY* 256–57 (2014). For a more popular take on the trend, see *What's Gone Wrong with Democracy*, *ECONOMIST* (Mar. 2014), <https://www.economist.com/news/essays/21596796-democracy-was-most-successful-political-idea-20th-century-why-has-it-run-trouble-and-what-can-be-do> [<https://perma.cc/4BEQ-HGXX>]; see also *Decline in Democracy Spreads Across The Globe as Authoritarian Leaders Rise*, *Nat'l Pub. Radio* (Aug. 3, 2017, 4:35 PM), <https://www.npr.org/2017/08/03/541432445/decline-in-democracy-spreads-across-the-globe-as-authoritarian-leaders-rise> [<https://perma.cc/HC82-23C8>].

Information Technology and the Fall of the American Republic

States.¹⁷ Power relationships and strategic doctrines are shifting dramatically.¹⁸ In lieu of traditional conventional military and diplomatic practices and doctrines, both Russia and China have adopted asymmetric “civilizational conflict” approaches that contemplate low-level continuous conflict across the entire frontier of competing civilizations. Every aspect of a civilization, from social structure to financial systems to software systems underlying modern infrastructure become fair game in such a contest.¹⁹ More profoundly, private firms, networked tribal communities, and globalized criminal syndicates, often associated with existing states, city-states, and ultrawealthy individuals, combine to generate ecosystems of power relationships, which leach away at the current state-based world order.²⁰ Technology is changing rapidly and unpredictably, and its cutting edge no longer lies with the military-industrial complex, but with private firms.²¹ This is especially true in critical areas such as artificial intelligence (AI) (where giants such as Facebook, Microsoft, Alibaba, Tencent, Baidu, and Google dominate); data collection and mining (where both the tech giants and authoritarian regimes unhindered by concerns about privacy, like China, are establishing dominance); CGI and virtual/augmented reality; and marketing.²²

17. Marc Champion, *The Rise of Populism*, BLOOMBERG (Jan. 21, 2019, 10:28 PM), <https://www.bloomberg.com/quicktake/populism> [<https://perma.cc/M87P-WJRK>].

18. See, e.g., SEAN MCFATE, *THE NEW RULES OF WAR: VICTORY IN THE AGE OF DURABLE DISORDER* 1–10 (2019) (discussing how geopolitical shifts reduce the importance of traditional forms of warfare, and how new practices and strategies should be implemented in response).

19. For the classic reference, see QIAO LIANG & WANG XIANGSUI, *UNRESTRICTED WARFARE* 4–5, 7 (Cent. Intelligence Agency trans., 1999), <http://www.c4i.org/unrestricted.pdf> [<https://perma.cc/RYY3-T4JS>]. The CIA translation is highly preferable to other versions, which distort the original content, such as the book version entitled *Unrestricted Warfare: China's Master Plan to Destroy America*, which obviously is playing to a different agenda. For a Russian perspective, see Valery Gerasimov, *The Value of Science Is in the Foresight: New Challenges Demand Rethinking the Forms and Methods of Carrying Out Combat Operations*, *MIL. REV.*, Jan.–Feb. 2016, at 23, 24–25 (Robert Coalson ed. & trans.) (originally published Feb. 27, 2013 in *Voyenno-Promyshlenny Kurier* (Russ.) [*Military-Industrial Kurier*]). On the subject of civilizational warfare, see Braden R. Allenby, *In an Age of Civilizational Conflict*, 56 *JURIMETRICS* J. 387, 393, 398 (2016); Brad Allenby, *The Paradox of Dominance: The Age of Civilizational Conflict*, *BULL. ATOMIC SCIENTISTS*, Mar. 2015, at 60, 63.

20. FUKUYAMA, *supra* note 16, at 7. See generally ROBERT KAPLAN, *THE RETURN OF MARCO POLO'S WORLD: WAR, STRATEGY, AND AMERICAN INTERESTS IN THE TWENTY-FIRST CENTURY* 39 (2018) (“The age of comparative anarchy is upon us.”); HENRY KISSINGER, *WORLD ORDER* (2014) (discussing the increasing failure of Western universalism and the Westphalian state-based system). Others call it “neomedievalism.” See SEAN MCFATE, *THE MODERN MERCENARY: PRIVATE ARMIES AND WHAT THEY MEAN FOR WORLD ORDER* 74–75 (2014).

21. NAT'L RESEARCH COUNCIL & NAT'L ACAD. OF ENG'G, *EMERGING AND READILY AVAILABLE TECHNOLOGIES AND NATIONAL SECURITY—A FRAMEWORK FOR ADDRESSING ETHICAL, LEGAL, AND SOCIETAL ISSUES* 33 (Jean-Lou Chameau et al. eds., 2014) (ebook).

22. See, e.g., KAI-FU LEE, *AI SUPERPOWERS: CHINA, SILICON VALLEY, AND THE NEW WORLD ORDER* 83 (2018).

And more than ever, individual and institutional identity is a battlespace of new forms of warfare such as weaponized narrative.²³

Under these circumstances, many people hope that after this period of chaos, order and civility will reestablish themselves, and life can get back to normal. Although understandable, this begs the critical question: is this period of history really that different? After all, it was in 1919, almost a full century ago, that W. B. Yeats wrote in his poem, “The Second Coming”:

Things fall apart; the centre cannot hold;
Mere anarchy is loosed upon the world,
The blood-dimmed tide is loosed, and everywhere
The ceremony of innocence is drowned;
The best lack all conviction, while the worst
Are full of passionate intensity.²⁴

Determining whether this historical point is different from the usual fluctuations of history depends on the answer to a deeper underlying question: are the trends and factors that have encouraged such difficult political and social behavior transitory—in which case a “return to normalcy”²⁵ might be possible—or are they long term, and thus require more serious thinking about the effectiveness, stability, and potential failure of current legal, institutional, and governance systems? A review of some of the more salient trends does indeed suggest that today’s changes and dislocations are neither short term nor transitory, and thus portend fundamental shifts in systems developed and honed in conditions that no longer exist. It is not that these trends are set in stone or irreversible; such a claim would require an impossible knowledge of an unpredictable future. But it is possible to assert that current knowledge strongly suggests that such trends will continue, if not intensify, going forward.

23. On issues of identity, see FRANCIS FUKUYAMA, *IDENTITY: THE DEMAND FOR DIGNITY AND THE POLITICS OF RESENTMENT* 3–11 (2018). On weaponized narrative, see Allenby, *The Age of Weaponized Narrative*, *supra* note 6, at 66–67. The concept was introduced in Brad Allenby & Joel Garreau, *Weaponized Narrative Is the New Battlespace*, DEFENSE ONE (Jan. 3, 2017), http://www.defenseone.com/ideas/2017/01/weaponized-narrative-new-battlespace/134284/?oref=defense_one_today_nl, [https://perma.cc/7NZU-HS26]. For a broader treatment of weaponized narrative, see generally WEAPONIZED NARRATIVE: THE NEW BATTLESPACE, *supra* note 4.

24. W.B. YEATS, *The Second Coming*, in *THE COLLECTED POEMS OF W.B. YEATS* 187, 187 (Richard J. Finneran ed., 2nd ed. 1996).

25. Warren Harding, a successful newspaper publisher and later U.S. Senator, won the 1920 Presidential election by a landslide in part because of his campaign promise of a “return to normalcy” after the hardships and, for an insular country, the cultural challenge of World War I. See, e.g., *Warren G. Harding*, HISTORY, <https://www.history.com/topics/us-presidents/warren-g-harding> [https://perma.cc/5T25-GZSW]. Because the domestic and geopolitical changes that accompanied that war were so fundamental and long term, however, it proved to be a vain hope, the equivalent of wishing history to reverse its path. See Patty Limerick, *From the Past, A New Slogan: Make America Normal Again*, DENVER POST (Oct. 14, 2016), <https://www.denverpost.com/2016/10/14/from-the-past-a-new-slogan-make-america-normal-again/> [https://perma.cc/8JQ3-L2CA]. Nonetheless, similar hopes are a popular escape from responsibility today as well. It is therefore worth remembering Martin Heidegger’s admonition: “So long as we do not, through thinking, experience what is, we can never belong to what will be.” HEIDEGGER, *supra* note 2, at 49.

II. NO, VIRGINIA, YOU CAN'T GO HOME AGAIN

With this context in mind, a number of underlying trends can be identified that, taken together, suggest that today's political, cultural, social, and institutional turmoil are not passing phenomena but instead are the beginning of a period of rapid, unpredictable, and potentially dramatic change. Seven factors in particular deserve mention:

A. Factor 1: Rapid progress in evolutionary psychology, behavioral economics, neuroscience, and related fields is fueling accelerating capabilities to manipulate people, communities, institutions, and states.

Such manipulation is the essence of “weaponized narrative,” which is defined as “the use of information and communication technologies, services, and tools to create and spread stories intended to subvert and undermine an adversary’s institutions, identity, [] civilization,” and will by creating and “exacerbating complexity, confusion, and political and social schisms.”²⁶ Weaponized narrative is not a theoretical threat; it has been deployed in the Russian invasion of Ukraine, Brexit, the attacks on the American 2016 election, and ongoing attacks on the Baltic and Eastern European states and American elections.²⁷ It draws on, but is far more powerful than, the disinformation and information warfare of the Cold War precisely because it arises from advancements across a wide front of disciplines, especially evolutionary and personal psychology,²⁸

26. See, e.g., Allenby, *The Age of Weaponized Narrative*, *supra* note 6, at 66; see also Brad Allenby & Joel Garreau, *Weaponized Narrative Is the New Battlespace: And the U.S. Is in the Unaccustomed Position of Being Seriously Behind Its Adversaries*, in WEAPONIZED NARRATIVE: THE NEW BATTLESPACE, *supra* note 4, at 5, 6–9.

27. See, e.g., HEATHER A. CONLEY ET AL., CTR. FOR STRATEGIC & INT’L STUDIES, THE KREMLIN PLAYBOOK 6–9 (2016), https://csis-prod.s3.amazonaws.com/s3fs-public/publication/1601017_Conley_KremlinPlaybook_Web.pdf [<https://perma.cc/LA4S-4V48>]; OFFICE OF THE DIR. OF NAT’L INTELLIGENCE, *supra* note 10, at 1–5; Mark Scott, *Cambridge Analytica Helped ‘Cheat’ Brexit Vote and US Election, Claims Whistleblower*, POLITICO (Mar. 29, 2018, 9:18 PM), <https://www.politico.eu/article/cambridge-analytica-chris-wylie-brexit-trump-britain-data-protection-privacy-facebook/> [<https://perma.cc/2Q9C-RY7G>].

