

Conspiracy Capital: Cognitive Capitalism, InfoWars America, and the Evolution of Sustainable Finance¹

We are now a decade into a new coalescence of capital, information, and socionature. As the speculative leverage built on U.S. predatory real estate capital collapsed into what Ben Bernanke called the worst global financial crisis in the history of capitalism, Silicon Valley visionaries were rediscovering and engineering an obscure but powerful concept developed in the 1920s by the Russian geochemist Vladimir Vernadsky: the noösphere. Initially conceived as a hopeful prediction that planetary industrialization would foster humanity's collective global awareness of what we would today call the Anthropocene, the noösphere's evolutionary implications were refined amidst the advancing information and communications technologies of the 1950s and 1960s. By the first decade of the twenty-first century, the noösphere finally became a part of mundane everyday experience with the mass social networking of billions -- as Wall Street infrastructures of securitization had evolved from the traditional spatial fix (the overcapitalization of land and urban built environments) into a more dynamic, adaptive circuitry of investments in a) 'nature banking,' bioprospecting, genomics, and environmental derivatives, and b) the cybernetic mining of the globally networked human attention span in what is now widely described as 'cognitive capitalism.' In this essay, I analyze the central contradiction of this capitalization of the postindustrial noösphere: the fundamental American Exceptionalism of political legitimation and public opinion on humans, nature, and human nature. In the Trumpian noösphere of Breitbart and Infowars, evangelical creationists and climate-change denialists who angrily reject evolution are, in fact, co-evolving with nativists and White nationalists who understand all too well their imminent extinction in a survival-of-the-fittest ecosystem of ethnoracially diverse learning, progressive cosmopolitan innovation, and a relentless intensification of *Celebrity Apprentice* competition.

¹ Elvin K. Wyly (ewyly@geog.ubc.ca), March 24, 2017 version. I am grateful to Professor Janelle Knox-Hayes for the invitation that helped inspire the ideas in this manuscript. For valuable recommendations on previous versions, I thank Jatinder Dhillon and Joe Daniels.

From Canterbury to *Conservapedia* and the Catholic News Agency

On the 13th of June, 1863, the *Canterbury Press* carried an essay signed by ‘Cellarius’ and titled “Darwin Among the Machines.” “The machines are gaining ground upon us,” Cellarius warned, and “day by day we are becoming more subservient to them,” as “more men are daily devoting the energies of their whole lives to the development of mechanical life.”² The essay was a sequel to another anonymous piece, published in the *Press* the previous December, mounting a philosophical attack on Charles Darwin’s *Origin of Species*; both essays unleashed considerable discussion both in London and in the New Zealand colony — which was barely a dozen years old at that point. Three months later, another letter appeared in the *Press*, inspired by New Zealand’s first telegraph line connecting Christchurch to Port Littleton a few miles to the southeast. “Why should I write to the newspapers instead of to the machines themselves?” asked the ‘Mad Correspondent’ who signed as ‘Lunaticus’; “why not summon a master meeting of machines, place the steam engine in the chair, and hold a council of war?” Proclaiming a “grand annihilation of time and place” achieved through such communications advances that would soon allow a “back-country squatter” to hear crop prices and opera performances from London or to “send the mind from here to China in an instant of time,”³ the letter’s ideas and the previous essays eventually became the basis for a chapter of *Erewhon*, a novel about the people of an isolated rural valley who turn back time to thwart the development of intelligence among machines. Anonymous and self-published, *Erewhon* met with wild success until the London literary magazine *The Athenaeum* pronounced the author a “nobody”: Samuel Butler, the estranged son of the Rector of Langar, Nottinghamshire. Freshly graduated from Cambridge with a degree in classics, Butler had sailed for New Zealand in 1859, and spent several years as a sheep farmer on a riverside homestead that came to be known (and still appears on Google Maps) as ‘Mesopotamia Station.’ Butler sold his valley sheep farm — eight thousand acres — for a healthy profit in 1864, the year after ‘Lunaticus’ had written about the singular machinic essence of “the pyramids, hieroglyphics, Roman inscriptions, parchment, paper, letters, printing, newspapers, the penny-post,” and of course the electric telegraph: “there is one great principle underlying them all, and that principle is increased facility for the action of mind upon mind.”⁴

A century and a half later, a *New York Times* correspondent recounted the scene when U.S. Secretary of State John Kerry visited a group of scientists in Antarctica:

“On his first day, flying by helicopter to see the spectacular geology of an ice-free region called the McMurdo Dry Valleys, his group was accosted by a lone Adèle penguin. The Secretary of State whipped out his phone and filmed the creature. ‘Come on, walk up here, buddy!’ Mr. Kerry said. The penguin hesitated, then did exactly that.”⁵

² Reprinted in Henry Festing Jones, ed. (1917). *The Note-Books of Samuel Butler*. New York: G.P. Dutton & Co, pp. 40-46, quote from p. 46.

³ “From our Mad Correspondent,” *The Press* (Christchurch), September 15, 1863, reprinted in Joseph Jones (1959). *The Cradle of Erewhon: Samuel Butler in New Zealand*. Austin, TX: University of Texas Press, pp. 195-200, quote from p. 198. See also George B. Dyson (1997). *Darwin Among the Machines: The Evolution of Global Intelligence*. Reading, MA: Addison-Wesley, p. 33.

⁴ “Mad Correspondent,” in Joseph Jones, p. 198.

⁵ Justin Gillis (2016). “John Kerry’s Antarctica Visit Highlights a Continent, and Climate Policies, Under Threat.” *New York Times*, November 15.

The arrival of Secretary Kerry, the highest-ranking U.S. government official ever to visit the continent, was eloquently covered by our non-mad *Times* correspondent (Justin Gillis), but it was just as easy to follow the action on the jam-packed @StateDept Twitter feed, with its 47 thousand tweets and 3.45 million followers — even if the retweet counter for the penguin image (1.5 thousand) did seem a bit underwhelming. Or you could follow the action on the trip’s dedicated Flickr photo album (but still only 2,896 views as of this writing). Kerry’s visit to the Antarctica scientists was the second leg on a planetary itinerary — *after* he laid a wreath at the New Zealand National War Memorial in Wellington and *before* he headed to bilateral meetings in Muscat, Oman (where he was photographed with Minister Yusuf bin Alawi beholding a large, rotating globe in the lobby of the Foreign Ministry), Abu Dhabi, U.A.E., the Twenty-Second Conference of the Parties of the U.N. Framework Convention on Climate Change (#COP22) in Marrakech, Morocco, and then finally to the APEC Summit in Lima, Peru.

The possibilities and perils of Butler’s warnings from Mesopotamia — sending the mind from here to China in an instant of time — became clear right at the beginning of Kerry’s trip. Flying over the South Pacific towards Christchurch on election day, the liberal Democratic aides traveling with the Secretary “rushed around the plane” as the results came in, “shocked at some of the states Mrs. Clinton was losing.”⁶ Everyone quickly understood what this meant: with the hostile takeover of a Tea-Party sharpened Republican establishment by a candidate who had famously tweeted “The concept of global warming was created by and for the Chinese in order to make U.S. manufacturing non-competitive,”⁷ U.S. climate policy — and indeed nearly any public policy involving the elitism of scientific expertise — was suddenly headed in bizarre, dangerous directions. During the campaign, on the same day that Donald Trump assured the *Times* that he was “open minded” on the issue of climate change, he announced the head of his White House transition team for the Environmental Protection Agency: Myron Ebell, the prominent climate-change denialist Director of the Center for Energy and Environment at the Competitive Enterprise Institute. A steadfast critic of mainstream climate science who plays a crucial, strategic role in one of the few right-wing, free-market NGOs accredited at UN climate meetings, Ebell has quite the sense of humor: the biography he submitted for Congressional testimony proudly notes that *Business Insider* said he “may be enemy #1 to the current climate change community” and that Greenpeace had featured him in its *Field Guide to Climate Criminals*. But none of this could have been funny to Secretary Kerry as he settled in to his Christchurch hotel as the final election results came in. Having helped organize the Massachusetts delegation for the first Earth Day in April, 1970 and withdrawing from a primary campaign to make way for Father Robert F. Drinan, the first Roman Catholic priest ever elected to Congress,⁸ Kerry had seen his own presidential ambitions destroyed in 2004. Kerry’s Navy service in Vietnam (a Bronze Star, a Silver Star, three Purple Hearts) had been used against him in a media operation that became legendary among right-wing operatives: the Swift Boat Veterans for Truth campaign opened new frontiers in reactionary information warfare, and made ‘Swiftboat’ a familiar verb in the American political lexicon. An updated version of Nixon-era

⁶ Gillis, “John Kerry’s Antarctica Visit...”

⁷ Trump issued this tweet on the morning of election day 2012, November 6. After calling for a mass revolt when Romney lost, Trump became the subject of an online petition drive signed by some 460 thousand urging Macy’s to fire Trump as its Christmastime celebrity spokesman. Some of Macy’s advertisements had playfully referenced Trump’s birtherism, portraying The Donald pulling Santa’s beard and asking, ‘is this real?’

⁸ See Associated Press (2007). “Robert F. Drinan, 86; First Priest to Serve in Congress.” *Los Angeles Times*, January 29; New York Times (1971). “Man in the News: Angry War Veteran.” *New York Times*, April 23, p. A4.

‘astroturf’ (the orchestration of fake grassroots support that Nixon engineered while trying to survive Watergate), Swift Boat Veterans for Truth had mobilized a group of conservative Vietnam vets shocked to learn that one of their own had given *anti-war* testimony to the Senate Foreign Relations Committee back in 1971. Kerry’s testimony “portrayed veterans as both vicious killers and hopeless mentally ill victims,” readers of *Conservapedia* learn from the ‘Swift Boat Veterans for Truth’ entry; this is “a characterization which has yet to leave the public consciousness.”⁹ Conservapedia’s ‘Statistics’ section gives a rough estimate of their market share of the right-leaning spectrums of that public consciousness — 569 million total views, with the top ten page views including “Homosexual Agenda” (6.83 million), “Atheism” (6.05 million), “Barack Hussein Obama” (3.01 million), “Adolf Hitler” (2.30 million), and “Muslim Agenda of the Obama Administration” (2.07 million).¹⁰

Watching the final election tally in Christchurch in 2016, it must have been truly mind-bending for Kerry to come to terms with the strange synthesis of old and new media realities of Samuel Butler’s ‘action of mind upon mind.’ Kerry’s political career had achieved liftoff when he had appeared on Dick Cavett’s television talk show to campaign for Father Drinan’s 1970 Congressional run. Members of Vietnam Veterans Against the War saw his appearance, and asked him to be their national spokesman. Father Drinan, a Jesuit human rights advocate who ran for office after he learned on a trip to South Vietnam that the U.S. State Department had been systematically lying about the number of political prisoners held by the Thieu regime,¹¹ won that election. He served for a decade, until he was forced to step down in 1980 “with pain and regret” after Pope John Paul II issued a worldwide directive prohibiting priests from holding public office. Now, in 2017, the U.S. Presidency would be held by the self-described “Ernest Hemingway of Twitter” who had accused Obama of buying the 2012 election by “handing out billions” of federal aid after Superstorm Sandy, who promised to eliminate the EPA, pull the U.S. out of the Paris climate accord, and revive the U.S. coal industry.¹² Back in 2009, Trump had co-signed an open letter with Al Gore and several dozen other figures demanding Obama take action on the “scientifically irrefutable” threat of climate change, to “ensure that future generations are left with a safe planet”; but a few weeks later he told an audience that Gore’s Nobel Prize should be rescinded because that winter had been cold.¹³ But that was then. With millions of followers following the fragments of 140-character wisdom that can circulate through an infinite combinatorics of planet-spanning conversations that constantly reconfigure space and time, who needs consistency, logic, or rationality? Trump had initially welcomed the ascension of the Jesuit Pope Francis — tweeting “The new Pope is a humble man, very much like me, which probably explains why I like him so much” — and had once said the Pope would be a “dream guest” for *Celebrity Apprentice*. But then Trump got nasty when Francis visited the U.S.-Mexico border and questioned whether obsessive wall construction was really in the spirit

⁹ Conservapedia, n.d., “Swift Boat Veterans for Truth.” *Conservapedia*, at <http://www.conservapedia.com>, last accessed January 8, 2017.

¹⁰ All statistics as of January 8, 2017.

¹¹ Drinan, then Dean of the Boston College Law School was one of six members of a study team that also included John Conyers. See Cleve Matthews (1969). “Support of Thieu by Nixon Scored.” *New York Times*, July 18, p. 4.

¹² See Philip Rucker and Danielle Pacquette (2017). “How a Week of Trump Tweets Stoked Anxiety, Moved Markets, and Altered Plans.” *Washington Post*, January 7; Robinson Meyer (2016). “What Does Trump Think About Climate Change? He Doesn’t Know Either.” *The Atlantic*, November 22.

¹³ Ben Adler and Rebecca Leber (2016). “Donald Trump Once Backed Urgent Climate Action. Wait, What?” *Grist*, June 8.

of Christ; Trump took to Facebook (three paragraphs instead of 140 characters) to declare, “If and when the Vatican is attacked by ISIS, which as everyone knows is ISIS’s ultimate trophy, I can promise you that the Pope would have only wished and prayed that Donald Trump would have been President because this would not have happened.”