28. “Evolutionary psychology is a theoretical approach to psychology that attempts to explain useful mental and psychological traits—such as memory, perception, or language—as adaptations, i.e., as the functional products of natural selection.” *Evolutionary Psychology*, SCIENCE DAILY, www.sciencedaily.com/terms/evolutionary_psychology.htm [<https://perma.cc/K6N6-SXE6>].

cultural intelligence studies,²⁹ behavioral economics,³⁰ marketing,³¹ and neuroscience. These disciplines are generating new knowledge about human behavior and cognition, and especially about its weaknesses in complex and rapidly changing information environments. At such times, decisions tend to default to automatic processes characterized by reliance on cognitive heuristics and biases known as System 1, rather than the energetically expensive reliance on rational evaluation (known as System 2). Unlike System 2, System 1 can be manipulated and to some extent designed.³² For those so inclined, from marketers to political consultants to geopolitical adversaries, this enables far more sophisticated intervention in, and manipulation of, individual and institutional behaviors.³³

The old model of social control, the Big Lie introduced by Hitler in 1925 in *Mein Kampf* and used effectively by Stalin and others, requires large security state apparatuses and depends upon state control of media and information.³⁴ This makes the Big Lie model complicated, expensive, and very difficult to maintain in an increasingly information rich environment.³⁵ But new methods of control, such as weaponized narrative, enable much less expensive and far subtler population management by manipulation of the narratives, stories, and scripts fed to target audiences.³⁶ For domestic audiences, it enables the creation and maintenance of self-identified communities ring-fenced not by expensive external controls but by exclusionary internal narratives; externally, it enables attacks on weak points and existing schisms in adversary societies and cultures. In particular, knowledge of cognitive biases and heuristics and cultural divides can be used to divide, influence, and manage adversary societies as a whole. This is especially true if they are already weakened along civilizational lines, as was the case with Ukraine,³⁷ or already prone to respond to stimulation of anger

29. See generally P. Christopher Earley & Elaine Mosakowski, *Cultural Intelligence*, HARV. BUS. REV., Oct. 2004, at 139 (discussing the meaning of cultural intelligence, its three theories, and how to cultivate your cultural intelligence).

30. See generally DANIEL KAHNEMAN, *THINKING, FAST AND SLOW* 292–94, 300, 372, 412 (2011) (the best general introduction to behavioral economics).

31. See generally TIM WU, *THE ATTENTION MERCHANTS: THE EPIC SCRAMBLE TO GET INSIDE OUR HEADS* (2016) (discussing how media and marketing have evolved over time).

32. The S1 and S2 systems are well explained, along with the basics of behavioral economics, in KAHNEMAN, *supra* note 30, at 19–30, 412–13.

33. See generally ROBERT CIALDINI, *PRE-SUASION: A REVOLUTIONARY WAY TO INFLUENCE AND PERSUADE* (2016) (ebook) (discussing the art of “pre-suasion” and its use to influence others’ behaviors); CASS R. SUNSTEIN, *THE ETHICS OF INFLUENCE: GOVERNMENT IN THE AGE OF BEHAVIORAL SCIENCE* (2016) (ebook) (discussing how institutions can use behavioral science to influence society).

34. See ADOLF HITLER, *MEIN KAMPF* 231–32 (Ralph Manheim trans., Houghton Mifflin Co. 1999) (1925).

35. See, e.g., *East German Stasi Had 189,000 Informers, Study Says*, DW (Nov. 3, 2008), <https://dw.com/en/east-german-stasi-had-189000-informers-study-says/a-3184486-1> [<https://perma.cc/4JVC-T9ZE>]. The East German Ministry for State Security (Stasi) had over 90,000 full employees, and an estimated 190,000 informers, or about 1 in every hundred East Germans, before it was disbanded in 1990. *Id.*

36. Allenby & Garreau, *supra* note 26.

37. SAMUEL P. HUNTINGTON, *THE CLASH OF CIVILIZATIONS AND THE REMAKING OF WORLD ORDER* 165–68 (2011).

and fear responses, as is the case with the United States.³⁸ The results include social fragmentation, substitution of moral condemnation for reasoned argument, the rise of ring-fenced communities that reject the legitimacy of any who oppose them, and golden opportunities for practitioners such as Russia who use weaponized narrative not to conquer, but to weaken and fragment their adversaries—and to legitimize their own internal narratives by contrast.³⁹

B. Factor 2: The rapid and accelerating evolution of major technology systems such as nanotechnology, robotics, and biotechnology across the entire technological frontier is another contributing trend that shows no sign of stopping.⁴⁰ It is, however, the profound changes in information and communication technologies (ICT) that are fueling the most fundamental social, cultural, institutional, political, and psychological change.⁴¹

It is axiomatic but often overlooked that while individuals, institutions, communities, and cultures may be many things, they are all information processing mechanisms. Change the information environment dramatically, and you will likely fundamentally change how they function. And the information environment is surely in the process of fundamental change. The most obvious trendline is the accelerating changes to volume, velocity, and variety of information. In 2014, for example, Susan Gunelius found that every minute Facebook users shared nearly 2.5 million pieces of content; Twitter users tweeted nearly 300,000 times; Instagram users posted nearly 220,000 new photos; YouTube users uploaded 72 hours of new video content; Apple users downloaded nearly 50,000 apps; and email users sent over 200 million messages.⁴²

38. See, e.g., SINGER & BROOKING, *supra* note 7, at 112–15.

39. See generally CHARLES CLOVER, *BLACK WIND, WHITE SNOW: THE RISE OF RUSSIA'S NEW NATIONALISM* (2016) (ebook) (discussing Russia's political history); BOBO LO, *RUSSIA AND THE NEW WORLD DISORDER* (2015) (discussing the challenges Russia faces in current global politics and what Russia is doing to meet those challenges); PETER POMERANTSEV, *NOTHING IS TRUE AND EVERYTHING IS POSSIBLE: THE SURREAL HEART OF THE NEW RUSSIA* (2015) (discussing the evolution of a singularly postmodern Russian intelligentsia in the post-Soviet era).

40. See RAY KURZWEIL, *THE SINGULARITY IS NEAR: WHEN HUMANS TRANSCEND BIOLOGY* 35 (2005). While some find Kurzweil's conclusions regarding "the Singularity," or the point at which AI reaches the ability to evolve itself, thus rapidly evolving away from human experience, somewhat off putting, the comprehensive data regarding, and analysis of, emerging technologies in the book are excellent.

41. BRADEN R. ALLENBY, *THE THEORY AND PRACTICE OF SUSTAINABLE ENGINEERING* 252 (2011); LEE, *supra* note 22, at x; Brad Allenby, *Frankensteins and Space Odysseys: Our History with Technology, Our Future with Machines*, 72 *BULL. ATOMIC SCIENTISTS* 256, 256 (2016) (book review).

42. Susan Gunelius, *The Data Explosion in 2014 Minute by Minute—Infographic*, ACI (July 12, 2014), <https://aci.info/2014/07/12/the-data-explosion-in-2014-minute-by-minute-infographic> [<https://perma.cc/DNB6-AUXU>].

As many have noted, more information is created every two years in the modern world than had previously been created in all of human history,⁴³ or, as Eric Schmidt, then CEO of Google, put it in 2010, we create as much information in two days as in all of history up until 2003.⁴⁴ The exact numbers are a matter of debate; the underlying point, that the volume and velocity of information flows in the past decades have exploded, is not.

But it is not just that the volume, velocity, and variety of information have fundamentally changed, the technologies that process, deliver, and shape it based on psychological and community profiles are also undergoing profound, and accelerating, evolution. Social media platforms are increasingly powerful and ubiquitous; virtual reality and deepfake technologies that eclipse the difference between real world events and CGI fakes are becoming indistinguishable from reality;⁴⁵ firms such as Cambridge Analytica, the Russian Internet Research Agency, and their successors enable psychological profiling, targeting, and manipulation of individuals based on data scraped from the Internet (e.g., for voter suppression);⁴⁶ and above all the integrative power of AI combined with big data and analytics techniques enables everything from weaponized narrative to social credit mass surveillance and control.⁴⁷ AI, big data, and analytics not only enable the fragmentation of cognition across techno-human systems—think of how memory is now offloaded onto computers and search engines—but especially do so in complex environments (such as political competition,

43. Bernard Marr, *Big Data: 20 Mind-Boggling Facts Everyone Must Read*, FORBES (Sept. 30, 2015, 2:19 AM), <https://www.forbes.com/sites/bernardmarr/2015/09/30/big-data-20-mind-boggling-facts-everyone-must-read/#2162010c17b1> [<https://perma.cc/D4U8-9TQT>]. Naturally, there is a huge argument about what constitutes “information,” but the fundamental point is that virtually all information processing mechanisms, including human cognitive systems and institutions, are operating in an information environment for which they were never intended, and which is overwhelmingly complex, rapid, and unintelligible to existing entities.

44. M.G. Siegler, *Eric Schmidt: Every Two Days We Create as Much Information as We Did Up To 2003*, TECHCRUNCH (Aug. 4, 2010), <https://techcrunch.com/2010/08/04/schmidt-data> [<https://perma.cc/H4S5-DLK4>].

45. *Rise of the Deepfakes*, WEEK (June 9, 2018), <http://theweek.com/articles/777592/rise-deep-fakes> [<https://perma.cc/2WLG-ZQEH>]; see also Patrick Shanley & Katie Kilkenny, *Deepfake Tech Eyed by Hollywood VFX Studios*, HOLLYWOOD REPORTER (May 4, 2018, 7:05 AM), <https://www.hollywoodreporter.com/news/deepfake-tech-eyed-by-hollywood-vfx-studios-1087075> [<https://perma.cc/974V-HVVH>].

46. See, e.g., Indictment, *supra* note 10, at 18–21.

47. See, e.g., *Planning Outline for the Construction of a Social Credit System (2014–2020)*, CHINA COPYRIGHT AND MEDIA (Rogier Creemers ed., Jun. 14, 2014), <https://chinacopyrightandmedia.wordpress.com/2014/06/14/planning-outline-for-the-construction-of-a-social-credit-system-2014-2020> [<https://perma.cc/4NEC-8PSG>]; see also Simina Mistreanu, *Life Inside China’s Social Credit Laboratory*, FOREIGN POLICY (Apr. 3, 2018), <http://foreignpolicy.com/2018/04/03/life-inside-chinas-social-credit-laboratory> [<https://perma.cc/JS4J-AE4H>]; Charles Rollet, *The Odd Reality of Life Under China’s Social Rating System*, WIRED (June 5, 2018), <https://www.wired.co.uk/article/china-blacklist> [<https://perma.cc/SM6B-TUXA>]; *Big Data, Meet Big Brother: China Invents the Digital Totalitarian State*, ECONOMIST (Dec. 17, 2016), <https://www.economist.com/briefing/2016/12/17/china-invents-the-digital-totalitarian-state> [<https://perma.cc/9Z8B-CDDP>].

cyberspace, or battlespaces infested with networked software bots and swarms of minirobots), which leads to emergent cognitive systems and behaviors.⁴⁸

C. Factor 3: Technological and scientific change, and information overload, lead to strategies to reduce the need to process incoming information, which may include increasing fundamentalism and increased reliance on narrative, as opposed to applied rationality, as a screen for what is “real” and “true.”⁴⁹

Unpredictable and accelerating change and the dramatic increases in complexity that emerging technologies, especially ICT, have spawned, in turn destabilize both individuals and institutions. The predictable result is that individuals flee to mechanisms that screen and simplify information overload.⁵⁰ Fundamentalisms are particularly attractive when they can be applied because they are both simple and emotionally satisfying.⁵¹ Moreover, because they provide powerful narratives, fundamentalisms provide powerful identities and meanings with which to oppose overwhelming complexity.⁵² Moreover, fundamentalisms provide ready-made answers that need not be tested against rationality and thus are particularly attractive in a post-factual environment. As Colin Woodard writes, American Christian evangelicals continue to “war against cultural pluralism, religious diversity . . . and the Enlightenment’s very insistence that verifiable facts trump the beliefs they contradict.”⁵³ A recent Pew Research Center survey supports this interpretation: 68 percent of Americans are “exhausted” and are “feeling overwhelmed by the amount of news there is,” a figure that rises to 77 percent among Republicans.⁵⁴ Interestingly, the survey reported

48. See ALLENBY & SAREWITZ, *supra* note 14, at 186. See generally BRADEN R. ALLENBY, *THE RIGHTFUL PLACE OF SCIENCE: FUTURE CONFLICT & EMERGING TECHNOLOGIES* 35–40 (2016) (discussing emerging military and security technologies and their implications).

49. “Western history and psychology have heretofore treated truth as independent of the personality and prior experience of the observer. Yet our age is on the verge of a changed conception of the nature of truth. . . . The concept of truth is being relativized and individualized—losing its universal character.” KISSINGER, *supra* note 20, at 352; see also Allenby & Garreau, *supra* note 26.

50. KAHNEMAN, *supra* note 30, at 20–21. In terms of behavioral economics, the more decisions an individual is required to make on a constant basis, the more necessary it will be for them to rely on S1, cognitive heuristics and biases, rather than S2, which involves the time and energy of conscious cognition. *Id.*

51. KAPLAN, *supra* note 20, at 242–49; see, e.g., FUKUYAMA, *supra* note 23, at 69–70.

52. See e.g., FUKUYAMA, *supra* note 23, at 69.

53. Colin Woodard, *How Trump Breathed New Life into the Cultural War Waged by Evangelicals*, WASH. POST (Apr. 14, 2017), https://www.washingtonpost.com/opinions/how-trump-p-breathed-new-life-into-the-cultural-war-waged-by-evangelicals/2017/04/14/6262ac10-04ff-11e7-b1e9-a05d3c21f7cf_story.html?noredirect=on&utm_term=.a186ba07ac1d [https://perma.cc/HN5K-5EKT].

54. Jeffrey Gottfried & Michael Barthel, *Almost Seven-in-Ten Americans Have News Fatigue, More Among Republicans*, PEW RESEARCH CTR. (June 5, 2018), <http://www.pewresearch.org/fact->

that “[f]eeling overwhelmed by the news is more common among those who follow the news *less* closely,” 78 percent, as opposed to 62 percent among the general public.⁵⁵ Of course, not following news, and quickly rejecting any information that does not jive with an individual’s narrative, are both ways of reducing cognitive load. Furthermore, another recent Pew Research Center survey noted that over “[t]wo-thirds of Americans (67%) get at least some news [from] social media,” which means the society is increasingly relying on pre-screened news feeds.⁵⁶

Not just individuals, but institutions are susceptible to pressures to oversimplify. As a result, they tend to perform inadequately, and sometimes fail, as their governance tasks become more complex and their personnel and stakeholders become more simplistic.⁵⁷ Institutions, particularly in the United States and Europe, tend to be justified by explicit applied rationality, and they develop and deploy fact-based policies (or at least policies purporting to be fact based, an increasingly difficult and arbitrary standard as modern societies move into a post-factual environment).⁵⁸ This can be a particular challenge for institutions such as the U.S. military, which value tradition and historical continuity and change relatively slowly compared to the cycle times of modern media and cyber campaigns.⁵⁹

D. Factor 4: Geopolitical shifts have augmented such challenges in important ways that increase complexity in global governance and thus encourage further retreat to fundamentalism and institutional failure.

After World War II, few questioned the ethical principles of the victors, Europe and especially the United States, which were consequently enshrined in the United Nations’ Universal Declaration of Human Rights in 1948.⁶⁰ However, the “universal values” appearing in that document have turned out not to

tank/2018/06/05/almost-seven-in-ten-americans-have-news-fatigue-more-among-republicans/ [https://perma.cc/2CTV-KT4J].

55. *Id.*

56. Kristen Bialik and Katerina Eva Matsa, *Key Trends in Social and Digital News Media*, PEW RESEARCH CTR. (Oct. 4, 2017), <http://www.pewresearch.org/fact-tank/2017/10/04/key-trends-in-social-and-digital-news-media/> [https://perma.cc/YV8M-URSG].

57. See FUKUYAMA, *supra* note 16, at 543. That current institutions are increasingly incapable not just because of particulars, but because they reflect obsolete assumptions about information and media is a point made by a number of observers, most often in blogs and nontraditional spaces: “the balance of the struggle between the Deep State and the Insurgency will be determined by how quickly the Deep State can dispense with old and dysfunctional doctrine and innovate novel approaches that are adequate to the war.” Jordan Hall, *Situational Assessment 2018: The Calm Before the Storm*, MEDIUM (Feb. 1, 2018), <https://medium.com/deep-code/situational-assessment-2018-the-calm-before-the-storm-5a0bd014ec84> [https://perma.cc/GMU9-5DAU].

58. Hall, *supra* note 57. See generally KISSINGER, *supra* note 20.

59. See, e.g., Kurt M. Sanger & Brad Allenby, *Marines: Tell It to The*, in WEAPONIZED NARRATIVE: THE NEW BATTLESPACE, *supra* note 4, at 28–30. See generally MCFATE, *supra* note 18, at 25–42 (discussing how conventional warfare has become obsolete and how U.S. military and security strategies, policies, and institutions must change if the United States is to keep up).

60. See G.A. Res. 217 (III) A, Universal Declaration of Human Rights (Dec. 10, 1948).

be so universal after all: Russia, China, and a number of Islamic entities, among others, now reject them.⁶¹ China, for example, in a 2013 policy report entitled “Document 9: Communiqué on the Current State of the Ideological Sphere,” called Western constitutional democracy “an attempt to undermine the current leadership and the socialism with Chinese characteristics system of governance,” and asserts that promoting Western “universal values” is “an attempt to weaken the theoretical foundations of the Party’s leadership.”⁶²

E. Factor 5: The rise of postmodern and post-factual culture, combined with increasing skepticism about scientific truth, feeds a world where multiple competing narratives at all scales is becoming the norm —“narrative neomedievalism.”

Geopolitically, neomedievalism is a regional state of durable disorder, or a “non-state-centric and multipolar world order characterized by overlapping authorities and allegiances.”⁶³ Current examples include the dynamic yet structured chaos of sub-Saharan Africa or the Middle East.⁶⁴ “Narrative neomedievalism” reflects the reality of today’s fragmentation among many competing narratives at many scales;⁶⁵ a state of narrative neomedievalism provides a ready-made battlespace for those adept at weaponized narrative.⁶⁶ The core shift that enables narrative medievalism at scale is from “truth” as an accepted general social value based in science and observation, to truth as whatever agrees with the narrative of a particular cohort.⁶⁷

This is more meaningful than one might initially believe. How truth is understood by a culture relates directly to the institutions and mental models that

61. HUNTINGTON, *supra* note 37, at 195–96; *see also* KISSINGER, *supra* note 20, at 127, 364–65.

62. Cent. Comm. of the Communist Party of China’s Gen. Office, Communiqué on the Current State of the Ideological Sphere 22-4-2013 (China), translated in *Document 9: A ChinaFile Translation*, CHINA FILE (Nov. 8, 2013), <http://www.chinafile.com/document-9-chinafile-translation> [<https://perma.cc/8AE3-EBLM>]. In the case of Russia, *see, e.g.*, LO, *supra* note 39, at 63 (“One of the defining features of the new world disorder is the erosion of universalism.”); POMERANTSEV, *supra* note 39, at 234.

63. This definition is offered by MCFATE, *supra* note 18, at xv.

64. *See also id.* at 5–7.

65. *See generally* FUKUYAMA, *supra* note 23, at 3–11 (discussing fragmentation between various groups in modern-day society).

66. Allenby, *The Age of Weaponized Narrative*, *supra* note 6.

67. Skepticism in science is increasing around the world, in part because some 45% of the respondents to 3M’s 2019 State of Science survey, which includes responses from some 14,000 people in 14 countries, reported that “they only believe in science that aligns with their personal beliefs.” Renae Reints, *People Are Becoming Increasingly Skeptical of Science, Report Finds*, FORTUNE (Mar. 20, 2019), http://fortune.com/2019/03/20/state-of-science-report/?fbclid=IwAR0C1xwYwZZk-8kixzQYS5zAePESfTsySAZxnhCy8GA0ybd-49Ew_xauVE [<https://perma.cc/EZA4-ECEY>]; *see also State of Science Index Survey*, 3M, https://www.3m.com/3M/en_US/state-of-science-index-survey/about-2019-survey/ [<https://perma.cc/QVL2-48LR>].

culture adopts. Thus, historically the Enlightenment, among many other things, shifted the basis of truth to the scientific method and applied rationality, and away from reliance on religious and traditional authority, giving facts and observation priority over faith.⁶⁸ Today, however, concomitant with the rise in fundamentalisms, scientific truth as a definitive general standard is increasingly replaced by an *a la carte* approach to science: the facts that support one's narrative are accepted while others are rejected.⁶⁹ This correlates with increasing reliance on S1 heuristics, especially the "confirmation bias," and a decreased reliance on S2 applied rationality cognitive processes.⁷⁰ This pattern holds true across the political spectrum: many on the left reject GMOs (genetically modified agricultural organisms) and vaccinations, while many on the right reject consensus views of climate change and evolution, in both cases despite adequate scientific and experiential data supporting the scientific assertion.⁷¹ While this is a very complex process and is occurring at different speeds and in different ways depending on local culture, the validator of truth is subtly but powerfully shifting from scientific discourse to narratives.⁷² While this new version of the Enlightenment is still in its early stages, it is already clear that it is post-factual, postmodern, complex and unpredictable, privileging narratives and emotion over applied rationality and fact-based policy—and it is in the process of replacing the more rationalistic society that built it, and within which today's individuals and institutions have been shaped.⁷³

F. Factor 6: Current institutions are increasingly inadequate as new and less traditional power centers displace them, and as they become increasingly incapable of functioning with the rapidity and agility that complex environments demand.