In the chaotic election aftermath, *Buzzfeed* published a study of the 8.7 million Facebook likes and shares of the season’s top-performing fake news stories; two of the biggest were a story claiming that Hillary Clinton sold weapons to ISIS, and one claiming that Pope Francis had endorsed Trump.¹⁴ The analytics on the speed of sending the mind from here to anywhere in an instant — the fake Pope endorsement was seen at least a million times on a single social network — were enmeshed in a wider discourse of political technologies that included Clinton’s private email server, potential Clinton emails on Anthony Weiner’s laptop computer, automated Twitterbots, Wikileaks, and Russian hackers (rather than Nixon’s plumbers) breaking into the computer servers of the Democratic National Committee. By the time Trump began spewing scare-quote tweets in attempts to discredit the ‘Intelligence’ agencies of a national-security infrastructure that he was set to control, the “sophisticated manipulations of nature” and “immaterial labor” of what critical theorists and business gurus have been calling “cognitive capitalism”¹⁵ seemed to have created a weird sort of cybernetic postmodernism in American political discourse. Even David Brooks, now the *Times*’ house Conservative who had been so deeply influenced by the intellectual ‘Godfather of Neoconservatism’ of the 1960s, advised that we can only understand Trump by digging up “old French deconstructionists like Jean Baudrillard” to make sense of words not as references of meanings but as weapons in “an oppositional power struggle” in the “Snapchat presidency.”¹⁶

Snapchat politics and fake Pope endorsements had made for an unpredictable campaign that moved at breakneck speed, but the speedy present was also tied to fundamental ideological struggles over the longer history of the United States — and indeed all of Western civilization. Two years before he took over as campaign manager for Trump, Steve Bannon had outlined a vision of populist, global nationalism to a conservative group with ties to some of the harshest critics of Pope Francis. Speaking by Skype from Los Angeles right across the street from his *Breitbart News* headquarters to a Human Dignity Institute event held in a conference room inside the Vatican, Bannon noted the irony that it had been almost exactly one century earlier that Archduke Franz Ferdinand had been assassinated — ending a stable Victorian era of world peace, globalizing prosperity, and a “Christian faith” that was “predominant throughout Europe of practicing Christians. Seven weeks later ... there were 5 million men in uniform and within 30 days there were over a million casualties.”¹⁷ Now, once again, “the great institution that is the Church of the West” confronts “a new barbarity,” Bannon said, that “will completely eradicate everything that we’ve been bequeathed over the last 2,000, 2,500 years.” Part of this barbarity involves the sophisticated media tactics of “jihadist Islamic fascism” — “look at what they’ve done with Twitter and Facebook” — but Bannon also had harsh words for state-managed

¹⁴ Craig Silverman (2016). “Viral Fake Election News Outperformed Real News on Facebook in Final Months of the U.S. Election.” *Buzzfeed Canada*, November 16.

¹⁵ Dillon Mahmoudi and Anthony Levenda (2016). “Beyond the Screen: Uneven Geographies, Digital Labor, and the City of Cognitive-Cultural Capitalism.” *Communication, Capitalism, and Critique* 14(1), 99-120.

¹⁶ David Brooks (2017). “The Snapchat Presidency.” *New York Times*, January 3.

¹⁷ Steve Bannon (2014). Speech to the Human Dignity Institute Conference on Poverty. Transcribed and distributed in J. Lester Feder (2016). “This is How Steve Bannon Sees the Entire World.” *Buzzfeed*, November 16.

corporate capitalism, as well as the libertarian “Ayn Rand objectivist capitalism” that turns *everything* and *everyone* into commodities. The real crisis of the West is the loss of an “enlightened capitalism” built on the “spiritual and moral foundations” of Christianity and the Judeo-Christian tradition. The “global revolt” of the center-right “global Tea Party movement” might be understood by its middle-class masses in terms of day-to-day populist economics — but for Bannon the more fundamental struggle is against the secularizing and ‘progressive’ changes to that Judeo-Christian foundation. Hence the conservative rage not long after Bannon’s Vatican Skype, when Pope Francis spoke at the Pontifical Academy of Sciences and “appeared to endorse two major scientific concepts that have given religious believers big trouble: the Big Bang and evolution.”¹⁸ Francis’s betrayal of conservatism, however, sharply divides ‘the West.’ Whereas public acceptance of Darwinian evolution exceeds 70 percent in Italy, Spain, Germany, France, and the United Kingdom, the figure is only 40 percent in the U.S. — and that share has fallen significantly over the past twenty years. There is a hardcore one-third of Americans who firmly reject evolution, and the measurable, independent effects of fundamentalist religious belief on acceptance of science has been a key element of Republican strategy ever since the 1970s.¹⁹ Christianity, no less than capitalism, is governed by the American Exceptionalism catechism of a Jesus who favors low capital taxes for rich people while rejecting government welfare for poor people, of a God who has given man — especially White men — dominion over Nature so that we don’t get sticker shock filling up the gas tank.²⁰ And thus while European conservative reactions to papal progressivism alternated between a muted mainstream and a marginalized white nationalist fringe, America’s right wing has been decisively Protestant and aggressively apocalyptic. The stakes became clear in June of 2015 when the Vatican released *Laudato Si’*, Pope Francis’s encyclical on climate change, and Myron Ebell at the Competitive Enterprise Institute issued a speedy response. Trump’s future EPA advisor was at once erudite on the theological history and angry at science:

“It has been reported that Vatican officials in the global warming debate want to make sure they do not put the Roman Catholic Church on the wrong side of science, as in the condemnation of Galileo in 1633 for believing that the Earth revolved around the Sun. *Laudato Si’* fails to get the science right ... and although the Vatican can no longer prosecute heretics, Francis has no hesitation condemning those who oppose the alleged global warming consensus”²¹

Ebell attacks the Pope for issuing “a diatribe against modern industrial civilization,” for believing that the world’s “industrialized economies are wrecking God’s creation by digging far too much stuff (coal, oil, natural gas) up,” for believing that the “current level of resource consumption is exhausting and polluting the Earth.” Even more egregious, for Ebell, is the fact that the Pope attacks the world’s wealthy countries for doing “far too little to help the poor in the unindustrialized Third World” — while ignoring the fact that the Pope’s own namesake, Saint Francis of Assisi, “had wealthy parents who didn’t require his care when they became old and

¹⁸ Chris Mooney (2015). “Pope Dares to Side with Science.” *Washington Post*, January 3, B5.

¹⁹ See the detailed cross-sectional survey results and multivariate analyses in Jon D. Miller, Eugenie C. Scott, and Shinji Okamoto (2006). “Public Acceptance of Evolution.” *Science*, New Series, 313(5788), 765-766.

²⁰ On “evangelical neoliberalism,” see Luke R. Barnesmoore (2017). *Neoliberal Christian Extremism, Trump, and the Apocalypse*. Vancouver, BC: Department of Geography, University of British Columbia.

²¹ Myron Ebell (2015). “Pope Francis’s Climate Encyclical: Help Poor People by Dismantling Industrial Civilization.” *Globalwarming.org Blog: May Cooler Heads Prevail*. June 19, at <http://www.globalwarming.org>.

sick, didn't have children who needed to be fed, clothed, and educated, and relied for his sustenance on alms from wealthy people in a wealthy society."²² Ebell builds a right-wing American populist case that the Pope is an elitist hypocrite — “Francis does not emphasize the need for the rich to share their wealth with the poor” — because he has been brainwashed by St. Francis of Assisi. “Thus the Pope wants to address inequality and at the same time save the world from global warming by reducing the wealth of the wealthy countries through de-industrializing, overcoming the ‘technological paradigm,’ and giving up our consumer ‘throwaway’ culture. In other words, we can save the world by leveling down.”²³ Ebell achieves a sort of Swiftboat satirization of the “glaring intellectual inconsistency” of the Pope’s emphatic statement that population control is not part of the solution, and attacks Francis’s ideal of “a pastoral society of peasants who live in harmony with the land and who don’t disturb ‘Mother Earth.’”²⁴

“Thus, world population can continue to increase as long as we are all poor,” Ebell writes in his blog post attacking the Pope, and it is here where Steve Bannon’s Skyped-in defense of the Judeo-Christian foundations of Western civilization intersect with Trump’s Facebook warnings of an ISIS attack on the Vatican and the Swiftboating of Kerry for that treasonous Vietnam betrayal: *Pope Francis is a communist*. “The influence of Liberation Theology on the Pope’s thinking is obvious,” Ebell writes, noting that a former general in Romania’s Communist-era secret police had recently disclosed that “the Soviet KGB created, directed, and funded the Liberation Theology movement.”²⁵ Ebell provides a helpful hyperlink to his source, an interview with Ion Mihai Pacepa distributed through the *Catholic News Agency*. Pacepa, who defected to the U.S. in the late 1970s, describes a super-secret 1960 KGB “Party-State Dezinformatsiya Program” to take surreptitious control of the World Council of Churches, with its representation of some half a billion believers, and to use the label and ideology of Liberation Theology as a “South American Revolutionary tool.” This was part of a diversified portfolio of KGB innovations, Pacepa explains, that included the National Liberation Army of Colombia (FARC, built with help from Fidel Castro), the National Liberation Army of Bolivia (Ché Guevara), and the Palestine Liberation Organization (PLO, Yasser Arafat).²⁶ The *CNA* piece quickly racked up a mildly respectable 14 thousand Facebook likes, as well as a comment section hinting at the kinds of political currents that had enabled Ebell’s nomination. “And Obama’s ‘Rev’ Jeremiah Wright from Shicago is a Klassic Liberation Theology preacher,” posts one reader from Facebook; “Marxist & Radical Leftist by Emphasizing Black Liberation Theology as Marxist Victimology.”²⁷ “Been there done that 45 years ago,” posts another reader from Google+; “My former husband is one of the senior executive Russian agents at the NSA. That’s why he’s my former husband. I divorced him when he got involved with the KGB.” Another reader, though, wonders if this is “some kind of Red scare tactic? Won’t work. Nobody under 40 even know about Commies.” This elicits a stern lecture from another Facebooker: “If young

²² Ebell, “Pope Francis’s Climate Encyclical.”

²³ Ebell, “Pope Francis’s Climate Encyclical.”

²⁴ Ebell, “Pope Francis’s Climate Encyclical.”

²⁵ Ebell, “Pope Francis’s Climate Encyclical.”

²⁶ Catholic News Agency (2015). “Former Soviet Spy: We Created Liberation Theology.” *Catholic News Agency*, May 1, at <http://www.catholicnewsagency.com>

²⁷ Sic on the *Klassic Shicago Manual of Style* and all other comment-section Safirean Fumblerules. If I had to read through this crap so do you. William Safire (1979). “On Language: The Fumblerules of Grammar.” *New York Times Magazine*, November 4, p. SM4.

people don't know, they should. It's like not knowing the Devil exists ... it's like the eugenic movement of the 1920s. Even though most people don't know about it, doesn't mean the concepts are not reaking havoc in our society even today." Another reader implores everyone to read Pacepa's book *Disinformation* (coauthored with Professor of Law Ronald J. Rychlak, a member of the Holy See's delegation to the United Nations and of the Mississippi Advisory Committee to the U.S. Civil Rights Commission²⁸); the reader angrily notes that Jimmy Carter had "muzzled" Pacepa "from writing or speaking, but Reagan lifted the ban." The comments go on and on, of course, with more than a few instances of 'for God's sake...', and then near the end one reader from Twitter reflects, "Hmm...these are pretty serious allegations. ... Can we get some more verification other than an old KGB agent on this conspiracy theory? That would be good journalism. When I Google this theory, another article by the same man (and using the exact same wording — he just copy and pasted the text!) is all that appears."

Geographic Thought and the Conspiracies of Cybernetic Planetarity

"We are moments in natural history, nodes inextricably enmeshed in a more-than-human world. This is perhaps most readily evident in the fact that to live in and work on the world is to be a carbon being."

—Joel Wainwright and Geoff Mann²⁹

I apologize for dragging you along on this strange journey, from Samuel Butler's letters about telegraphs at Mesopotamia Station to John Kerry's smartphone selfies with Antarctica penguins to *Conservapedia*, Trump tweets, and the nether regions of right-wing social media trolls. The chaotic, contingent connections of this digital acid trip, however, are central to my purpose. In this essay, my goal is to analyze how these kinds of strange, conspiratorial connections are rapidly transforming human thought about nature, and the nature of human thought. 'Nature' is a vast territory of scientific and humanistic inquiry, and the landscape remains intimidating even if we try to stay within disciplinary boundaries to focus on how *geographers* have thought about nature, and the nature of what Geoffrey Martin sarcastically called "that now receding genre in American geography, the history of geographic thought."³⁰ But three themes in this history are particularly important in the story I wish to tell.

First, the field of political ecology has revolutionized the study of the complex metabolisms of nature and society, and within a single generation this literature has encapsulated many of the frontier expedition ambitions that have always defined and imperiled the entire history of geography. Beginning in the 1970s with an emphasis on resource and agrarian questions in the global South, political ecology reconceptualized human-nature relations at the precise moment when postwar *Pax Americana* industrialization attained a planetary crescendo, followed by variegated worlds of deindustrialization, postindustrialized information societies, and 'splintering

²⁸ See <http://law.olemiss.edu/faculty-directory/ronald-j-rychlak/>

²⁹ Joel Wainwright and Geoff Mann (2015). "Climate Change and the Adaptation of the Political." *Annals of the Association of American Geographers* 105(2), 313-321, quote from p. 318.

³⁰ Geoffrey J. Martin (1989). "The Nature of Geography and the Schaefer-Hartshorne Debate." In J. Nicholas Entrikin and Stanley D. Brunn, eds., *Reflections on Richard Hartshorne's The Nature of Geography*. Washington, DC: Association of American Geographers, 69-90, quote from p. 74.

urbanisms.³¹ The political ecologies of Michael Watts's *Silent Violence*³² and Neil Smith's 'production of nature' evolved into a fully globalized world of ecosystem services, commodity chains, environmental derivatives, and discourses of sustainability and environmental (in)justice. By the time the world crossed the majority-urban threshold, Michael Watts concluded that "political ecology has in a sense almost dissolved itself over the last 15 years as scholars have sought to extend its reach," even as he praised the breathtaking critical creativity in the "proliferation of forms of environmental study emerging from history, science studies, post-structuralism, and new social movements."³³ As the "Anthropocene" has become a twenty-first century keyword, and as Erik Swyngedouw has developed a framework for the study of "cyborg urbanism,"³⁴ the fear of an ambitious political ecology dissolving on its own frontiers seems to echo similar anxieties in an urban theory still recovering from the many Project MKUltra innovations of Foucault, Lefebvre, Deleuze, and other expeditions of continental European social theory.

Swyngedouw's analysis of socio-nature highlights the second theme: the cyborg. If we don't count precursors like Samuel Butler, the first widely recognized scientific and philosophical philosophy of "cybernetics" — from the greek word, *kubernētēs*, for "steersman" — came from the MIT mathematician Norbert Wiener. Wiener established the conditions of possibility for an entirely new kind of thought with *Cybernetics* (1948) for specialized mathematicians and engineers, and then *The Human Use of Human Beings* (1950) for a wider audience. For Wiener, cybernetics was about language as information, as "the study of messages as a means of controlling machinery and society," a blend of engineering, psychology, and the study of the human nervous system.³⁵ Wiener developed the ideas that became cybernetics while trying to figure out how to make antiaircraft guns more accurate.

In the half century since Wiener's death in 1964, there's been enormous interest in the topic across many fields of academic knowledge as well as popular culture. From Norbert Wiener to Alan Turing's behavioral tests for artificial intelligence (if *we act as if* computers are intelligent, then *they are*) to recent collections of articles from *The Edge (What to Think About Machines That Think)*,³⁶ humanity has confronted a strange paradox. As people get better at creating machinery, and as we are living in a world of more and more messages — information — then more and more human creativity is invested in machines. The longer this goes on, the bigger the accumulation of human creativity invested in machines, or computers, or computer programs. And more and more of the history and present of humanity is recorded and stored in quickly-accessible forms. John Kerry can swipe a thumb through his smartphone to show someone those

³¹ Stephen Graham and Simon Marvin (2001). *Splintering Urbanism: Networked Infrastructures, Technological Mobilities, and the Urban Condition*. New York: Routledge.

³² Michael Watts (1983). *Silent Violence: Food, Famine, and Peasantry in Northern Nigeria*. Berkeley: University of California Press.

³³ Michael Watts (2009). "Political Ecology." In R.J. Johnston, Derek Gregory, Geraldine Pratt, and Michael Watts, eds., *The Dictionary of Human Geography, Fourth Edition*. Chichester, UK: Blackwell, 590-593, quote from p. 592.

³⁴ Erik Swyngedouw (2006). "Circulations and Metabolisms: (Hybrid) Natures and (Cyborg) Cities." *Science as Culture* 15(2), 105-121.

³⁵ Norbert Wiener (1954). *The Human Use of Human Beings, Revised Edition*. New York: Houghton Mifflin, p. 15.

³⁶ John Brockman, ed. (2015). *What to Think About Machines That Think*. New York: Harper Perennial.

penguin photos he took in Antarctica. There's more information recorded every day, by ever more powerful algorithms, and gradually these ever more powerful phenomena become so important in society that we take them for granted. As they proliferate, we stop noticing cyborgs. And they get better, stronger, faster, as we give them more information. The first internet search, like the first telephone, wasn't worth much because not many other people were there to connect. When only a few people were on the internet, search could be quite primitive and frustrating. But just as the telephone (like the pyramid, Roman inscriptions, printing press, and telegraph) changed society, so has the internet. Now Google is always learning more about how people search for various things online. The algorithms are getting ever better at providing those auto-complete suggestions as we type. As more human creativity and information — present and past — is stored in code, we are constantly and re-creating something new: the cyborg.

Geography became a cyborg discipline in the middle years of the twentieth century.³⁷ So did nearly every other discipline that survived the truly Darwinian competition to survive in America's increasingly economistic Cold War fusion of science and technology for military purposes — what Donna Haraway called “technoscience.”³⁸ Just as in the case of political ecology, there's a vast literature on this topic. The most important point, though, is that there is a remarkably broad consensus across a number of different fields of study: we've been in Samuel Butler's world of evolutionary machines for quite some time now. Messages — items of information — are indeed being used to control machinery and society. Sometimes we forget about how much of a cybernetic world we're living in, because most of us still think of the cyborg as a combination of an individual person and a computer, or a computer program. These combinations are indeed important, but things get really interesting when they begin interacting with each other — at that point it's nearly impossible to tell where the human ends and the ‘machine,’ or the code, begins. My stone-age laptop computer just updated its operating system (without first asking me), and now there's a new option at the log-in screen: “Skip the password, log in with your face. TrueKey™.” If we really begin to rely on our smartphone for the necessities of daily life — and how many of us don't? — are we really any different from the character played by Joaquin Phoenix in the movie *Her*, the guy who fell in love with the artificial intelligence of his operating system?

It means something that millions, maybe billions, of apps and websites in the world use innovations like the CAPTCHA, that friendly box where you have to put a check in the box next to “I'm Not a Robot!” followed by a set of visual quizzes. CAPTCHA stands for Completely Automated Public Turing test to tell Computers and Humans Apart. The news feed on the *Times* website tells me that the *Hollywood Reporter* says that there's a new installment of *The Matrix* in the works. David Brooks's neoconservative intellectual Godfather, Irving Kristol, was once an idealistic young leftie before he became the patriarch of the legendary ‘First Family of American Neoconservatism.’ Kristol once wrote that he had gone through so many changes in his thinking

³⁷ Trevor J. Barnes (2014). “Geo-historiographies.” In Roger Lee et al., eds., *The Sage Handbook of Human Geography*. London: Sage Publications, 202-228

³⁸ Brian J.L. Berry (1980). “Creating Future Geographies.” *Annals of the Association of American Geographers* 70(4), 449-458. Donna Haraway (1997). *Modest_Witness@second-millennium.FemaleMan@Meets_OncoMouse™: Feminism and Technoscience*. New York: Routledge.

that perhaps, he said, “I’m going to end up a neo. Just neo, that’s all, Neo-dash-nothing.”³⁹ No wonder Keaneau Reeves hasn’t yet signed up for the part. #IrvingisNeo? No wonder “red pill” became such a powerful meme in the white nationalist alt-Right in 2016.

There’s a third important point about the history of geographical thought. This is about how we think about nature, and the nature of human thought. As we help to teach those phenomena created by the finest scientific and technological minds among us, we’re creating something new. This isn’t just a cyborg or a system of networked, constantly learning artificial intelligence algorithms. At the planetary scale, it’s something else entirely. It is an entirely different *species*, and it evolves from more and more of humanity’s stored creativity, more of its communication, more human lives, thoughts, and fears. Think of it as a sort of “thinking planet.” This species is called the noösphere, from the Greek *noös*, “mind” + *sphaera*. The idea was developed by a geochemist, Vladimir I. Vernadsky, who was one of the first to work on the “Anthropocene” theory that has become so important in today’s global popular understanding of the meanings of climate change for the future of humanity.

Each of the theories and connections we’ve explored come from different assumptions, intentions, and modes of thought — each with distinct genealogies. To combine them as I have risks creating an incomplete, incoherent conceptual assemblage — what Don Mitchell, in another, seemingly unrelated context, has diagnosed as a sort of ‘*Huffington Post* epistemology.’ That context, however, offers important lessons. Mitchell issues this warning amidst a defense of historical materialism against a neo-Kantian idealism in the postcolonial theorist Gayatri Spivak’s concept of “planetary,” in a debate over Joel Wainwright’s analysis of a group of geographers funded by the U.S. Army to map indigenous lands in Oaxaca.⁴⁰ Evaluating Wainwright’s proposed alternative to the ontological violence of “militant empiricism,” Mitchell warns of the dangers of Spivak’s admonition that we cannot know the world — or even parts of it — as empirical objects with material reality. Instead, Spivak suggests, we must engage with a ‘worldliness,’ a ‘planetary’ of unstructured fieldwork, of narratives, texts, and groups of texts. “In other words,” Mitchell responds,

“just make things up. At best this is a *Huffington Post* model of knowledge dissemination. Produce nothing but one’s self, but ‘aggregate’ other texts, maybe interpret them a bit, send them around, and — voila — ‘reality’ comes into being.”⁴¹

Mitchell is correct to warn of the dangers of the persistent, unhinged immaterial illusions of neo-Kantian thought. But making things up — and the catachresis of my brief literature review and the journeys through *Conservapedia* — is precisely the point. Historical materialism is being cybernetically rematerialized, and neo-Kantian idealism has been coded into the Ernest Hemingway of Twitter tweeting scare-quote attacks on “intelligence” agencies and calling for a

³⁹ Quoted in Barry Gewen (2009). “Irving Kristol, Godfather of Modern Conservatism, Dies at 89.” *New York Times*, September 18.

⁴⁰ Joel Wainwright (2013). *Geopiracy: Oaxaca, Militant Empiricism, and Geographical Thought*. New York: Palgrave Macmillan.

⁴¹ Don Mitchell (2014). “Review of Joel Wainwright, *Geopiracy: Oaxaca, Militant Empiricism, and Geographical Thought*.” *Human Geography* 7(3), 85-87.

renewed nuclear arms race — “Let it be an arms race,” Trump clarified the next day after his nuclear tweet sowed astonished confusion worldwide; “We will outmatch them at every pass and outlast them all.”⁴² Catachresis is now the strategic frontier of capital accumulation and political power, precisely because this term — which Spivak uses in her attempt to build an emancipatory, cosmopolitan alternative to the positivist, modernist hegemony of ‘globalization’ — comes from the mid-sixteenth century Latin, which Mitchell reminds us comes from the Greek *katakhrēsis*. This simply means ‘the misuse of words or concepts.’ The *Oxford English Dictionary* cites the example of “the use of mitigate for *militate*,” but the more relevant examples today are Trump’s “unpresidential” tweet, Sarah Palin’s “refudiate,” and of course George W. Bush’s nuclear misunderestimations. These are the digital dog-whistle code words of an evolutionary cyborg of right-wing America. This cyborg, I suggest, is the product both of the materialist dynamics of the climate ‘Leviathan’ analyzed by Wainwright and Mann,⁴³ and the imaginative and materialist production of an evolving white nationalist consciousness in America, what Andrew Baldwin has called the “white affect” in global North attitudes on climate-induced migration in a ruthless politics of “criteria for survivability.”⁴⁴ What we are seeing here is a planetary software update of the revanchist operating system that horrified Bruno Latour when he read about the Bush Administration’s post-9/11 surveillance programs. “Didn’t I read that somewhere in Michel Foucault?” Latour asked; “Has knowledge-slash-power been co-opted of late by the National Security Agency? Has *Discipline and Punish* become the bedtime reading” for Bush’s cabinet?⁴⁵ The clearest confession of the Right’s tactics in hijacking postmodernism, deconstruction, and all the other critical tools of leftist social theory came from Karl Rove. Exulting as Bush cruised to a decisive election victory in 2004, Rove gave the journalist Ron Suskind a stern lesson on the futility of the profession of journalism:

“The aide said that guys like me were ‘in what we call the reality-based community,’ which he defined as people who ‘believe that solutions emerge from your judicious study of discernible reality.’ I nodded and murmured something about enlightenment principles and empiricism. He cut me off. ‘That’s not the way the world really works anymore,’ he continued. ‘We’re an empire now, and when we act, we create our own reality. And while you’re studying that reality — judiciously, as you will — we’ll act again, creating other new realities, which you can study too, and that’s how things will sort out. We’re history’s actors ... and you, all of you, will be left to just study what we do.’”⁴⁶

My argument is very simple. Rove’s formula has been accelerated. It has been cybernetically networked and partially, selectively automated. It exemplifies a dangerous mutation of a theory of humanity’s relations with nature. And its evolution highlights the American Exceptionalism of the political consciousness of human nature and human evolution.

⁴² See Micheal D. Shear and David E. Sanger (2016). “Trump Says U.S. Would ‘Outmatch’ Rivals in a New Nuclear Arms Race.” *New York Times*, December 23.