Private military companies, large multinationals, and nongovernmental organizations of all stripes increasingly function as independent power centers, while self-defining religious communities claim ideological and temporal power

68. *Enlightenment*, HISTORY.COM (Dec. 16, 2009), <https://www.history.com/topics/british-history/enlightenment> [<https://perma.cc/U2Y6-LQPQ>].

69. See Peter Hacker, *Reason, The Enlightenment, and Post-Truth Politics*, IAI NEWS (Mar. 2, 2017), <https://iai.tv/articles/reason-the-enlightenment-and-post-truth-politics-auid-785> [<https://perma.cc/L5CY-BS6G>]; Reints, *supra* note 67.

70. See KAHNEMAN, *supra* note 30, at 80–81.

71. See, e.g., Janelle Bouie, *Anti-Science Views Are a Bipartisan Problem*, SLATE (Feb. 4, 2015, 1:37 PM), <https://slate.com/news-and-politics/2015/02/conservatives-and-liberals-hold-anti-science-views-anti-vaxxers-are-a-bipartisan-problem.html> [<https://perma.cc/9YTQ-UBQ7>].

72. See FUKUYAMA, *supra* note 23, at 3–11; see also Allenby & Garreau, *supra* note 26.

73. See FUKUYAMA, *supra* note 16, at 8–9. See generally KISSINGER, *supra* note 20. It also represents an interesting power shift within the Enlightenment itself, from the applied rationality of Voltaire, Montesquieu, and Locke to the romantic anti-rational reactions of Rousseau and writers such as Mary Shelley and the Romantic Poets. See, e.g., FUKUYAMA, *supra* note 23, at 57, 94.

Information Technology and the Fall of the American Republic

in many guises.⁷⁴ Thus, large areas of the world, especially in sub-Saharan Africa and the Middle East, increasingly lapse into what Sean McFate calls “durable disorder,” a neomedieval devil’s brew of religions, ideologies, clans, governments, armed activists, and various internal and external powers.⁷⁵ Private firms and nonprofit entities increasingly encroach on state function in domains ranging from space exploration and exploitation to military and security functions and foreign aid and assistance.⁷⁶ In short, individual commitment to larger state and social identities is weakening: the state-based Westphalian system of international law and institutions, while still dominant in many ways, is failing and is being replaced by a complex pastiche of private, public, non- and quasi-governmental, and ad hoc institutions, power centers, and interests.⁷⁷ Geopolitics is growing ever more complex even as the societies and institutions that must manage them are retreating into more simplistic worldviews and narratives.⁷⁸

Failure of existing institutions also occurs as the rate of technological, political, economic, and social change accelerates beyond institutional ability to adapt; once this happens, the cycle time of adaptation then fails.⁷⁹ The strategic dimensions of this challenge have also been recognized: to the extent an adversary gets inside an institutional or social “Observe, Orient, Decide, and Act” (OODA) loop (a concept made famous by military theorist and strategist John Boyd), the adversary is able to control the evolution of the battlespace.⁸⁰ As Jeff Kubiak notes, the institutional implications are obvious:

74. See, e.g., Joel Garreau, *Environmentalism as Religion*, 28 NEW ATLANTIS 61, 64–69 (2010). This is true not just of “traditional religions,” but also of superficially secular belief systems, such as environmentalism, that over time have become much more like religions. *Id.* at 61.

75. MCFATE, *supra* note 18, at 74.

76. See, e.g., Robert S. Gilmour & Laura S. Jensen, *Reinventing Government Accountability: Public Functions, Privatization, and the Meaning of “State Action”*, 58 PUB. ADMIN. REV. 247, 247 (1998); Marija Gavrilov, *Short Guide to Digital Switzerlands—When Companies Act as Countries*, MEDIUM (July 21, 2018), <https://medium.com/@arijaMGavrilov/short-guide-to-digital-switzerlands-when-companies-act-as-countries-2316938f16dd> [<https://perma.cc/GDJ6-6ELJ>]. The USAID website notes that “[p]artnerships with non-governmental organizations help deliver services, enrich democratic processes, and meet constituent needs in the areas where USAID works.” *Non-Governmental Organizations (NGOs)*, U.S. AGENCY FOR INT’L DEV., <https://www.usaid.gov/partnership-opportunities/ngo> [<https://perma.cc/F55Z-U2T8>].

77. See, e.g., FUKUYAMA, *supra* note 16, at 7. See generally KISSINGER, *supra* note 20.

78. See, e.g., Hal Brands, *U.S. Allies Are Failing to Fill the Global Leadership Void*, BLOOMBERG (Feb. 15, 2018, 6:00 AM), <https://www.bloomberg.com/view/articles/2018-02-15/u-s-allies-can-t-fill-the-void-of-trump-s-global-retreat> [<https://perma.cc/EQ8Q-8RLK>]; Richard N. Haass, *Liberal World Order, R.I.P.*, COUNCIL ON FOREIGN RELATIONS (Mar. 21, 2018), <https://www.cfr.org/article/liberal-world-order-rip> [<https://perma.cc/43BV-T94K>]. See generally KISSINGER, *supra* note 20.

79. This is referred to in the literature as “The Pacing Problem.” See, e.g., Gary E. Marchant, *Addressing the Pacing Problem*, in THE GROWING GAP BETWEEN EMERGING TECHNOLOGIES AND LEGAL-ETHICAL OVERSIGHT: THE PACING PROBLEM, *supra* note 6, at 199–204.

80. See generally FRANS P.B. OSINGA, SCIENCE, STRATEGY AND WAR: THE STRATEGIC THEORY OF JOHN BOYD (Routledge 2007) (introducing and discussing OODA). John Boyd operated

During times when the environment was changing slowly, these [(existing and effective)] institutions would grow and execute nearly automatically. However, during times of rapid change, these institutions needed to be destroyed and recreated as one's orientation was adjusted to match reality. Applying Boyd's thinking to the strategic concerns of our surging information environment would suggest that old institutions need to be completely rebuilt.⁸¹

Moreover, especially in cyber and tech spaces, rapid increases in both knowledge and technological sophistication in the private sector have shifted institutional power significantly.⁸² This shift is especially apparent in domains involving security, AI, big data, analytics, and protection against weaponized narrative.⁸³ This has led some U.S.-based firms to argue that they are globalized "digital Switzerlands," not just extensions of the state within which they are legally located, as Brad Smith, President of Microsoft, has noted:

We need to start with a clear premise. Even in a world of growing nationalism, when it comes to cybersecurity the global tech sector needs to operate as a neutral Digital Switzerland. We will assist and protect customers everywhere. We will not aid in attacking customers anywhere. We need to retain the world's trust. And every government regardless of its policies or politics needs a national *and* global IT infrastructure that it can trust.⁸⁴

In short, both people and institutions have constrained capability to adapt to change, and if those limits are transgressed, institutional incapacity, degradation, and failure are the result.⁸⁵

G. Another significant contribution to greater geopolitical complexity is the development of new strategies by potential adversaries in response to American dominance of conventional military capabilities.⁸⁶

In response to American superiority in conventional warfare, Russia and China in particular have emphasized a shift to asymmetric warfare.⁸⁷ The strategies and doctrines evolved by these states are fundamentally different in that they assign a secondary role to traditional conventional war and strategies, while

mainly through long slide-based presentations and never wrote much about his highly influential OODA framework. *Id.*

81. Jeff Kubiak, *Strategy: Thinking Forward*, in WEAPONIZED NARRATIVE: THE NEW BATTLESPACE, *supra* note 4, at 32, 31–35.

82. Allenby, *The Age of Weaponized Narrative*, *supra* note 6, at 66, 68.

83. *Id.*

84. Brad Smith, *The Need for a Digital Geneva Convention*, MICROSOFT ON THE ISSUES (Feb. 14, 2017), <https://blogs.microsoft.com/on-the-issues/2017/02/14/need-digital-geneva-convention/> [<https://perma.cc/U3SM-WTDU>]. This is, of course, a sector specific case of the broader phenomenon of the decline of the Westphalian world order; see KISSINGER, *supra* note 20, at 7–8.

85. Allenby & Garreau, *supra* note 26.

86. See MCFATE, *supra* note 18, at 37–42.

87. THE WHITE HOUSE, NATIONAL SECURITY STRATEGY OF THE UNITED STATES OF AMERICA 14, 21, 34–35, 46–48 (Dec. 2017), <https://www.whitehouse.gov/wp-content/uploads/2017/12/NSS-Final-12-18-2017-0905-2.pdf> [<https://perma.cc/5NT7-95TR>].