⁴³ Wainwright and Mann, “Climate Change and the Adaptation of the Political.”

⁴⁴ Andrew Baldwin (2016). “Premeditation and White Affect: Climate Change and Migration in Critical Perspective.” *Transactions of the Institute of British Geographers* 41, 78-90, quote from p. 88.

⁴⁵ Bruno Latour (2004). “Why Has Critique Run Out of Steam? From Matters of Fact to Matters of Concern.” *Critical Inquiry* 30, 225-248, quote from p. 228.

⁴⁶ Ron Suskind (2004). “Without a Doubt: Faith, Certainty, and the Presidency of George W. Bush.” *New York Times* magazine, October 17, 44-106, quote from p. 51.

Data and Methods

In this essay, my purpose is to explore the geographical dimensions of this reconfiguration of old and new ideas about culture, economics, and nature in the American Right. The ‘geography’ I have in mind is not the straightforward Cartesian mapping that is so often remembered as the primary legacy of twentieth-century modernist spatial analysis,⁴⁷ but rather a more agile, strategic cartography of hybridity suitable for the ‘post-canonical’ currents of thought amongst today’s generation of human geographers.⁴⁸ I combine three complementary methods. First, as should already be clear, a simple genealogical narrative traces connections through a blend of journalistic works, policy documents, and social media sources. We might also call this approach something like “open-source ethnography” — exploiting the hiding-in-plain-sight informational avalanche of the contemporary network society, while also tracing connections to the geographically contingent divisions of epistemological space inherited from previous generations.⁴⁹ Mainstream positivist scientists view this approach with deep suspicion, because of its vulnerability to sample-selection bias and confirmation bias: all of the meanings of the vignettes I’ve presented thus far are contingent on the choices made in selecting particular empirical events, images, and discursive representations. Obviously, I made these choices in order to tell the story I have in mind — and what is in my mind cannot be regarded as a scientifically reliable phenomenon corresponding to an external, objectively observed ‘real world.’ Even my choice of particular, individual words shapes the meanings of my concepts and your interpretations: ‘phenomenon’ is Immanuel Kant’s eighteenth-century idealism, which a century later becomes fused with pragmatism and New England transcendentalism to create a distinctively American “evolutionary idealism” — “a belief in the hard-won, progressive development of ideas verified through a strict positivism.”⁵⁰ Yet if positivist evolutionary idealism guided the consolidation of geopolitical power in the ‘American Century’ — from Isaiah Bowman’s ethnic maps of Europe at the 1918-1919 Paris Peace Conference to the GPS precision-guided smart bombs of the 1991 Iraq War, the “first full-scale GIS war”⁵¹ — the twenty-first century has brought a decisive, militarized Right-wing engagement with postpositivist poststructuralism. Karl Rove’s dismissal of the “reality-based community,” after all, was only the polite, civilian front for the more violent theorizations of the 2003 U.S. invasion of Iraq, with General Tommy Franks’s callous “We don’t do body counts” violation of the Geneva Conventions and Donald Rumsfeld’s press conference seminars on the finer distinctions between “known unknowns” and “unknown unknowns” on the matter of Saddam’s weapons of mass destruction. Put simply, the contingent genealogical methods of open-source ethnography

⁴⁷ The classical reference points here are David Harvey (1969). *Explanation in Geography*. London: Edward Arnold; and Ronald Abler, John S. Adams, and Peter R. Gould (1971). *Spatial Organization: The Geographer’s View of the World*. Englewood Cliffs, NJ: Prentice-Hall.

⁴⁸ See Mei-Po Kwan (2004). “Beyond Difference: From Canonical Geography to Hybrid Geographies.” *Annals of the Association of American Geographers* 94(4), 756-763.

⁴⁹ See Michael E. Elliot-Hurst (1985). “Geography Has Neither Existence nor Future.” In Ron J. Johnston, ed., *The Future of Geography*. London: Methuen, 59-91.

⁵⁰ Neil Smith (2003). *American Empire: Roosevelt’s Geographer and the Prelude to Globalization*. Berkeley: University of California Press, p. 43. On the conservatism of Kantian idealism in Geography, see Neil Smith (1989). “Geography as Museum: Private History and Conservative Idealism in the Nature of Geography.” In J. Nicholas Entrikin and Stanley D. Brunn, eds., *Reflections on Richard Hartshorne’s The Nature of Geography*. Washington, DC: Association of American Geographers, 91-120.

⁵¹ Neil Smith (1992). “History and Philosophy of Geography: Real Wars, Theory Wars.” *Progress in Human Geography* 16(2), 257-271, quote from p. 257.

offer the only hope of keeping pace with today's acceleration of the "we're an empire now" epistemology that has brought us from Karl Rove to Donald Trump and Kellyanne Conway's formulation of "alternative facts." Trump "obtains, processes, and uses information differently from any modern president," the *Times* reported after yet another chaotic news cycle in international diplomacy after the Commander-in-Chief angrily tweeted moments after watching a Fox News documentary on immigration and crime in Sweden; "He watches television at night and tends to incorporate what he sees into his Twitter feed, speeches and interviews."⁵²

My second method is a more conventional multivariate statistical analysis of the microdata files of the 2016 Pilot Study of the American National Election Study (ANES).⁵³ ANES, regarded as the preeminent electoral behavioral baseline since 1948, now refines pre- and post-election surveys with pilot studies conducted with random samples of U.S. citizens age 18 and older, drawn from the YouGov panel; the YouGov panel includes more than one million respondents who volunteer to complete online surveys on a wide variety of political and policy issues. The 2016 ANES Pilot Study was conducted in January, 2016, when the Republican nomination race was dominated by powerful "Never Trump" contingents that drove support to many other candidates pursuing the enraged far-right base voters. Nevertheless, the Pilot Study includes a number of important questions, and captures a pivotal moment in the coalescence of new right-wing coalitions.

The third method emerges from the wider 'Big Data' genre of social media analysis. In simple, practical terms, the approach is to 1) identify key speeches, events, and news stories, and then 2) analyze the correlations among viewing behaviors on YouTube, using the 'YouTube Data Tools' developed by Bernhard Reider, Associate Professor of Media Studies at the University of Amsterdam.⁵⁴ Version 1.0 of Reider's powerful suite of tools was made freely available on May 5, 2015. In terms of interpretation and genealogy, Reider's data extraction tools allow the creation of graphical representations that finally deliver on the most ambitious analytical capabilities envisioned by previous generations of social scientists as well as activist artists. Among the social scientists are the psychologists like Warren Torgerson, who in the early 1950s spent his time on a fellowship at the Educational Testing Service at Princeton developing the multivariate statistical techniques known as multidimensional scaling,⁵⁵ and geographers inspired by Peter Gould's use of MDS and related techniques in the "mental mapping" revolution of the 1960s and 1970s.⁵⁶ Among the activist artists, Mark Lombardi stands out as an especially fascinating and relevant figure. Lombardi was speaking to a friend on the telephone one day in the early 1990s, and he began doodling on a sheet of paper as they chatted about the events of the day. At the time, the big news in the U.S. was the massive savings and loan scandal — then on its way to becoming the largest wave of bank failures and bailouts since the Great Depression — and Lombardi's friend happened to be a banker. As he drew all the interconnections between bank CEOs, government officials, and scandalous revelations about offshore accounts and political contributions, Lombardi suddenly realized that *this* was the kind of art he wanted to

⁵² Peter Baker and Sewell Chan (2017). "From an Anchor's Lips to Trump's Ears to Sweden's Disbelief." *New York Times*, February 20.

⁵³ Stanford University and University of Michigan (2016). *Codebook and User's Guide to the ANES 2016 Pilot Study*. Available at <http://www.electionstudies.org>

⁵⁴ See <https://tools.digitalmethods.net/netvizz/youtube>

⁵⁵ Warren S. Torgerson (1952). "Multidimensional Scaling I: Theory and Method." *Psychometrika* 17(4), 401-419.

⁵⁶ Peter Gould and Rodney White (1974). *Mental Maps*. New York: Penguin.

create. Lombardi began reading several major newspapers each morning, writing the details of connections and scandals he found interesting on small index cards; he eventually built a collection of more than 12 thousand cards. Lombardi would then create simple yet elegant drawings, connecting labeled circles representing key individuals, corporations, and governments involved in various scandals. Lombardi soon began to get wider attention as a rising star in what came to be known as “conspiracy art.”⁵⁷ Lombardi once remarked that his drawings, vast works that sometimes stretched ten feet across, were best understood by the reporters covering the stories he was so carefully following with his index card collection. Other admirers of his work only became apparent after Lombardi was found dead of an apparent suicide in his Williamsburg loft in the Spring of 2000:

“Lombardi’s maps of corporate kleptocracy literally illustrate how all the dots are connected in ways that were always suspected, but rarely worked out in such detail. Little surprise, then, that FBI representatives appeared at the opening of his posthumous retrospective and expressed their incredulity that an artist with access to only information in the public domain, and working without a computerized database, could have plotted the scandals with such accuracy. Rumors also flew that the artist’s apparent suicide was actually a murder, motivated by any number of parties whose illicit finances he had exposed. The circulation of money shows the theft of your property ... within a paranoid world system.”⁵⁸

Lombardi’s paranoid world system is now planetary, and cybernetically networked through the cloud computing facilities that the virtual-reality pioneer Jaron Lanier has called the “Siren Servers” of Silicon Valley.⁵⁹ YouTube is, of course, just one of many ‘channels’ in a vast infosphere of interactive human communication — broadcast and cable television, terrestrial radio, satellite radio, the open internet, the privatized ecosystems of apps, the so-called Dark Web — but it is one of the largest and most widely used, particularly in the United States.⁶⁰ It functions as one part of an audiovisual public space. Reider’s YouTube network analytics make it astonishingly easy for us to map the dynamic online cognitive spaces of visual communication that Torgerson’s generation struggled to build with laborious operations on giant, noisy ‘desk calculators’ and massive, punchcard-driven mainframe computers.⁶¹ Reider’s powerful, simple

⁵⁷ Roberta Smith (2000). “Mark Lombardi, 48, An Artist Who Was Inspired by Scandals.” *New York Times*, March 25.

⁵⁸ Emily Apter (2006). “On Oneworldness: Or, Paranoia as a World System.” *American Literary History* 18(2), 365-389, quote from pp. 381-382.

⁵⁹ Jaron Lanier (2010). *You Are Not a Gadget: A Manifesto*. New York: Knopf.

⁶⁰ “YouTube overall, and even YouTube on mobile alone, reaches more 18-34 and 18-49 year olds than any cable network in the U.S.” YouTube (2017). “Statistics.” <http://www.youtube.com>, last accessed March 15.

⁶¹ In the vast literatures in science and technology studies, the best analyses of the interplay between the evolution of analytical technologies and scholarly ideas is Trevor Barnes’s project examining the histories of Geography’s Quantitative Revolution. Barnes analyzes how the field became a ‘cyborg discipline’ in the 1950s and 1960s, as fieldwork gave way to hand-calculation quantification, then to giant, thudding desktop calculating machines — and then to monumental mainframe computers. On the mutually reinforcing dynamics of military money and calculative practices, see Trevor Barnes (2008). “Geography’s Underworld: The Military-Industrial Complex, Mathematical Modeling and the Quantitative Revolution.” *Geoforum* 39, 3-16. On the “literally billions of calculations” performed by a key QR figure, William Warntz, over a career of applying Newtonian physics metaphors to human phenomena, see Trevor Barnes and Matthew Wilson (2014). “Big Data, Social Physics, and Spatial Analysis: The

front-end interface for the YouTube Application Programming Interface (API) reanimates a hybrid of Gould's mental mapping, Torgerson's multidimensional scaling, and Lombardi's conspiracy art for a world where a "reality" television celebrity now holds the nuclear codes, watching Fox News and InfoWars while spouting angry Tweets late into the night.

First, however, before we dive into the quantitative opinion data of the ANES Pilot Study and the YouTube Network analytics, we need to undertake another genealogy. This time we direct the narrative towards more scientific and scholarly sources, focusing on one of the antecedents of Lanier's warnings about the Silicon Valley informational monopolies. This involves the concept of the noösphere.