Information Technology and the Fall of the American Republic

emphasizing the need to use unconventional weapons such as disinformation warfare and cyberwar methods to engage across the entirety of cultures and civilizations.⁸⁸ The entirety of a civilization becomes a battlespace. In China, for example, Qiao Liang and Wang Xiangsui of the People's Liberation Army in *Unrestricted Warfare* wrote that war is now "transcend[ing] all boundaries and limits," and that "all the boundaries lying between the two worlds of war and non-war, of military and non-military, will be totally destroyed."⁸⁹ A similar perspective is offered by General Gerasimov, Chief of the General Staff of the Russian Federation, who writes that "[t]he very 'rules of war' have changed. The role of nonmilitary means of achieving political and strategic goals has . . . in many cases . . . exceeded the power of force of weapons in their effectiveness."⁹⁰ This new form of conflict, sometimes called "hybrid warfare," relies on "the broad use of political, economic, informational, humanitarian, and other nonmilitary measures," with conventional force "resorted to . . . primarily for the achievement of final success in the conflict."⁹¹ In both cases, operations tend to occur in "the Gray Zone," a portion of the conflict spectrum that includes conventional military operations only tangentially, if at all.⁹²

These strategies and doctrines are not completely *sui generis*—the Cold War and various insurgencies have included cultural and ideological as well as military confrontation, and much of the Cold War was fought in what is now called the Gray Zone.⁹³ Nonetheless, especially given the new tools and weapons that cyber and AI, big data, and analytics technologies make possible, the implications of large and well organized states redefining conflict to include entire cultural, financial, and political landscapes as battlespaces are profound.⁹⁴ China, for example, has used cybertheft attacks to sap the strength of adversaries,⁹⁵ and Russia—a postmodern, post-factual, media-savvy, morally relativist state par excellence—is rapidly developing significant expertise in

88. MCFATE, *supra* note 18, at 67–68, 200–03; SINGER & BROOKING, *supra* note 7.

89. See LIANG & XIANSUI, *supra* note 19, at 12.

90. Gerasimov, *supra* note 19, at 24.

91. *Id.*

92. MICHAEL J. MAZARR, *MASTERING THE GRAY ZONE: UNDERSTANDING A CHANGING ERA OF CONFLICT 2* (2015).

93. *Id.* at 4, 43. See generally LAWRENCE FREEDMAN, *STRATEGY: A HISTORY* (2013) (ebook) (discussing the history of strategy and how it has evolved over time).

94. See MCFATE, *supra* note 18, at 14–17. See generally SINGER & BROOKING, *supra* note 7.

95. See *Cybersecurity and American Power: Addressing New Threats to America's Economy and Military*, AM. ENTER. INST. (July 9, 2012), <http://www.aei.org/events/cybersecurity-and-american-power/>. General Keith Alexander, then the Director of the National Security Agency and CYBERCOM Commander, observed on July 9, 2012 in a speech at the American Enterprise Institute regarding the theft of intellectual property by the Chinese, "In my opinion, it's the *greatest* transfer of wealth in history." *Id.* at 15:49. Among other exploits, the Chinese stole a huge U.S. Office of Personnel Management database on existing and past federal employees containing information on over 22 million people, with significant criminal, intelligence, and military implications. Ellen Nakashima, *Hacks of OPM databases Compromised 22.1 Million People, Federal Authorities Say*, WASH. POST (July 9, 2015), <https://www.washingtonpost.com/news/federal-eye/wp/2015/07/>

weaponized narrative, which enables it to use modern media, disinformation techniques, information, and communication technologies to neuter opposition from and impose its agenda on adversaries. In both cases, an important part of success is to achieve the desired geopolitical goals without resort to conventional armed attack or triggering a conventional military response to aggressive initiatives.⁹⁶

Taken together, these trends—and others—suggest the current chaotic and destabilized environment is not a temporary phenomenon, but a symptom of, and an emergent pattern reflecting, unpredictable change across cultures, technologies, institutions, and cognitive patterns. The result is a fraught global environment where major belief systems clash by night. Russia strikes with weaponized narratives across the West even as it fails internally, while China is determined to rise against the reigning superpower, the United States. Meanwhile, the state system characteristic of the Westphalian world order continues to weaken around the globe.⁹⁷ The tides are global, inclusive, and growing stronger. And the implications of these developments are far more profound than the usual discussion is willing to recognize. In fact, these trends reflect both the success of the original Enlightenment and the institutions that it spawned, as well as the irony that it is that very success that is now relegating those institutions to a receding past.⁹⁸ And no country is more exposed to these implications than the United States.⁹⁹

III. THE SUCCESS OF THE ENLIGHTENMENT PROJECT AND THE AMERICAN EXPERIMENT

Although it is increasingly obsolete, “[i]t is not that the original Enlightenment has failed.”¹⁰⁰ Indeed, as I have noted before, “the problem is the opposite: the original Enlightenment, with its emphasis on scientific observation and experiment, and applied rationality, has succeeded spectacularly”—so spectacularly that it has led to a world of economic and population growth, technological

09/hack-of-security-clearance-system-affected-21-5-million-people-federal-authorities-say/?utm_term=.bb8a5e9df74b [https://perma.cc/5NY3-52CL].

96. See, e.g., CLOVER, *supra* note 39, at 269–71, 329; LO, *supra* note 39, at 41; POMERANTSEV, *supra* note 39, at 234; see also ARKADY OSTROVSKY, *THE INVENTION OF RUSSIA: FROM GORBACHEV’S FREEDOM TO PUTIN’S WAR* 319–27 (2015). See generally ANNE GARRELS, *PUTIN COUNTRY: A JOURNEY INTO THE REAL RUSSIA* (2016) (discussing the societal changes in middle Russia in the modern era).

97. See, e.g., Allenby, *supra* note 4, at 15–19.

98. *Id.*

99. *Id.* at 15.

100. *Id.* at 18. Without delving unnecessarily into minutia, by “original Enlightenment” I mean the period from roughly 1685 to 1815, sometimes known as the “long eighteenth century,” or the Age of Reason, that saw the reorientation of Western politics, philosophy, science, and communications away from authority, especially the Church, and toward applied rationality and secular humanism. This was the period that saw the American Revolution with its explicit rejection of aristocratic and medieval governance and embrace of rational, structured institutions. See, e.g., *THE FEDERALIST NO. 39*, at 79–80 (James Madison) (Michael A. Genovese ed., 2009); FUKUYAMA, *supra* note 16, at 12–19.

Information Technology and the Fall of the American Republic

evolution, geopolitics, accelerating change and complexity, institutional strategies, and psychological and social adjustments that have, in turn, rendered its tools, beliefs, worldviews, and assumptions increasingly obsolete and even dysfunctional.¹⁰¹ This dynamic and the trends discussed above are the context of weaponized narrative.¹⁰²

The resulting challenges fall into two categories. One is the immediate and foreseeable offensive and defensive considerations around rapidly evolving political, technological, and adversarial relationships, both internal and external.¹⁰³ The American and European cultural-institutional immune systems are at least aware of the challenges at this level and are actively developing some ideas about how to respond. However, their effectiveness is not clear.¹⁰⁴

The second category, however, raises far more difficult and fundamental challenges and questions. For example, if accelerating complexity and change threaten many, if not most, existing American institutions, including long-standing legal and indeed Constitutional structures, which are most at risk? Once those are identified, what new or modified institutions might need to be constructed if individuals and democratic societies are to function ethically, responsibly, rationally, and successfully in the new century? Indeed, in a coming age where every indication is that manipulating individuals and narrative-based communities will be increasingly common and effective, can the individual even function ethically, responsibly, and rationally?

A second set of difficult challenges revolve around the question of whether the United States, and other similar Enlightenment powers constructed on a cultural and intellectual framework of early Enlightenment rational thought, are uniquely at risk during such a period of change?¹⁰⁵ To the latter, the response so far seems to admit the possibility. Indeed, such frameworks may go far to explain exactly why weaponized narrative is such a powerful and effective asymmetric weapon for Russia to deploy against the United States.

It is important to be clear about the possibility that Enlightenment values and institutions that have underpinned the American experiment for 200 years are in some jeopardy. This is not a result of particular political personalities—

101. Allenby, *supra* note 4, at 18.

102. *Id.* at 16.

103. *See, e.g.*, Farwell, *supra* note 9, at 41–47.

104. *See, e.g.*, Indictment, *supra* note 10, at 3; GILES, *supra* note 10, at 19–30; OFFICE OF THE DIR. OF NAT'L INTELLIGENCE, *supra* note 10, at i–iii; U.S. SPECIAL OPERATIONS COMMAND, *supra* note 10, at 1–3. *See also* the websites for the German Marshall Fund and the European External Action Service East Stratcom Task Force: *About Us*, THE GERMAN MARSHALL FUND OF THE U.S., <http://www.gmfus.org/about-gmf> [<https://perma.cc/A4HR-AK92>]; *About*, EUROPEAN EXTERNAL ACTION SERV. E. STRATCOM TASK FORCE, <https://euvsdisinfo.eu/about/> [<https://perma.cc/4K5J-662W>].

105. Other countries that might be similarly susceptible include Australia, New Zealand, and Canada. *See The Near Future: Tensions Are Rising*, GLOB. TRENDS, <https://www.dni.gov/index.php/global-trends/near-future> [<https://perma.cc/L6NB-NFB7>].

the general failure of the American or British political classes to generate leadership at a critical time, while unfortunate, is certainly not unprecedented¹⁰⁶—or even of Russian interference with Western elections, a process that requires weakness and a divided society as a precondition.¹⁰⁷ Francis Fukuyama notes that “the overall quality of the American government has been deteriorating steadily for more than a generation.”¹⁰⁸ And David Rothkopf writes in *Foreign Policy* that “we are showing the telltale signs of a failing state. Our government has ceased to function,”¹⁰⁹ a point reinforced by French President Macron in a recent speech to Congress.¹¹⁰ These are symptoms of the underlying condition. As the discussion of trends makes clear, it is their confluence and coevolution with social, political, and cultural behaviors and institutions that are creating a new and much more complex world, one where many existing U.S. institutions increasingly appear to be fragile, vulnerable, or broken—including both political parties. Xenophobia, primitive nationalism, and tribalism are symptoms of a diseased political culture, not causes.

Institutional breakdown is facilitated under such circumstances because the tendency is to revert to old patterns of thought and belief.¹¹¹ Thus, for example, some left-wing Americans (so-called “Sandernistas”) are trying to resurrect socialist theory, while others have reverted to ideas about world governments.¹¹² Others, such as many in the Tea Party, yearn for a return to a mythic Golden Age that never existed.¹¹³ More recently, some argued for a rediscovery of core Enlightenment liberal values, although it is not clear that the coevolving trends

106. See, e.g., FUKUYAMA, *supra* note 16, at 465.

107. Allenby & Garreau, *supra* note 26.

108. FUKUYAMA, *supra* note 16, at 460.

109. David Rothkopf, *Is America a Failing State?*, FOREIGN POLICY (May 10, 2017, 12:37 AM), <http://foreignpolicy.com/2017/05/10/is-america-a-failing-state-trump-fires-comey-fbi/> [<https://perma.cc/4QBD-4KVD>]; see also Katherine M. Gehl & Michael E. Porter, *Why Politics Is Failing America*, FORTUNE (Mar. 9, 2017), <http://fortune.com/2017/03/09/why-politics-is-failing-america/> [<https://perma.cc/59P8-526D>]; Jeffrey D. Sachs, *The Failing U.S. Government—The Crisis of Public Management [Extended Version]*, SCI. AM., Oct. 1, 2009, <https://www.scientificamerican.com/article/the-failing-of-us-government/> [<https://perma.cc/8AAX-7874>].

110. *French President Macron Address to Joint Meeting of U.S. Congress*, C-SPAN (Apr. 25, 2018), <https://www.c-span.org/video/?444422-1/french-president-macron-pushes-comprehensive-iran-nuclear-deal-address-congress> [<https://perma.cc/EY95-VMCS>].

111. See, e.g., KAPLAN, *supra* note 20, at 216.

112. See George Divorsky, *When Will We Finally Have a World Government?*, GIZMODO (Dec. 19, 2012, 3:00 PM), <https://io9.gizmodo.com/when-will-we-finally-have-a-world-government-30762867> [<https://perma.cc/63MV-JEFC>]. On the “Sandernista Rebellion,” see *The Sandernista Revolution*, ECONOMIST (Aug. 20, 2015), <https://www.economist.com/united-states/2015/08/20/the-sandernista-revolution> [<https://perma.cc/3KGM-LHSH>]. See generally BERNIE SANDERS, OUR REVOLUTION: A FUTURE TO BELIEVE IN (2016) (discussing Sanders’ personal experiences from his 2016 presidential campaign and his progressive agenda).

113. See Claire Goldstene, *Republican Nostalgia for the Gilded Era*, INEQUALITY.ORG (Nov. 19, 2014), <https://inequality.org/research/republicans-nostalgic-gilded-age/> [<https://perma.cc/A6SJ-AQ6P>]. The postwar years, especially the 1950s before the turmoil of the 1960s, appeal to some in retrospect, but even a brief perusal of the advertisements of that era indicates how invisible minorities were in that culture and how subservient women were expected to be. See generally JIM HEIMANN, 50’S ALL-AMERICAN ADS (2001).

Information Technology and the Fall of the American Republic

discussed above would allow any such reversion.¹¹⁴ But these are backward-looking concepts that assume simplicity, centralized control, and rational governance and therefore reductive governance structures that avoid, rather than address, the challenges of complexity and accelerating technological evolution and institutional breakdown.¹¹⁵ Thus, while there is clearly concern about this level of challenges, there does not seem to be much idea what to do about it yet.

Failure of Enlightenment institutions, values, and norms is of particular concern to the United States.¹¹⁶ Unlike most other powerful states, such as Russia, China, Germany, France, or the United Kingdom, the American experiment, honed as a frontier society, does not have deep historical roots in either geography or tribe.¹¹⁷ Rather, the United States was created explicitly at a particular place and time out of Enlightenment ideals, as expressed in the Declaration of Independence, the Constitution, and the Federalist Papers.¹¹⁸ It may therefore face a unique challenge because it is the world's leading Enlightenment power, founded on the principles of applied rationality, balance of power, and individual rights voiced by such philosophes as Voltaire, Locke, and Montesquieu.¹¹⁹ The founding fathers of the American experiment were philosophes deeply influenced by and committed to Enlightenment thought.¹²⁰ America is thus the quintessential Enlightenment power, and to the extent the Enlightenment segues into something new in the twenty-first century, so must the United States.

The trends outlined above, therefore, combine to pose a unique and significant threat not just to the American state and many of its institutions as currently constituted, but to the American experiment as a whole. And as some examples indicate, this is a substantial threat indeed.

114. See Bagehot, *Some Thoughts on the Crisis of Liberalism—And How to Fix It*, ECONOMIST (June 12, 2018), <https://www.economist.com/bagehots-notebook/2018/06/12/some-thoughts-on-the-crisis-of-liberalism-and-how-to-fix-it> [<https://perma.cc/XF5X-HXSN>].

115. See generally Allenby, *supra* note 4.

116. See Jacob Soll, *The Culture of Criticism: What Do We Owe the Enlightenment?*, NEW REPUBLIC (May 20, 2015), <https://newrepublic.com/article/121837/what-do-we-owe-enlightenment> [<https://perma.cc/6TH3-5UVA>]. The same may be true of other states formed contemporaneously in the Enlightenment spirit, and thus sharing an underlying framework of assumptions and institutional structure, such as Canada, Australia, and New Zealand, but this article does not explore that possibility.

117. See Frederick Jackson Turner, *The Significance of the Frontier in American History*, PRIMARY SOURCES (1893), <https://www.learner.org/workshops/primarysources/corporations/docs/turner.html> [<https://perma.cc/2M2H-2BZD>].

118. See, e.g., THE FEDERALIST NO. 49 (Alexander Hamilton or James Madison) (Michael A. Genovese ed., 2009); FUKUYAMA, *supra* note 16, at 13–14.

119. *Enlightenment*, *supra* note 68.

120. Michael A. Genovese, *Introduction to ALEXANDER HAMILTON, JAMES MADISON, & JOHN JAY, THE FEDERALIST PAPERS 1, 9–12* (Michael A. Genovese ed., 2009).

IV. TRANSCENDING THE AMERICAN EXPERIMENT?

It is one thing to identify the United States as particularly at risk as the original Enlightenment gives way to its successor. It is another matter, however, to identify elements of the U.S. governance systems that, while they might have been highly adaptive in the past, may now be arguably obsolete or dysfunctional.

Nonetheless, it is possible to identify areas of institutional failure that do not arise simply from accidents of personnel, lack of leadership, or transitory political and social quirks but from the dynamics of the trends discussed above. Examples might include the following:

1. The constitutional split between the military and civilian spheres and its internalization in the U.S. military has generated many benefits, not least the absence of military adventurism in U.S. domestic politics.¹²¹ But the Constitutional split may now be a significant disadvantage as new doctrines on the part of major state adversaries create integrated civilizational conflict threats using cyber methods and weaponized narrative. Such challenges require “whole of society” responses.¹²² This is especially true when the constitutional fragmentation of responsibility is reinforced by a strong divide between private and public operations.¹²³

2. The relatively clear division between the public and the private sector has been a powerful source of American innovation and economic growth.¹²⁴ But it may now similarly impede “whole of society” responses, especially as “American” firms become truly multinational with no cultural loyalty to the United States.¹²⁵ This becomes increasingly apparent as employees of technological firms such as Google and Amazon, heavily imbued with the academic anti-

121. Article I, Section 8 of the Constitution gives Congress the authority to “declare War, grant Letters of Marque and Reprisal, and make Rules concerning Captures on Land and Water;” “[t]o raise and support Armies,” and to “provide and maintain a Navy.” U.S. CONST. art. I, § 8, cl. 11–13 (West, Westlaw through P.L. 116-18). Article II, Section 2 makes the President the Commander-in-Chief: “The President shall be Commander in Chief of the Army and Navy of the United States, and of the Militia of the several States.” U.S. CONST. art. II, § 2, cl. 1 (West, Westlaw through P.L. 116-18).

122. See Allenby, *The Age of Weaponized Narrative*, *supra* note 6, at 69–70.

123. *Id.*

124. See *id.*

125. See generally, e.g., Smith, *supra* note 84. The relationship between tech firms and the U.S. government is, of course, highly complex, combining collaboration, competition, and rejection. Thus, firms may refuse to work with the U.S. military, but collaborate in trying to prevent adversarial (primarily Russian and domestic U.S. Russian sympathizers) interference with elections. See, e.g., Elizabeth Dwoskin & Ellen Nakashima, *Tech Didn't Spot Russian Interference During the Last Election. Now It's Asking Law Enforcement for Help*, WASH. POST (June 26, 2018), https://www.washingtonpost.com/technology/2018/06/26/tech-didnt-spot-russian-meddling-during-last-election-now-its-asking-law-enforcement-help/?noredirect=on&utm_term=.e4be1fd1f0c6 [https://perma.cc/XS3M-FSET].

Information Technology and the Fall of the American Republic

military ethic, force their companies to refuse to cooperate with military or security requirements of their putative home state.¹²⁶

3. The American emphasis on the individual as the functional unit of society and the citizen with her vote as the core of governance and regime legitimacy, a core principle of classical liberalism,¹²⁷ may already be obsolete.¹²⁸ Behavioral economics, neuroscience, evolutionary psychology, marketing, and political operations such as Cambridge Analytica make personal identity and political behavior a design space to be manipulated by internal and external entities alike, often without awareness on the part of the target.¹²⁹ Equally important, this framing of a person in society—as an individual within whom are vested all the rights that Western universalism has manufactured, and as a citizen of a modern state—ignores the power of tribalism.¹³⁰ As Amy Chua notes, the United States, especially given the way it has sanctified people into holders of natural rights on the one hand and the irreducible citizen and source of legitimacy for the modern state on the other, is particularly blind to the rise of tribalism:

[A]s Americans are now learning firsthand, democracy under certain conditions can actually catalyze group conflict. In recent years, the United States has begun to display destructive political dynamics much more typical of developing and non-Western countries: the rise of ethnonationalist movements, eroding trust in institutions and electoral outcomes, hate-mongering demagoguery, a popular backlash against both “the establishment” and outsider minorities,

126. See, e.g., *Google Runs Into More Flak On Artificial Intelligence*, ECONOMIST (June 16, 2018), <https://www.economist.com/business/2018/06/16/google-runs-into-more-flak-on-artificial-intelligence> [<https://perma.cc/D4VR-TGB9>]; Bradley Peniston, *Google’s Withdrawal from Pentagon AI Project Risks US Lives, Says Work*, DEFENSE ONE (June 26, 2018), <https://www.defenseone.com/technology/2018/06/googles-withdrawal-pentagon-ai-project-risks-us-lives-bob-work/149280/> [<https://perma.cc/Q6RB-38UD>]; Hamza Shaban, *Amazon Employees Demand Company Cut Ties with ICE*, WASH. POST (June 22, 2018), https://www.washingtonpost.com/news/the-switch/wp/2018/06/22/amazon-employees-demand-company-cut-ties-with-ice/?utm_term=.52cd2f76bbf5 [<https://perma.cc/V2NF-RADV>]. But see Dustin Volz et al., *Tech Firms Let Russia Probe Software Widely Used by U.S. Government*, REUTERS (Jan. 25, 2018, 4:19 AM), <https://www.reuters.com/article/us-usa-cyber-russia/tech-firms-let-russia-probe-software-widely-used-by-u-s-government-idUSKBN1FE1DT> [<https://perma.cc/4RQC-53BY>].

127. See Bagehot, *supra* note 114.

128. This emphasis is enshrined in the Declaration of Independence:

We hold these truths to be self-evident, that all men are created equal, that they are endowed by their Creator with certain unalienable Rights, that among these are Life, Liberty and the pursuit of Happiness.—That to secure these rights, Governments are instituted among Men, deriving their just powers from the consent of the governed,—That whenever any Form of Government becomes destructive of these ends, it is the Right of the People to alter or to abolish it

THE DECLARATION OF INDEPENDENCE para. 2 (U.S. 1776).