From Geological Thought to 'Trump Digs Coal': Cognition and Carbon in the Noösphere

On December 2, 2015, Donald Trump's appearance on an internet livestream seemed to encapsulate all the bizarre paradoxes of the age. Trump was speaking from his Trump Tower office on a video feed to the wildly conspiratorial Alex Jones, whose 18 YouTube channels anchor a massive media operation that is "breaking down the Berlin Wall of media control" and "circumventing the dying dinosaur media systems of information suppression." Jones's "InfoWars" channel is the "tip of the spear" in an insurgent media revolution "on the front lines" against a world-government conspiracy of "control freaks who seek to turn the globe into a prison planet."⁶² In full attack mode in his race for the Republican nomination, Trump spent a full thirty minutes with Jones. At one point, Trump angrily complained that "we have a president trying to get everybody excited about global warming, like that's our number one problem," and repeated a mantra for U.S. military strategy in the Middle East: "We should take the oil! We should take the oil!" By this point in human and non-human history, more than 600 gigatons — a gigaton is a billion metric tons — of carbon had been emitted into the atmosphere in the era of industrialization, and global temperature averages had made 2014 the hottest on record, followed by another record-shattering 2015; 2016 would set yet another record.⁶³ But Trump had begun the year 2014 with a bold Twitter blast — "This very expensive GLOBAL WARMING bullshit has got to stop. Our planet is freezing, record low temps, and our GW scientists are stuck in ice"⁶⁴ — and he clearly understood that if public opinion could be so

Early Years." *Big Data & Society*, April/June, 1-14. A particularly striking description comes from the autobiography of Brian J.L. Berry, who was, for the first quarter-century of the Social Sciences Citation Index, the world's most widely-cited geographer. Berry recalls a 1960 project analyzing the intercorrelation of alternative measures of economic development in order to classify countries of the world: "I completed and tested the program, spending many a long night in the computer lab. The UNIVAC 1 was a myriad of vacuum tubes that filled the basement of the business school. I would start an iteration at the keyboard, pour a cup of coffee, stroll inside the computer and wait for the lights to start flashing in a particular pattern, then walk out to the printer for a convergence parameter: Close enough? How much money is left? ... Computer time was very expensive — several hundred dollars per hour." Brian J.L. Berry (2006). *Nihil Sine Labore: An Autobiography*. Baltimore, MD: Waveland Press, p. 94. Today, 'strolling inside the computer' gives way to the app on a handheld smartphone, and anywhere you stroll might be chronicled by your GoPro, your FitBit. Other aspects of Berry's reminiscence, however, endure: "Time for reflective thought was a rare commodity."

⁶² Alex Jones (2017). "About the Alex Jones Channel." *YouTube*, last accessed February 23.

⁶³ World Meteorological Organization (2016). "The Global Climate 2011-2015: Heat Records and High Impact Weather." November 8, at <http://public.wmo.int>; John Bellamy Foster (2017). "Trump and Climate Catastrophe." *Monthly Review* 68(9).

⁶⁴ Donald J. Trump, *Twitter*, January 1, 2014.

Table 1. Modelling Trump's Support in January, 2016.

*Odds ratios from logistic regression model of
Trump as preferred Republican candidate*

	Model 1	Model 2	Model 3
Feeling thermometer: how do you feel about the police? ^A	1.090		1.168
Feminists?	0.969		0.966
Transgender people?	1.251		1.205
Muslims?	0.786 **		0.905
Barack Obama?	0.473 ***		0.515 ***
Blacks?	1.079		1.094
Whites?	1.545 ***		1.392 ***
Hispanics?	0.718 ***		0.823
Gays and Lesbians?	0.866		0.870
Hillary Clinton?	1.075		0.945
Most Blacks could be described as lazy	0.856		0.754
Most Hispanics could be described as lazy	1.020		1.746
Most Muslims could be described as lazy	1.051		0.835
Most Blacks could be described as violent	0.914		0.923
Most Hispanics could be described as violent	1.106		0.668
Most Muslims could be described as violent	2.160 ***		1.938 ***
Legal immigration should be decreased a lot		1.510 *	0.940
Strongly Oppose Free Trade		1.229	0.784
No opportunity for average American		1.157	0.907
Much harder than parents to move up the ladder		1.589 **	1.219
Global Warming Probably Not Happening		1.404 *	1.293
Global Warming Would be Good		1.071	2.253 **
Global Warming Would be Neither Good nor Bad		0.920	0.879
Global Warming Mostly Natural		1.011	0.515 **
Global Warming Equally Human and Natural Caused		0.815	0.449 ***
Government should be doing less on Global Warming		0.907	0.400 ***
Moderately or Strongly Oppose Vaccination		0.245 ***	0.324 ***
Neither Favor Nor Oppose Vaccination		1.364	1.196
Vaccines Cause Autism		1.241	1.404
Birther		4.519 ***	1.768 ***
Not at all Pleased about possibility of Latino President			1.986 ***
People are far too easily offended on politically incorrect language			1.126
Extremely or Very Worried about a Terror Attack			1.576 **
Extreme Opposition to Birthright Citizenship			1.532 **
Strongly Favor Ground Troops to Fight Isis			0.877
Strong Opposition to Syrian Refugees			1.805 ***
Nagelkerke (1991) pseudo-R squared	0.290	0.167	0.389
Percent concordant	79.7	69.3	82.0
Unweighted number of observations	1187	1187	1187

*P<0.10; **P<0.05; ***P<0.001.

^A Feeling thermometer questions are continuous; odds ratios are standardized, reporting the change in odds with a one-standard-deviation increase in the respective predictor variable.

masterfully manipulated on the question of Barack Obama’s birth certificate, the same could be achieved on climate science (see Table 1). And immigration. And national security policy, and so many other issues.

At this early stage in the primary race, those who doubt global warming were 1.4 times more likely to prefer Trump as the Republican nominee. When controlling for a wide range of other, intercorrelated factors,⁶⁵ members of the reverse-reality community who told pollsters that global warming would actually be a good thing were 2.25 times more likely to prefer Trump. Trump’s subsequent campaign embodied Noam Chomsky’s observation that, considering the Republican primary candidates, “you have to be impressed and appalled at the utter irrationality of the species.” For Chomsky, Trump’s “Forget it” stance on climate change is “almost a death knell for the species.”⁶⁶ Yet as Trump’s Tweets circulated amongst millions, and as his video appearance reached a vast audience on the largest of Alex Jones’s InfoWars channels with its 1.9 million subscribers and 1.19 billion views, the prison planet seemed to have a new species created by exactly that kind of “cybernetic totalism” that Jaron Lanier feared. “We technologists are turning ourselves, our planet, our species, everything, into computer peripherals attached to the great computing clouds,” Lanier had written back in 2010; the network architectures were promoted as creating “the noösphere, which is a supposed global brain formed by the sum of all the human brains connected by the internet.”⁶⁷ Lanier attacked the noösphere as Silicon Valley’s “fantasy object,” and diagnosed how the concern with the “big new computational object that is bigger than us” had become an implicit assumption in design decisions for network architecture and user interfaces. Lanier gave his chapter a provocative title — “The Noösphere is Just Another Name for Everyone’s Inner Troll” — as a challenge to the naive technological utopianism that has dominated the industry in recent years. But the concept has a longer history, and there are eerie parallels between today’s gigatons of carbon enveloping the InfoWars prison planet and the work of the scholar who theorized the noösphere, the Russian geochemist Vladimir I. Vernadsky (1863-1945).

The Worlds of Vernadsky’s Thought

In the 1880s, Vernadsky began studies in the Faculty of Physics and Mathematics at St. Petersburg University, working with the chemist Dmitri I. Mendeleev (1834-1907) — who devised the periodic table of elements — and Vasily V. Dokuchaev (1846-1903) — who had developed a science of soil formation as the environmentally conditioned process of interaction between living and dead matter. After doctoral work under Dokuchaev’s supervision on soil science, mineralogy, and crystallography, Vernadsky spent time at the University of Munich and came to know the Austrian geologist Eduard Süss (1831-1914) — best known for a three-volume *Face of the Earth* in which he distinguished four ‘geological envelopes’: the lithosphere of the planet’s stony crust, the hydrosphere of waters, the atmosphere, and finally, at the boundary between lithosphere and atmosphere, the “biosphere” — “the place on the Earth’s

⁶⁵ Rigorous positivist observers will note the likelihood of serious multicollinearity problems in these models. There are indeed a number of predictors whose tolerance values fall below the generally-accepted 0.20 threshold, especially in Model 3. This is an issue to which we will return later.

⁶⁶ Leo Benedictus (2016). “Noam Chomsky on Donald Trump: ‘Almost a Death Knell for the Human Species.’” *The Guardian*, May 20.

⁶⁷ Jaron Lanier, *You Are Not a Gadget*, p. 45.

surface where life dwells.”⁶⁸ Süess’s work deeply influenced Vernadsky, who sought to integrate geology with biology. Vernadsky wanted to replace the old, descriptive approach to mineralogy with a more dynamic, “process-controlled” analysis of the “chemical evolution of minerals and the migration of elements in the Earth’s crust.”⁶⁹ In a December, 1909 presentation to the Congress of Russian Physicians and Natural Scientists in Moscow, Vernadsky provided the first formal codification of geochemistry as a separate, independent science, and a few years later he established both the Geochemical Laboratory and the Radium Laboratory of the Russian Academy of Sciences. Vernadsky launched a program of exploration for radioactive minerals, at the same time warning of the dangerous political implications of control of radioactivity, and in the years just before the Great War he led expeditions to the Caucasus, the Urals, Central Asia, Siberia, and the Transbaikal. He also undertook experimental research on radioactivity in laboratories in France, Austria, and Czechoslovakia. And then,

“In 1919, with a group of colleagues and students, he went to Canada and the USA, taking part in the 12th International Geological Congress in Toronto. On the excursion related to the conference, he visited several mineral deposits including the Kingston mica and apatite mines in Ontario. While he was traveling by train through Ontario he saw large mine waste dumps, dead forests in the vicinity of ore smelters, large dams and other impacts of human activity on the natural environment. These observations inspired him to develop his ideas about the geological activity of mankind; mankind as a geological factor affecting and changing the natural environment.”⁷⁰

Amidst the ‘War to End All Wars’ and the Russian Civil War, Vernadsky struggled to maintain the Academy, went to the Ukraine to recover from tuberculosis, fled an invasion of German troops, returned to Petrograd, and eventually, in 1922, accepted an invitation to be Guest Professor at the Sorbonne. In Paris, Vernadsky refined Süess’s “geospheres” concepts, emphasizing the influence of living matter on the distribution of chemical elements, “the importance of carbon for life on earth, and the transformation of the sun’s energy into organic matter.”⁷¹ It was also in Paris where Vernadsky met the philosopher and mathematician Édouard LeRoy (1870-1954) and LeRoy’s friend Pierre Teilhard de Chardin (1881-1955) — a geologist, paleontologist, and ordained Jesuit priest whose commitments to evolutionary science were beginning to get him into trouble with Catholic authorities. de Chardin and Vernadsky powerfully influenced each other’s thoughts on evolution, and after Vernadsky returned to the Soviet Union in 1926 he expanded the “geospheres” framework into the concept of the noösphere, the “sphere transformed by human cognition and activity,” the “latest phase in the evolutionary and qualitative transformation of the biosphere. The noösphere emerges at the point where humankind, through the mastery of nuclear processes, begins to create energy resources through the nuclear transmutation of elements.”⁷²

⁶⁸ See Heinze Kautzleben and Axel Müller (2014). “Vladimir Ivanovich Vernadsky (1863-1945) — From Mineral to Noösphere.” *Journal of Geochemical Exploration* 147, 4-10, p. 6.

⁶⁹ Kautzleben and Müller, “Vernadsky,” p. 6.

⁷⁰ Kautzleben and Müller, “Vernadsky,” p. 7.

⁷¹ Kautzleben and Müller, “Vernadsky,” p. 8.

⁷² Kautzleben and Müller, “Vernadsky,” p. 9.

Vernadsky died of a cerebral brain hemorrhage on January 6, 1945. The curator of the Museum of his Moscow office suggests that his death may have been precipitated by the pain and frustration of reading a December, 1944 *Pravda* article, “Nazis’ Atrocities in Lithuania,” that still remains on his desk.⁷³ News of Vernadsky’s death arrived just as the Editors of the *American Scientist* were going to press with a combined synthesis of a pair of Vernadsky’s articles, one from 1938 and another from 1943, translated to English by Vernadsky’s son George, an historian at Yale. The published essay, “The Biosphere and the Noösphere,” is thus in more ways than one an artifact at the edge of life and death, future and past, of the “approaching climax” of a Second World War that Vernadsky had predicted amidst the First, in a 1915 essay on the role of war as a driving force in scientific knowledge.⁷⁴ Vernadsky looks to the past in biology, tracing the ‘biosphere’ concept used by Dokuchaev back to the early nineteenth-century proto-evolutionary ideas of Lamarck (1744-1829), and then looks ahead to replace a geology distorted by static, obsolete Lamarckian evolutionary thought — the simple linear transmission of acquired characteristics — with a forward-looking geophysical, geochemical extrapolation of the Darwinian scientific revolution.

The details of Vernadsky’s logic and thought process are fascinating and significant. Vernadsky describes the “intensive and systematic” process of his “reading and reflection” during his stressful travels in the war-torn years between 1917 and 1921, as he focused on the “geochemical and biogeochemical manifestations in the circumambient nature, the biosphere.”⁷⁵ Vernadsky avoids the word “life” — which “always enters the realm of philosophy, folklore, religion, and the arts” — in order to maintain a relentless focus on “firmly established scientific and empiric facts and generalizations”: thus he uses the phrase “living matter” to denote the totality of all living organisms. Over the long durations of geological time, living matter undergoes changes in morphological structure — an idea that had been “rising in scientific research through the ages, until, in 1859, it received a solid foundation”⁷⁶ in the theories of Darwin and Wallace. Morphological change leads to changes in chemical composition, which in turn influences the interaction between living and inert matter. Successive eras over time produce “biogenic” rocks from metamorphic conversion of organic matter into the “granitic envelope,” the area of previous generations of biospheres. It is at this point that Vernadsky, a product of his time, slips perilously close to a teleological, inevitable, and unidirectional view of progressive evolutionary change, endorsing “the empirical generalization that *the evolution of living matter is proceeding in a definite direction.*”⁷⁷ Vernadsky relies here on a view that gradually won consensus among the contributions and alternatives developed by Lamarck, Lavoisier, the geologist J. Le Conte (1823-1901) — who saw progressive evolution leading to a phenomenon he called the “psychozoic era” — and the glaciology pioneer Louis Aggasiz (1807-1873), who “admitted that geologically the realm of man had come, but, because of his theological tenets, opposed the theory of evolution.”⁷⁸ While the evolution of living matter in the biosphere changes the granitic

⁷³ Irina N. Ivanovskaya (2014). “Academician Vladimir Vernadsky’s Office: A Witness to a Very Full Life.” *Journal of Geochemical Exploration* 147, 69-76, p. 69.

⁷⁴ “In my own scientific work the First World War was reflected in a most decisive way. It radically changed my *geological conception of the world.*” W.I. Vernadsky (1945). “The Biosphere and the Noösphere.” *American Scientist* 33(1), 1-12, quote from p. 5, emphasis in original.

⁷⁵ Vernadsky, “Biosphere and Noösphere,” p. 6.

⁷⁶ Vernadsky, “Biosphere and Noösphere,” p. 6.

⁷⁷ Vernadsky, “Biosphere and Noösphere,” p. 7, emphasis in original.

⁷⁸ Vernadsky, “Biosphere and Noösphere,” p. 7.

envelope, living organisms undergo irregular but inexorable processes of growth and perfection in the central nervous system — a process that the geologist, mineralogist, and biologist James D. Dana (1813-1895) called “cephalization.” Dana, the leading geologist in nineteenth-century America, was a central figure in the wider prevailing “philosophico-theological” paradigm of pre-Darwinian thought that harmonized natural science with Christian creation doctrines,⁷⁹ and so there is a subtle, contradictory backstory to Vernadsky’s austere scientific summary of ‘cephalization’: “The brain, which has once achieved a certain level in the process of evolution, is not subject to retrogression, but can only progress further.”⁸⁰

I realize that our extended engagement with Vernadsky risks slipping into hagiography — a recurrent danger in the history of geographical ideas.⁸¹ But it is important to consider a set of extended quotes, to give voice to some of the fragments of thought that Vernadsky expressed in the tumultuous years before that fatal cerebral hemorrhage — fragments of thought translated by his son, published in the pages of the *American Scientist* in 1945, and now almost as easily accessible to you and I through the internet as are the Flickr photos of John Kerry’s Antarctica penguin encounter.⁸² Consider the parallels between Vernadsky’s fascination with “cephalization” and Noam Chomsky’s recent synthesis of the philosophical puzzles of “thinking matter,”⁸³ from Descartes, Galileo, Newton, Hume, and Locke through Bertrand Russell up to today’s cutting-edge neuroscience:

“In the twentieth century man, for the first time in the history of the earth, knew and embraced the whole biosphere, completed the geographic map of the planet Earth, and colonized its whole surface. Mankind became a single totality in the life of the earth. There is no spot on the earth where man can not live if he so

⁷⁹ See David N. Livingstone (1992). *The Geographical Tradition*. Cambridge, MA: Blackwell, pp. 152-153.

⁸⁰ Vernadsky, “Biosphere and Noösphere,” p. 7.

⁸¹ Hagiography’s denial of the embodied, situated nature of ideas has repeatedly distorted each generation’s understanding of the contradictions, contingencies, and paradoxes of previous generations. See Don Mitchell’s discussion of Neil Smith’s attacks on hagiography in his seminars at Rutgers University in the early 1990s. Don Mitchell (2013). “Neil Smith, 1954-2012: Radical Geography, Marxist Geographer, Revolutionary Geographer.” Syracuse, NY: Department of Geography, Syracuse University. A shorter version was published in the *Annals*.

⁸² Almost, but not quite; the change is much more uncertain and risky. It was much harder to get your hands on books and articles in Vernadsky’s day, but today’s planetary internet connectivity is not without its own kinds of borders, walls, and dangers. I obtained my copy of Vernadsky’s 1945 article through JSTOR, a nonprofit but corporate entity that archives academic research and then makes the digitized historical collections available through carefully regulated institutional subscriptions and detailed Terms and Conditions. I clicked “Accept” on those Terms and Conditions, just as we all do countless times each day. Yet every time I obtain something from the JSTOR archive I think of Aaron Swartz, a young computer programmer committed to the vision of free information, who tapped into MIT’s computer network and wrote code to download the full JSTOR archive using a guest user account given to him by the institution. Swartz was essentially doing a small-scale version of Google’s vast, copyright-flouting book scanning project — what Jaron Lanier has called a “massive Manhattan Project of cultural digitization.” Swartz was arrested and charged with a variety of serious crimes, and threatened with penalties of up to 35 years in prison. After negotiations for a plea bargain failed, Swartz was found dead of an apparent suicide in his Brooklyn apartment. One of my former students works in the world of coding and tech innovation; he saw Swartz the week before his death. Now I read that JSTOR ‘Terms and Conditions’ differently. “Our lawyers are tough. You may lose all hope.” Agree?

⁸³ Begin with Chomsky’s engagement with “Locke’s suggestion” that God could “if he pleased, give to certain systems of created senseless matter, put together as he thinks fit, some degrees of sense, perception, and thought.” Noam Chomsky (2016). *What Kind of Creatures Are We?* New York: Columbia University Press; quote from p. 83. See the entire explication of “thinking matter” post-Newton to contemporary neuroscience, pp. 81-127.

desires. Our people's sojourn on the floating ice of the North Pole in 1937-1938 has proved this clearly. At the same time, owing to the mighty techniques and successes of scientific thought, radio and television, man is able to speak instantly to anyone he wishes at any point on our planet. Transportation by air has reached a speed of several hundred kilometers per hour, and has not reached its maximum. All this is the result of 'cephalization,' the growth of man's brain and the work directed by his brain."⁸⁴

And then, citing a computation of how the planet's entire human population could easily be crowded into a tiny area of a small lake on the border between Bavaria and Switzerland, Vernadsky continues:

"Thus the whole of mankind put together represent an insignificant mass of the planet's matter. Its strength is derived not from its matter, but from its brain. If man understands this, and does not use his brain and his work for self-destruction, an immense future is open before him in the geological history of the biosphere."⁸⁵

That geological history, Vernadsky emphasizes, is a "geological evolutionary process" that "shows the biological unity and equality of all men," with a multiracial mixture that "evolves ceaselessly, in innumerable generations." This is a

"law of nature. In a historical contest, as for instance in a war of such magnitude as the present one, he finally wins who follows that law. One cannot oppose with impunity the principle of the unity of all men as a law of nature."⁸⁶

In other words: evolutionary science teaches us that the Nazis' grotesque ideologies of racial purity will lose: this is a *law of nature*, "as this term is used more and more in the physical and chemical sciences, in the sense of an empirical generalization established with precision."⁸⁷ Vernadsky thus took evolutionary science in a direction that was the precise opposite of the prevailing "moral economy of climate" and Darwinian environmental determinism that was distorting Anglo-American geography⁸⁸ — embodied most horrifically in Griffith Taylor's global maps of correlations between the "cephalic index" and the linguistic and cultural traits of various races.⁸⁹ For Vernadsky, the history of planetary evolution over the long scales of

⁸⁴ Vernadsky, "Biosphere and Noösphere," p. 8.

⁸⁵ Vernadsky, "Biosphere and Noösphere," p. 8.

⁸⁶ Vernadsky, "Biosphere and Noösphere," p. 8, emphasis in original.

⁸⁷ Vernadsky, "Biosphere and Noösphere," p. 8.

⁸⁸ See Livingstone, *Geographical Tradition*, pp. 221-231.

⁸⁹ "Of all the coefficients which have been used to classify man, the measurement of the shape of the cranium is still in my opinion the best *single* standard." Taylor developed a "cephalic index," the breadth as a percentage of length, and inferred that 1) "the yellow type of man had developed from the Aryan type," 2) the Mongols of central Asia and the Alpine peoples of central Europe have the highest cephalic index, and 3) the "*lowest* Negro races" have the lowest cephalic indices. See Griffith Taylor (1921). "The Evolution and Distribution of Race, Culture, and Language." *Geographical Review* 11(1), 54-119, quotes from p. 55, 74. In another article Taylor uses an areal association model developed in Australia — where "we are free from the presence of an alien racial element" — to extrapolate the future settlement geography of the White race worldwide. He predicts that "white settlement will tend to congregate around five world centers, or clusters of cities of a type which Geddes has named 'conurbations.'

geological time coalesced with the more recent time scales of human development and political history at that point where, after Darwin, we attained consciousness of our own evolution and our place in the evolution of the Earth. Material reality and human understanding became one at the planetary scale. And now,

“The historical process is being radically changed under our very eyes. For the first time in the history of mankind the interests of the masses on the one hand, and the free thought of individuals on the other, determine the course of life of mankind and provide standards for men’s ideas of justice. Mankind taken as a whole is becoming a mighty geological force. There arises the problem of the *reconstruction of the biosphere in the interests of freely thinking humanity as a single totality*. This new state of the biosphere, which we approach without noting it, is the noösphere.”⁹⁰

Here Vernadsky mentions his years in Paris, the Bergsonian philosophical influence of LeRoy, and the connection with de Chardin (who was then undertaking paleontological research in China). de Chardin would spend the rest of his life theorizing the “achievement of an unbroken, co-conscious organism, coextensive with the entire area of the globe,” culminating in “a revolution in the very process of cultural evolution” — the “double curvature of our rounded mother-planet and our converging minds” in our “thinking planet,” a “psychical nova,” taking humanity, the planet, and God together “toward unheard-of and unimaginable degrees of complexity and consciousness.”⁹¹ Vernadsky was less concerned with the theology, and more focused on the new choices facing humanity:

“The noösphere is a new geological phenomenon on our planet. In it for the first time man becomes *a large-scale geological force*. He can and must rebuild the province of his life by his work and his thought, rebuild it radically in comparison with the past. Wider and wider creative possibilities open before him. It may be that the generation of our grandchildren will approach their blossoming.”⁹²

Vernadsky’s ideas slipped into obscurity almost immediately after his death, but his vision of the noösphere is a prescient guide to the political economy of the current century. As industrial capitalism becomes a “knowledge-based” form of “cognitive-cultural capitalism” with “biomedical and genetic engineering and artificial intelligence at the forefront,” there is a *literal*

These are near London, Chicago, Sydney, Durban, and Buenos Aires. Of these the center in the United States will probably be the largest.” Griffith Taylor (1922). “The Distribution of Future White Settlement: A World Survey Based on Physiographic Data.” *Geographical Review* 12(3), 375-402, quotes from p. 375, 376. Geddes would not have appreciated having his ideas dragged into service for such racist extrapolations.

⁹⁰ Vernadsky, “Biosphere and Noösphere,” pp. 8-9, emphasis in original.

⁹¹ Pierre Teilhard de Chardin (1956). “The Antiquity and World Expansion of Human Culture.” In William M. Thomas, Jr., ed., *Man’s Role in Changing the Face of the Earth*. Chicago: University of Chicago Press, 103-112, quotes from p. 106, 111. This short chapter was published posthumously; de Chardin died a few weeks before the large conference held at Princeton in 1955; but the paper presents a concise summary of de Chardin’s decades of scientific research, philosophical reflection, and theological synthesis.

⁹² Vernadsky, “Biosphere and Noösphere,” p. 9, emphasis in original.

evolution in the organic composition of capital.⁹³ Just as Marx and successive generations of Marxists have warned of the dangerous accumulations of dead labor exploitation in the advancing technological efficiencies of industrial automation, and just as Benjamin and Gramsci warned of the cultural contradictions of media-saturated commodity fetishism in the “false consciousness” wrought by the industrialization of art, politics, cinema, and literature, Vernadsky’s geological-evolutionary analysis exposed the same process as the neo-Kantian evolutionary idealism and other strains of “cognitive Darwinism” that were shaping American imperialist ideologies and social theories.⁹⁴ The organic composition of capital is no longer just the specialized technical jargon of Marxist analyses of the accounting ledgers of appropriated surplus value and fixed capital investment; it is now quite literally a matter of the evolution of humans’ relations between the past and the present, their relations with one another, with the cumulative technological creations of humanity, and with the biophysical and geochemical processes of the planet. In cognitive capitalism, moreover, each of these evolutionary dynamics becomes more complexly interwoven with *individual and collective human knowledge* about evolutionary paths and possibilities. Nothing is set in stone, not even stone. Nearly everything can change if humans think and act in different ways, mobilizing individual and collective human will and creativity. America’s political conservatives — at least those capable of looking beyond the biblical fatwas against Darwinian thought — understand the revolutionary implications of this kind of epistemological rupture, and it terrifies them. And this is why so many conspiratorial conservatives were so inspired by Donald Trump’s extended conversation with Alex Jones, on an InfoWars channel created to circumvent ‘dinosaur’ media systems. If you take your kids to Ken Ham’s biblical Creation Museum in the Kentucky suburbs of Cincinnati, you can learn all about how people lived together with dinosaurs just a few thousand years ago. Prepare to Believe™. And it’s also why so many voters in the traditionally Democratic states in the heartland of America’s post-World War II heyday of industrial capitalism clearly understood the motto at a rally in Charleston, West Virginia in the spring of 2016: TRUMP DIGS COAL. “Get ready because you’re going to be working your asses off!” Trump told the cheering crowd. #MAGA is the latest and greatest evolutionary mutation of Butler’s ‘Darwin among the machines,’ of the Darwinian cognitive fracking of carbon consciousness in Vernadsky’s noosphere. Trump’s announced energy and climate policies are projected to accelerate the emissions of carbon capitalism by an additional 3.4 billion tons — over and above the current trajectory — over the next eight years.⁹⁵

Lombardi Maps of the Trumpian Noosphere

“And then there was Margaret Howell. When Trump took the stage Friday

⁹³ David Harvey (2014). *Seventeen Contradictions and the End of Capitalism*. Oxford: Oxford University Press, p. xii; see also Yann Moulier-Boutang (2012). *Cognitive Capitalism*. Cambridge: Polity; Allen J. Scott (2011). “Emerging Cities of the Third Wave.” *City* 15(3/4), 289-321.