129. See, e.g., MCFATE, *supra* note 18, at 66–67; SINGER & BROOKING, *supra* note 7.

130. FUKUYAMA, *supra* note 23, at 3–11.

and, above all, the transformation of democracy into an engine of zero-sum political tribalism.¹³¹

4. Checks and balances built into the American system, although in some ways antidemocratic,¹³² have provided political stability throughout war and peace.¹³³ They may now, however, be ensuring that the cycle time of institutional controls, such as government bureaucracies and the American legal system, must fall further and further behind evolving technology and concomitant social practices.¹³⁴ This widening time gap between required responses and capability arises from three factors: increased friction in decision-making caused by private economic and activist interest groups, each of which seeks to gain veto power over decisions affecting its domain;¹³⁵ the rise of a highly tribal political structure which eschews compromise and values the purity of particular tribal narratives over national interests (a destructive form of identity politics);¹³⁶ and the rapid and accelerating pace of technological evolution and concomitant complexity, which is occurring just as decision-making becomes more fragmented, slow, and simplistic.¹³⁷

5. Freedom of speech—a core American principle¹³⁸—has been weaponized by geopolitical adversaries against American society and the American political system. Not all the Russian weaponized narrative pieces released on Facebook, for example, were clearly provocative; indeed, a number were relatively innoc-

131. Amy Chua, *Tribal World: Group Identity Is All*, FOREIGN AFFAIRS (July 2018), <https://www.foreignaffairs.com/articles/world/2018-06-14/tribal-world> [https://perma.cc/XP4C-6RBE].

132. See, e.g., *The Minority Majority: America's Electoral System Gives the Republicans Advantages Over Democrats*, ECONOMIST (July 12, 2018), <https://www.economist.com/briefing/2018/07/12/americas-electoral-system-gives-the-republicans-advantages-over-democrats> [https://perma.cc/E3HV-3XBF].

133. Charlotte Saikowski, *The World's Most Stable Democracy*, CHRISTIAN SCI. MONITOR (Feb. 4, 1987), <https://www.csmonitor.com/1987/0204/zcon1.html> [https://perma.cc/Y8CH-AT2S].

134. FUKUYAMA, *supra* note 16, at 488–96; see also Kubiak, *supra* note 81, at 32, 31–35. See generally OSINGA, *supra* note 80.

135. FUKUYAMA, *supra* note 16, at 488–505

136. See, e.g., *What's Left?: To Win Back Power, Democrats Must Do Things That Make Them Uncomfortable*, ECONOMIST (July 12, 2018), <https://www.economist.com/special-report/2018/07/12/to-win-back-power-democrats-must-do-things-that-make-them-uncomfortable> [https://perma.cc/4B7P-4JFX]. Speaking of the Democratic Party, the article notes a continuing need to “avoid the wrong kind of identity politics. That would mean not speaking to the different bits of their [the Democratic Party] mosaic coalition as if each had separate interests that are opposed to those of the population at large.” *Id.*; see also Bagehot, *supra* note 114.

137. See ALLENBY & SAREWITZ, *supra* note 14, at 1; FUKUYAMA, *supra* note 23, at 3–11. See generally THE GROWING GAP BETWEEN EMERGING TECHNOLOGIES AND LEGAL-ETHICAL OVERSIGHT: THE PACING PROBLEM, *supra* note 6.

138. The First Amendment to the Constitution of the United States provides that, “Congress shall make no law respecting an establishment of religion, or prohibiting the free exercise thereof; or abridging the freedom of speech, or of the press, or the right of the people peaceably to assemble, and to petition the Government for a redress of grievances. U.S. CONST. amend. I (West, Westlaw through P.L. 116-18).

Information Technology and the Fall of the American Republic

uous, and take on the intended meaning only when received by the target individuals as part of a long-term influence and disinformation campaign.¹³⁹ And the American (and European) response to Russian attacks directed through Facebook and other social media platforms has been to delegate supervision of speech on social media to the platforms.¹⁴⁰ In other words, responsibility for First Amendment decisions about what speech shall be allowed and what speech will be prevented now rests with private firms with no government supervision.¹⁴¹ This is not a passing or temporary conundrum. The American ideal of free speech arose, after all, in a period when communication was relatively slow and information relatively sparse compared to today, and citizens had the time and flexibility to consider the validity and truth of speech to which they were exposed, should they choose to.¹⁴² That is no longer the case.

Moreover, the First Amendment rests on two implicit assumptions. The first is that the primary threat to citizen communication is government, and therefore “speech” can be adequately protected by simply regulating the government. This assumption, of course, reflects the early Enlightenment concern about *Leviathan*,¹⁴³ rather than anything like Facebook, Twitter, and Alibaba. The second critical assumption is that there is something called “truth” that free speech will

139. See, e.g., *UsHadrons*, MEDIUM, <https://medium.com/@ushadrons> [<https://perma.cc/HK3Q-ZH4D>]. Although some of these examples may seem innocuous, they were packaged in sophisticated weaponized narrative campaigns. See CONLEY ET AL., *supra* note 27; Nick Penzenstadler et al., *We Read Every One of the 3,517 Facebook Ads Bought by Russians. Here's What We Found*, USA TODAY (May 11, 2018, 7:47 PM), <https://www.usatoday.com/story/news/2018/05/11/what-we-found-facebook-ads-russians-accused-election-meddling/602319002/> [<https://perma.cc/DMT5-AGCS>].

140. See, e.g., Marne Levine, *Controversial, Harmful and Hateful Speech on Facebook*, FACEBOOK (May 28, 2013, 1:51 PM), <https://www.facebook.com/notes/facebook-safety/controversial-harmful-and-hateful-speech-on-facebook/574430655911054/> [<https://perma.cc/UD9W-H3VQ>]. This is not an easy challenge for the platforms. See *id.*

141. An indication of the growing gap between government understanding of social media and the realities of that technology was unwittingly on display when Facebook CEO Mark Zuckerberg appeared before the U.S Senate Commerce and Judiciary Committee on April 10, 2018. See Rachel Gutman, *The 13 Strangest Moments from the Zuckerberg Hearing*, ATLANTIC (Apr. 10, 2018), <https://www.theatlantic.com/technology/archive/2018/04/the-strangest-moments-from-the-zuckerberg-testimony/557672/> [<https://perma.cc/9PKJ-L7DN>]. A notable moment was when Senator Orrin Hatch asked Mr. Zuckerberg, “[H]ow do you sustain a business model in which users don’t pay for your service?” *Id.* Mr. Zuckerberg, the CEO of one of the largest firms in history, noted that Facebook was supported by advertising. *Id.* As CNN’s Dylan Byers noted, “What the first day of the Zuckerberg hearings made clear is that many American lawmakers are illiterate when it comes to 21st century technology.” Dylan Byers, *Senate Fails Its Zuckerberg Test*, CNN (Apr. 11, 2018, 5:21 AM), <https://money.cnn.com/2018/04/10/technology/senate-mark-zuckerberg-testimony/index.html> [<https://perma.cc/9EJF-ZAJF>].

142. Zeynep Tufekci, *It's the (Democracy-Poisoning) Golden Age of Free Speech*, WIRED (Jan. 16, 2018, 6:00 AM), <https://www.wired.com/story/free-speech-issue-tech-turmoil-new-censorship/> [<https://perma.cc/4J3Q-NDSB>].

143. See generally THOMAS HOBBS, *LEVIATHAN* (J.C.A. Gaskin ed., Oxford Univ. Press 1996) (1651); MONTESQUIEU, *THE SPIRIT OF THE LAWS* (Anne M. Cohler et al. eds., Cambridge Univ. Press 1989 (1748)).

elevate over “falsehood.”¹⁴⁴ Even if we give “truth” the very broad and weak meaning implicit in a postmodern interpretation—that is, as a shared narrative which is generally accepted across a society, like the Western and Marxist narratives that were accepted by their respective societies during the Cold War—this assumption also fails. We are now well beyond the Westphalian World Order and Western universalism of values,¹⁴⁵ and any coherent definition of “truth” has been supplanted by tribal narrative and engineering (“if a 747 flies, it must be true in some meaningful sense”—which is very much American pragmatism a la James and Dewey).¹⁴⁶ It is certainly true that the First Amendment is an ingrained value in Enlightenment societies such as the United States, but it is increasingly illusory. The real question is with what do we replace it?¹⁴⁷

6. The increasing weakness of the Westphalian state-based international system—of which the United States is the current champion—threatens to fundamentally change regional and global power relationships.¹⁴⁸ This could completely obsolete American “Western universalism” and many of its associated values, norms, and institutions of world governance.¹⁴⁹ This is problematic for the United States because, unlike many “realist” powers, the United States and many public and private American institutions have always believed that American values and the norms that lie behind them—derived from Enlightenment models of “human nature” and individualism—are so inherently superior that they should, and will, become global in scope.¹⁵⁰

7. Finally, any society rests on widely accepted assumptions about foundational sources of truth, and thus social, cultural, and political legitimacy. In some Islamic countries, for example, it is religion, and only religion, which provides

144. See generally JOHN STUART MILL, ON LIBERTY (David Bromwich & George Kateb eds., Yale Univ. Press 2003) (1859).

145. See KISSINGER, *supra* note 20, at 6–8.

146. See Chua, *supra* note 131.

147. Most Americans in fact believe that social media platforms are already censoring their tribal speech. See, e.g., Riley Griffin, *Most Americans Think Facebook and Twitter Censor Their Political Views*, BLOOMBERG (June 28, 2018, 7:00 AM), <https://www.bloomberg.com/news/articles/2018-06-28/most-americans-think-social-media-giants-censor-their-views> [<https://perma.cc/TR37-UDVJ>]. American Republicans and President Trump are now adopting the narrative that social media discriminate against conservatives. See Jennifer Jacobs, *Trump Says ‘Do Something’ About Alleged Social Media Bias*, BLOOMBERG (Mar. 19, 2019, 11:31 AM), <https://www.bloomberg.com/news/articles/2019-03-19/trump-says-do-something-about-alleged-social-media-bias> [<https://perma.cc/T3HK-UCET>].

148. See HUNTINGTON, *supra* note 37, at 54, 82. See also KISSINGER, *supra* note 20, at 6–8.

149. See Cent. Comm. of the Communist Party of China, *supra* note 62 (recoiling against Western “universal values”); LO, *supra* note 39, at 63 (“Western-led norms and values . . . are under serious attack.”). Somewhat counterintuitively, the current U.S. Administration seems lukewarm about many of these global institutions. See, e.g., Josh Rogin, *Trump Is Trying to Destabilize the European Union*, WASH. POST (June 28, 2018), https://www.washingtonpost.com/opinions/global-opinions/trump-is-trying-to-destabilize-the-european-union/2018/06/28/729cb066-7b10-11e8-aece-4d04c8ac6158_story.html?utm_term=.b33b18f0a288 [<https://perma.cc/8S83-J2XK>].

150. See KAPLAN, *supra* note 20, at 217; KISSINGER, *supra* note 20, at 227, 243.

legitimacy. In Enlightenment states, however, it has generally been applied rationally—science and observation—which have been accepted as providing the grounding for broadly acceptable social truth.¹⁵¹ This is now failing: weaponized narrative works, in part, because identity politics and tribal narrative are becoming a formidable alternative source of truth (“Does it agree with what I and those like me believe? Then it is true.”).¹⁵² The end result is contingent truths that are often partial, arbitrary, limited in scope, and incapable of supporting society-wide agreement.¹⁵³ This latter trend will be substantially enhanced by the deployment in a year or two of CGI and voice imitation technology that will enable creation of convincing video and audio products purporting to be by real people and of real events that are, however, entirely fabricated.¹⁵⁴ At that point, most people will be unable to judge what constitutes reality beyond their immediate environment,¹⁵⁵ and behavioral economics suggests they will retreat to confirmation bias and thus their tribal narratives.¹⁵⁶

The immediate and obvious implication is that political and legal institutions and practices which implicitly rely on an unstated assumption about coherent society-wide worldviews will fail. This is a broad and often underappreciated source of failing institutional legitimacy.

V. CONCLUDING THOUGHTS: A NEW FEDERALIST DIALOG

It is thus likely that this is a unique historical point. Institutions and legal frameworks that are fundamental to the United States and other democracies are under threat and may be failing. Implicit assumptions that underlie democratic

151. *Enlightenment*, *supra* note 68.

152. *See, e.g.*, Chua, *supra* note 131; Robert Reich, *The New Tribalism and the Decline of the Nation-State*, TUMBLR (Mar. 23, 2014), <http://robertreich.org/post/80522686347> [<https://perma.cc/JP7G-762X>].

153. *Post-Truth Politics: Art of the Lie*, ECONOMIST (Sept. 10, 2016), <https://www.economist.com/leaders/2016/09/10/art-of-the-lie> [<https://perma.cc/5GQR-XQKA>].

154. *See, e.g.*, George Dvorsky, *Deepfake Videos Are Getting Impossibly Good*, GIZMODO (June 12, 2018, 1:05 PM), <https://gizmodo.com/deepfake-videos-are-getting-impossibly-good-1826759848> [<https://perma.cc/E2TA-ESHS>].

155. For an excellent example (a video of President Obama composed using deepfake technology), see Radiolab WNYC, *Future of Fake News*, YOUTUBE (JULY 28, 2017), <https://www.youtube.com/watch?v=u1fxu5RrM4w> [<https://perma.cc/N9NL-U3JB>]. It is generally recognized that political videos are an obvious target for deepfake technology. *See* Sara Fischer, *The Next Test for Deepfake Videos*, AXIOS (June 26, 2018), <https://www.axios.com/deepfake-video-fake-news-artificial-intelligence-d4845026-5fa6-4162-92a6-94f0e5e43fab.html> [<https://perma.cc/2N5Y-WJXF>]; Jeremy Hsu, *Experts Bet on First Deepfakes Political Scandal*, IEEE SPECTRUM (June 22 2018, 6:00 PM), <https://spectrum.ieee.org/tech-talk/robotics/artificial-intelligence/experts-bet-on-first-deepfakes-political-scandal> [<https://perma.cc/VD22-YBYQ>] (“A quiet wager has taken hold among researchers who study artificial intelligence techniques and the societal impacts of such technologies. They’re betting whether or not someone will create a so-called Deepfake video about a political candidate that receives more than 2 million views before getting debunked by the end of 2018.”).

156. *See* KAHNEMAN, *supra* note 30, at 324.

systems, such as the value of plurality and the importance of the individual, are becoming contingent as science, technology, and practice increasingly favor tribalism and the cognitive suborning of voters and citizens, often without their knowledge. The world order of states and human rights that flowered after thirty years of world war, from 1914 to 1945, is fragmenting. Even the idea of widely accepted and understood “truth” based on observation and reason is being replaced by the power and relativism of narrative.¹⁵⁷ Moreover, none of the trends or dilemmas discussed above show any sign of being temporary or reversible.

It is therefore not surprising that future political, social, and cultural trajectories, especially now, are difficult to discern. Indeed, it is appropriate to regard this discussion as framing a challenging and not unlikely scenario rather than as a prediction of any specific future path. Nonetheless, any one of these trends and challenges would raise difficult questions for the status quo. Taken together, they raise a strong probability that the historical period that birthed the United States is evolving into a new, much more complex, global environment. Many, if not most, American norms, institutions, and frameworks are under pressure because they are obsolete or even dysfunctional, at least in current form. Failure of many current American democratic processes and institutions is not just likely, but virtually certain.

Certainly there are better and worse ways to respond to these challenges. One obvious and quite popular way is to sink back into past verities, refusing to grapple with the difficult realities of today. This is neither ethical nor adaptive. Some are working on variations of social credit networks of self-organizing expertise, which may offer some promise but might need to be emergent behaviors rather than planned responses to existing challenges.¹⁵⁸ Others suggest that governance should devolve to as low a level as possible,¹⁵⁹ which would require deep rethinking of federalism in an explicitly structured polity such as the United States.¹⁶⁰ Given the success of Singapore, Hong Kong, and other small

157. Hacker, *supra* note 69.

158. MATT CHESSEN, THE MADCOM FUTURE: HOW ARTIFICIAL INTELLIGENCE WILL ENHANCE COMPUTATIONAL PROPAGANDA, REPROGRAM HUMAN CULTURE, AND THREATEN DEMOCRACY. . . AND WHAT CAN BE DONE ABOUT IT 21 (2017) (“Collective intelligence systems, in which large numbers of verified humans curate and validate the accuracy of information, are a possible solution to the overall disinformation problem.”).

159. See Bagehot, *supra* note 114 (noting that a “Global Council of Mayors” might be one way to re-center politics on more pragmatic and local issues).

160. See generally FUKUYAMA, *supra* note 16, at 488–505 (discussing the degradation of the U.S. political system). The European Union, in an effort to build a federalist structure of sorts on top of European states, speaks of devolution of powers to states, an issue that was discussed in some depth as part of the Brexit dialog in the United Kingdom. See, e.g., PUBLIC ADMINISTRATION AND CONSTITUTIONAL AFFAIRS COMMITTEE, DEVOLUTION AND EXITING THE EU AND CLAUSE 11 OF THE EUROPEAN UNION (WITHDRAWAL) BILL: ISSUES FOR CONSIDERATION, 2017–19, HC 484, at 4–6, 10–11 (UK), <https://publications.parliament.uk/pa/cm201719/cmselect/cmpubadm/484/484.pdf> [<https://perma.cc/PX25-TJN7>].

Information Technology and the Fall of the American Republic

polities, such as the emirate of Abu Dhabi, devolution of governance to individual city-states has also been proposed, although obvious questions of security in a world of larger entities would need to be considered.¹⁶¹

More broadly, a chaotic time—in which not just institutions and power relationships but also underlying assumptions about everything from forms of government to the importance and role of the individual in society are in play—requires new governance values. Stability and predictability have not become less desirable in the abstract. However, in the immediate tumult of today's world, it is far more important to develop agile and adaptive citizens, tribes, institutions, and government mechanisms. Moreover, there may well be important historic values, such as the American instantiation of free speech, which cannot be transitioned in their current form to the future. Identifying these cases and preserving what is best about historic values in an uncertain and volatile environment is an important service to future generations. Experimentation with new models of information flows and controls will need to be an explicit part of any adaptation as well: AI, big data, analytics, and rapid acceleration across the entire frontier of technology are changing cognitive structures in the world profoundly and rapidly, and any proposed shift in governance that is not robust and suited to such change will be, at best, temporary.

That the challenge is large, complex, and open ended does not mean that it cannot be addressed. Indeed, in many ways, it is analogous to the situation that the Founding Fathers found themselves in: surrounded by failing governance models and with ideas about what might work better in future, which were, however, scattered, incomplete, and theoretical. In the event, through the massive effort of the Federalist and Anti-Federalist papers and workshops and conferences to draft foundational documents such as the Constitution and the Declaration of Independence, they built a scaffold that was then instantiated and extended through history—the American experiment.

Similarly, it is time to generate such a new dialog, including not just traditional powers such as the state, but also newer ones such as high technology firms, ultrawealthy individuals, and the tribal communities that now populate the country and the world. For example, should Google or Exxon have a designated Senator? Should Russia and the European Union? How about Greenpeace or Oxfam?

A central node—a university, or affiliated institution not associated with political or governmental interests—could curate the podcasts, blogs, tweets, articles, videos, and other contributions, making them widely available to the public. A related series of workshops and conferences could begin exploring future governance patterns and mechanisms, recognizing that some values and

161. See Jamie Bartlett, *Return of the City-State*, AEON (Sept. 5 2017), https://aeon.co/essays/the-end-of-a-world-of-nation-states-may-be-upon-us?utm_source=Aeon+Newsletter&utm_campaign=91aff8af3d-EMAIL_CAMPAIGN_2018_06_04_05_35&utm_medium=email&utm_term=0_411a82e59d-91aff8af3d-69048065 [https://perma.cc/C83V-EDH4].

Allenby

institutions might not be viable going forward, while others—perhaps appropriately redesigned and enhanced—might be. While the extended scenario discussed above suggests that foundational structures, including the American Constitution and many Supreme Court decisions, might require modification, specific ideas on how that might be accomplished should await more detailed analysis and dialog.

So far, much of the response to the challenges thrown up by the end of the first Enlightenment, and the stirrings of a second, has been maladaptive—destructive domestic tribalism, for example. But the challenges will only continue to mount. Not responding, or retreating to dead verities, are profoundly unethical derelictions of responsibility. The task, therefore, is to see today's world and emerging technologies as clearly and nonjudgmentally as possible and to begin a dialog about fundamental, unpredictable, and uncomfortable change. The goal is to build agile and adaptive alternative governance and policy options that can inform the evolution of a new world.