⁹⁴ Smith, *American Empire*; on cognitive Darwinism, see J. Nicholas Entrikin (1980). “Robert Park’s Human Ecology and Human Geography.” *Annals of the Association of American Geographers* 70(1), 43-58; Nicholas Rescher (2005). *Realism and Pragmatic Epistemology*. Pittsburgh: University of Pittsburgh Press; and Nicholas Rescher (1977). *Methodological Pragmatism: A Systems-Theoretic Approach to the Theory of Knowledge*. Oxford: Basil Blackwell.

⁹⁵ Lux Research (2016). “A Trump Presidency Could Mean 3.4 Billion Tons More U.S. Carbon Emissions than a Clinton One.” Press Release, November 2. Boston, MA: Lux Research, Inc. See Also James Temple (2016). “Trump’s Empty Promises to Coal Country.” *MIT Technology Review*, November 15.

morning, I glanced over and noticed her, standing several feet away inside the media pen, with tears of joy running down her cheek. ‘It was overwhelming,’ she told me afterward. ‘He really inspires people.’ It turns out Howell works for Right Side Broadcasting, the pro-Trump livestreaming network, and was formerly a reporter for InfoWars and the Kremlin-backed RT television network. She, too, was a first-time attendee. ‘I was never inspired to come to CPAC prior to Donald Trump,’ she confessed. ‘Why would I be?’

‘Politics is an evolving process. You cannot simply say, ‘I’m a Reagan Republican and I will never move from my positions,’ Luis Fortuno, the former Puerto Rico governor and an ACU board member, said when I asked about Trump’s influence on conservatism. ‘Conditions are different today than they were 25 years ago. And we must evolve.’”

— from a *Politico* reporter’s account of Donald Trump’s speech at the 2017 Conservative Political Action Conference (CPAC).⁹⁶

Vernadsky is now mostly forgotten, but we are living in the evolutionary planetary geochemical consciousness he foresaw. In contrast to Vernadsky’s hopeful vision of an enlightened humanity understanding its place in planetary processes, however, evolution has accelerated along nonlinear, multidimensional, and unstable paths. It turns out that the brain — and especially the American brain — *is* subject to retrogression. Humans “are facing the most important question in their history — whether organized human life will survive in anything like the form we know,” Noam Chomsky reflected days after the 2016 U.S. election, “and are answering it by accelerating the race to disaster.” Confronted with the planetary catastrophe of “a new geological era, the Anthropocene, marked by radical human transformation of the environment,” the American electoral system placed complete control — “executive, Congress, the Supreme Court — in the hands of the Republican Party, which has become the most dangerous organization in world history.”⁹⁷ But in addition to his assessment of the global-scale implications of U.S. politics — the date of November 8, 2016 “might turn out to be one of the most important in human history, depending on how we react” — Chomsky had also spent 2016 analyzing a very different scale, the human brain/mind, in two remarkable books. One is *Why Only Us?*, which explores the evolutionary path that has allowed humans (and as far as we know, only us) to develop the capacity to use a finite set of hierarchically organized tools — the symbolic representation and auditory/oral expression of language — to express an infinite diversity of ideas.⁹⁸ The other book is *What Kinds of Creatures Are We?* This is a book devoted to the question, What is unique about our human nature? This is exactly the same question explored at the famous 1971 Chomsky-Foucault debate, memorably described as an intense public display of “two brains thinking simultaneously.” Back then (and even now if you watch it on YouTube) Chomsky looked a bit square, un-hip, uncool, so conservative next to Foucault’s

⁹⁶ Tim Alberta (2017). “The Conservative Movement Is Donald Trump: Trump’s Takeover of Conservatism is Faster and More Decisive Than Anyone Expected.” *Politico*, February 26.

⁹⁷ C.J. Polychroniou (2016). “Trump in the White House: An Interview with Noam Chomsky.” *Truthout*, November 14.

⁹⁸ Robert C. Berwick and Noam Chomsky (2016). *Why Only Us? Language and Evolution*. Cambridge, MA: MIT Press.

playful attacks on the question itself, premised as it was on quaint assumptions of a coherent phenomenon of ‘life’ or a notion of an essential human nature. Yet Chomsky is not just a linguist, not then, not now: Foucault didn’t have a lot to say about the details of everyday politics, but Chomsky offered astute, strategic contributions to the same struggle that was engaging John Kerry and Father Drinan. Vietnam was immoral, unjust, and illegal, and, Chomsky argued, the Nixon Administration’s attempt to stop the *Times* from publishing the Pentagon Papers was *the state criminalizing the exposure of its own criminal activity*. Now, nearly half a century later, we’ve long since lost the real live Foucault — and his YouTube videos and ever-increasing Google Scholar citation counts just aren’t the same. Foucault died of HIV just as the Christian evangelical leaders who had backed Reagan were loudly proclaiming that AIDS was God’s way of punishing homosexuals,⁹⁹ consolidating the theological dominance of America’s right-wing coalitions for decades: exit polls in 2016 indicate that White evangelicals backed Trump, who had once referred to his own daughter as “a piece of ass,” 81 percent to 16 percent.¹⁰⁰ How we think about HIV, and all the rest of our latest coevolutionary companions and competitors on this planet, has a profound effect on our lives, and increasingly on all life in the biosphere.

And how we think is simultaneously the last frontier of neuroscientific study of the structure of the human brain, *and* a planetary frontier of observation and profit. At the neural scale, working with Robert C. Berwick, Professor of Computational Linguistics and Computer Science and Engineering at MIT, Chomsky is able to track down the evolution of the human capacity for language to a “slight rewiring” of the fiber tracts between Brodmann’s Area 44, the dorsal-ventral pathway, and the ventral pathway superior temporal cortex. Evidence suggests that this rewiring occurred in the brains of our ancestors between 200 thousand and 80 thousand years ago, equivalent to five or six thousand generations of human life — not overnight, but also not “on the scale of geological eons.”¹⁰¹

At the planetary scale of cognitive capital, meanwhile, the daily use of more than a billion cell phones produces more than five petabytes of data each day — generating every week almost as much information as is produced in a full year by CERN’s Large Hadron Collider, the world’s

⁹⁹ The most infamous and influential attack was the 1983 declaration by Jerry Falwell, Sr.: “AIDS is not just God’s punishment for homosexuals, it is God’s punishment for the society that tolerates homosexuals.” Falwell’s Moral Majority, founded in 1979, was instrumental in delivering White Christian votes for Reagan in 1980 and 1984.

¹⁰⁰ Trump agreed, “Yeah,” with the host’s assessment of Ivanka as a beautiful “piece of ass” in a September, 2004 appearance on the Howard Stern Show. In early October, 2016, *CNN* compiled a collection of Trump’s on-air conversations with Stern, including Trump’s description of how he would go backstage at the beauty pageants he owned. It’s sort of like “an obligation,” he tells Stern, you’re like a doctor, “inspecting.” “Is everyone okay? You know, they’re standing there with no clothes. ... you see these incredible looking women. And so I sort of get away with things like that.” Andrew Kaczynski, Chris Massie, and Nate McDermott (2016). “Donald Trump to Howard Stern: It’s Okay to Call My Daughter a ‘Piece of Ass.’” *CNN*, October 9. On the White Evangelical vote, see Carol Kuruvilla (2016). “After Trump’s Win, White Evangelical Christians Face a Reckoning.” *Huffington Post*, November 10. See also the brief excited utterances of honesty from what passes for intellectual commentary among American conservatives today, specifically George Will’s warning a few weeks before the election: “Trump is a marvellously efficient acid bath, stripping away his supporters’ surfaces, exposing their skeletal essences. Consider Mike Pence, a favorite of what Republicans devoutly praise as America’s ‘faith community.’ Some of its representatives, their crucifixes glittering in the television lights, are still earnestly explaining the urgency of giving to Trump, who agreed that his daughter Ivanka is ‘a piece of ass,’ the task of improving America’s coarsened culture.” George Will (2016). “Donald Trump is the GOP’s Chemotherapy.” *Washington Post*, October 10.

¹⁰¹ Chomsky and Berwick, *Why Only Us?*, p. 157.

largest particle accelerator devoted to the study of the fundamental constituents of matter.¹⁰² A quarter-century after Tim Berners-Lee at CERN developed the World Wide Web protocols that transformed the internet from a specialized research and Defense Department enterprise into a friendly “social operating system” for everyday human life,¹⁰³ Alphabet, Google’s parent company, posted US\$90.3 billion in revenues in 2016, 88 percent of it from advertising.¹⁰⁴ Apple first overtook Exxon in August of 2011 to become the world’s most valuable company in terms of market capitalization, and today half of the world’s top ten market caps are informational enterprises: Apple, Alphabet, Microsoft, Facebook, and Amazon. In the Top 100, the ‘technology’ category has now surpassed ‘financials’ to become the largest sector by market cap, at a total of \$2.99 trillion.¹⁰⁵ Samuel Butler’s “sending the mind from here to China” has become the new frontier for capital accumulation, while redefining more and more dimensions of the human experience of space and time. Every day, more than 65 years of video are uploaded to YouTube, which has local versions in 88 countries and 76 languages; half of the 1.3 billion people around the world who use YouTube do so through mobile devices.¹⁰⁶ The human attention span has become a dynamic, networked commodity available for profit and power — at the precise historical moment when neuroscience breakthroughs in our knowledge of the human brain are enabling exponential advances in psychometrics, behavioral economic experimentation, ‘neuromarketing,’ and all the other newest technologies of neoliberal capitalist manipulation. The wildly popular genres of evolutionary economics and evolutionary consumption — with intriguing titles like Gad Saad’s “Evolutionary Neuromarketing: Darwinizing the Neuroimaging Paradigm for Consumer Research”¹⁰⁷ — thus finally offer an answer to a question that frustrated Vernadsky the geochemist. After pondering the creative possibilities of humanity’s newly-evolved role as a large-scale geological force, Vernadsky suddenly paused:

“Here a new riddle has arisen before us. *Thought is not a form of energy*. How then can it change material processes? That question has not as yet been solved. As far as I know, it was first posed by an American scientist born in Lvov, the mathematician and biophysicist Alfred Lotka. But he was unable to solve it. As Goethe (1740-1832), not only a great poet but a great scientist as well, once rightly remarked, in science we only can know *how* something occurred, but we cannot know *why* it occurred.”¹⁰⁸

Vernadsky here cites Lotka’s pathbreaking 1925 *Elements of Physical Biology*, but if you read the work today you’ll find no puzzle at all. Lotka’s analysis of industrial evolution — the ‘survival of the fittest’ development of scientific tools passed from one human generation to the

¹⁰² Jim Thatcher (2017). “The Stories We Tell Ourselves About the Data We Give Off to Others.” Presentation delivered March 2. Vancouver, BC: Department of Geography, University of British Columbia.

¹⁰³ Lee Rainie and Barry Wellman (2012). *Networked: The New Social Operating System*. Cambridge, MA: MIT Press.

¹⁰⁴ Alphabet, Inc. (2017). *Form 10-K Annual Report*. Washington, DC: U.S. Securities and Exchange Commission.

¹⁰⁵ PriceWaterhouseCoopers (2016). *Global Top 100 Companies by Market Capitalization, 31 March 2016 Update*. London: PWC Global IPO Centre, p. 4.

¹⁰⁶ Alphabet/Google (2017). “About YouTube: Statistics.” Accessed March 3; see also FortuneLords (2017). “36 Mind Blowing YouTube Facts, Figures, and Statistics, 2017.” *Fortunelords.com*, March 3.

¹⁰⁷ Justin R. Garcia and Gad Saad (2008). “Evolutionary Neuromarketing: Darwinizing the Neuroimaging Paradigm for Consumer Research.” *Journal of Consumer Behavior* 7, 397-414.

¹⁰⁸ Vernadsky, “Biosphere and Noösphere,” p. 9.

next in a phenomenon first noted by Hume in 1757 that “has a cumulative force that is unparalleled in ordinary organic evolution”¹⁰⁹ — sounds an awful lot like today’s Silicon Valley technological utopianism. Ray Kurzweil, Google’s Chief of Engineering, has written extensively on the “acceleration of the rate of evolution, with technological evolution as a continuation of biological evolution,”¹¹⁰ and in public presentations he holds out his smartphone, his “brain extender,” and tells the audience, “it’s a gateway from my brain to the cloud.”¹¹¹ The cloud — with its chatbots and twitterbots, its WiFi and its ‘Internet of Things,’ its 4G LTE (fourth-generation long term evolution) — does require a lot of energy to produce all the devices, to make and recharge all the batteries, and to power the massive data-center server farms that keep all the traffic going. Billions of watts of power — and in some cases, the most valuable central locations in cities¹¹² — are needed to sustain the vast “backbones of the infrastructures that are used to increase the velocity of consumption of material goods through advertising and distribution.”¹¹³ But once this infrastructure is powered up and running, Vernadsky is wrong: thought *is* a form of energy. It’s a powerful means of accelerating the evolution of economic processes and social relations. Vernadsky almost saw this, but he was distracted by a section of Lotka’s book that tries to understand the brain- and mind-level scales of how energy becomes a biological process that gives rise to *individual* human consciousness.¹¹⁴ This, I think, misled Vernadsky about his own achievement: the noösphere is not a theory of individual thoughts, and it’s not a theory of the giant, undifferentiated global thinking brain celebrated in today’s language of crowdsourcing, crowdfunding, or the ‘hive mind.’ Fundamentally, it’s a theory of a new technological relation *between individuals and collectives in humanity’s relations with the planet*. This nexus — the architecture among the dimensions of human “thinking matter” at all the changing ‘local’ and ‘global’ scales on the planet — is what has been evolving ever faster over the past century. Vernadsky’s theory is strengthened, not limited, when considering earlier sections of Lotka’s book, especially the passages on “Artificial Effectors: Industrial Evolution” and “The Ego as a Coördinate Reference Frame.”¹¹⁵ These parts of Lotka’s work diagnose the acceleration that has shaped all the infrastructures of today’s cybernetic online worlds. “My microscope does not die with my body, but passes on to my heirs,” Lotka writes in his analysis of the evolution of “the artificial extension of our natural body” with increasingly advanced physical tools built to enhance sense perception.¹¹⁶ But then Lotka goes further, analyzing the evolution of “our mental faculties” of memory and imagination that produce a “realistic type of thinking, the kind that ‘works,’” that has “evolved by a process of survival of the fittest from the

¹⁰⁹ Alfred Lotka (1925). *Elements of Physical Biology*. Baltimore: Williams & Wilkins Company, p. 368.

¹¹⁰ Ray Kurzweil (2005). *The Singularity is Near: When Humans Transcend Biology*. London: Penguin, p. 7.

¹¹¹ Ray Kurzweil and Richard Florida (2014). *Innovation: The Shock of the Possible*. Vancouver/Burnaby: Simon Fraser University, September.

¹¹² Most of a section of Atlanta’s Peach Street that had been used for 80 years for Davison’s and May’s department stores “has been turned from bustling retail to humming server farm,” according to the *Atlanta Business Chronicle*. Cited in Michael Kahn (2017). “Downtown Atlanta is Going Digital — And It’s Not All Good News.” *Curbed Atlanta*, March 16.

¹¹³ Mahmoudi and Levenda, “Beyond the Screen,” p. 113. Mahmoudi and Levenda (p. 108) cite a 2012 estimate of 30 billion watts of electricity required to keep the world’s “cloud factory” data centers going, and they provide a detailed analysis of the material processes in the U.S. Pacific Northwest that sustain the purportedly ‘immaterial’ presumptions of cognitive capitalism.

¹¹⁴ See Lotka, *Elements*, pp. 405ff.

¹¹⁵ See Lotka, *Elements*, pp. 365ff and 372ff.

¹¹⁶ Lotka, *Elements*, p. 368.

other kind (termed autistic thinking).¹¹⁷ This is of course the neo-Kantian “evolutionary idealism” of Isaiah Bowman, and the “cognitive Darwinism” of American pragmatism and the Progressive Movement of the early twentieth century. Ideas are tools that evolve, too. Concepts, meanings, and human social traditions and institutions adapt and change over time. As our physical tools get better, so do our cognitive tools. We learn how to communicate more effectively and more efficiently. We learn how to learn, and we teach the next generation how to learn better than we did. Once we stop to remember the truly revolutionary implications of Darwinian thought that shaped the years of Butler, Lotka, de Chardin, Vernadsky, and so many others — and once we consider the astonishing nuclear and computational powers that suddenly accelerated a few months after Vernadsky’s cerebral hemorrhage — we can see the noosphere clearly in Kurzweil’s prediction that “we will be a hybrid of biological and nonbiological thinking,” that “nanobots in the neocortex will communicate with the cloud,” that “nanobots communicating with neurons” will serve as ever more powerful “brain extenders.”¹¹⁸

Kurzweil, who has been writing for decades about the coming ‘Singularity’ as we merge with our computational and communications technologies, is just the most widely recognized mainstream ambassador for a remarkably diverse “Transhumanism” movement. Everyone who studies this movement quickly finds a wild, mind-bending world of bizarre, paradoxical politics — the rights of robots, the ways we’ll know when artificial intelligence achieves consciousness, the ethics of sex with robots, how to prepare for immortality in the cloud — and yet it seems familiar, like a logical extension of the fusion of social liberalism and economic libertarianism as the 1960s California Counterculture became the billionaires of the Age of Information. Everyone assumed that the touch-screen identity politics of Silicon Valley fit best with the corporate, high-tech “new economy” innovation discourses of the New Democrat makeover achieved by Bill Clinton, and carried forward in various ways by Obama and Hillary. But then the “brain extender” of Twitter fuelled the rise of Donald Trump. Facebook became an informational ecosystem to spread lies and conspiracies nearly simultaneously among millions, effectively weaponizing the one-quarter of Americans age 12 and over who use the ‘social network’ to follow political news and politicians.¹¹⁹ The noosphere of planetary social media gave rise to PayPal co-founder and Facebook “first investor” Peter Thiel, who financed Hulk Hogan’s lawsuit over a sex video in order to exact vengeance on *Gawker* for outing him,¹²⁰ and

¹¹⁷ Lotka, *Elements*, p. 371.

¹¹⁸ Kurzweil, comments at *Shock of the Possible*.

¹¹⁹ Edison Research (2016). “One Quarter of Americans 12+ Follow Politics on Facebook.” March 9 press release on *Infinite Dial 2016* study. Somerville, NJ: Edison Research.

¹²⁰ Owen Thomas (2007). “Peter Thiel is Totally Gay, People.” *Gawker*, December 19. “Here in northern California, where intolerance is the only thing we can’t tolerate, even alluding to someone’s sexual orientation is suspect,” Thomas writes, quickly adding, “Even if, like me, you’re gay yourself.” But the “clubby ranks” of venture capitalists in Silicon Valley are “mostly straight, white, and male,” and aspiring gay and lesbian entrepreneurs tell Thomas that there are very real problems with discrimination in a ruthlessly competitive industry. This is why Thomas shares the open secret that so many venture capitalists already knew:

“I think it explains a lot about Thiel: his disdain for convention, his quest to overturn established rules. Like the immigrant Jews who created Hollywood a century ago, a gay investor has no way to fit into the old establishment. That frees him or her to build a different, hopefully better system for identifying and rewarding talented individuals, and unleashing their work on the world. That’s why I think it’s important to say this: Peter Thiel, the smartest VC in the world, is gay. More power to him.”

There is some dispute, however, over Thiel’s motivation for spending nearly \$10 million to back the lawsuit that eventually bankrupted *Gawker*. Thiel once compared the outlet’s *Valleywag* journalists to Islamic terrorists, and

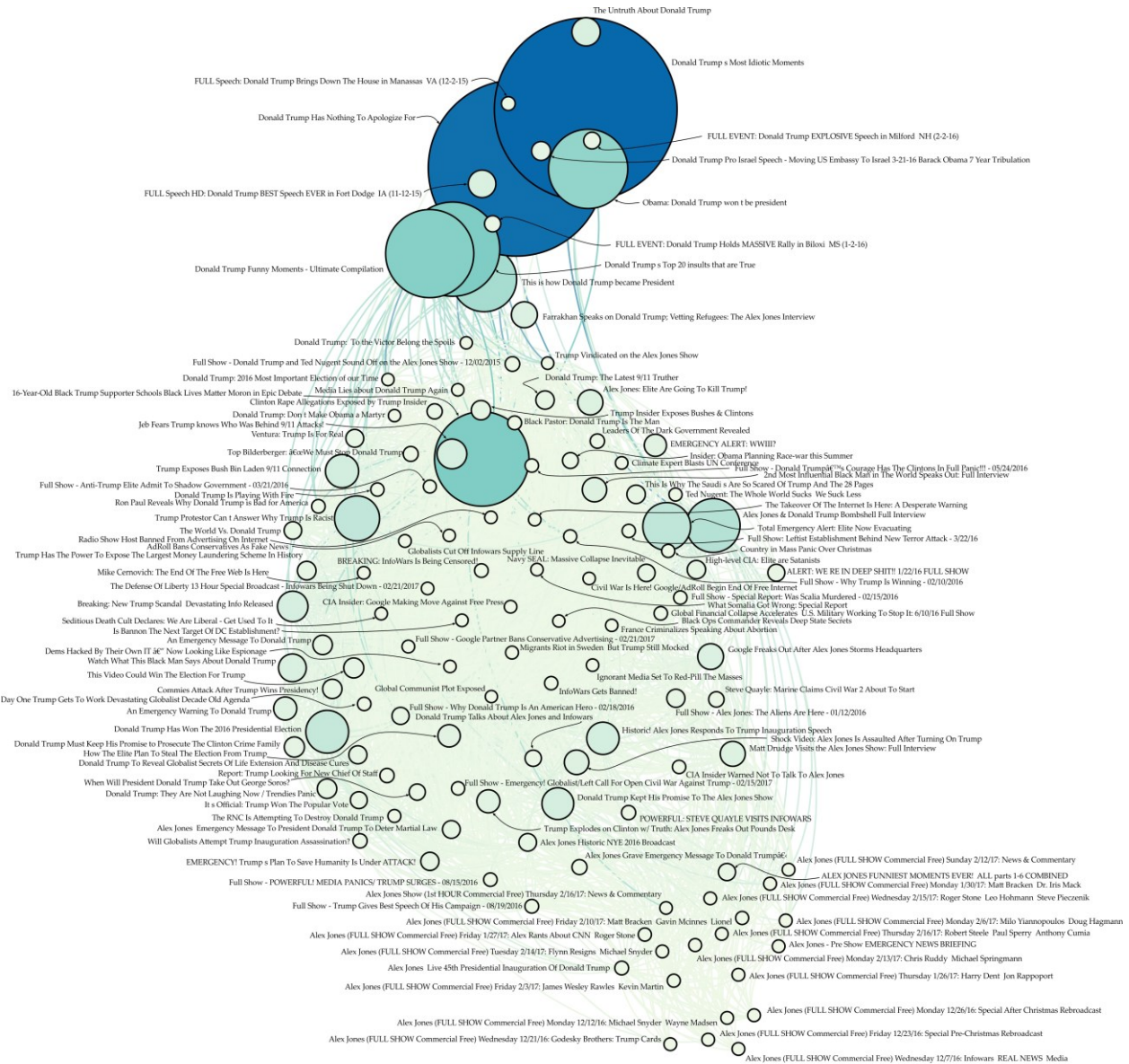


Figure 1. Connecting the Dots. Bernhard Reider’s YouTube analytics provide a powerful contemporary interface that allows for a combination of Warren Torgerson’s statistical approach to “multidimensional scaling” and Mark Lombardi’s “conspiracy art.” This map shows “related videos” suggested by YouTube’s algorithm for Donald Trump’s appearance on Alex Jones’s channel on December 2, 2015; as of February 22, 2017 this video had been viewed 2,480,598 times. Circle sizes are scaled and shaded proportional to total views: maximum 10.13 million (“Donald Trump’s Most Idiotic Moments”), minimum 3,924 (“Global Communist Plot Exposed”).

saw their stories as an all-out attack on Silicon Valley’s libertarian ethos. *Gawker* had also published highly critical coverage of Thiel’s backing of organizations opposed to immigration. *Gawker* also covered Thiel’s role as a key backer of “American Solutions for Winning the Future,” Newt Gingrich’s organization that questioned climate science and promoted coal mining and oil drilling. See J.K. Trotter (2016). “This is Why Billionaire Peter Thiel Wants to End *Gawker*.” *Gawker*, May 26, and Ryan Tate (2009). “Facebook Backer Peter Thiel Wants You to Know Environmentalism Will Kill Us All.” *Gawker*, June 24.

then went to Cleveland to endorse Trump at the Republican National Convention. “This is where I became an American,” Thiel told the delegates, praising the opportunities of the industrial metropolis of 1968, when “all of America was high-tech,” with the space program and defense money building what would become the internet. “I am proud to be gay,” Thiel declared. “I am proud to be a Republican. But most of all, I am proud to be an American.” Make America Great Again, and the lightning-fast noöspheric memes of #MAGA and #CrookedHillary allowed Trump to become an advanced, adaptive chatbot for the evolving conspiracies of a media-saturated American Right, speaking to InfoWars Alex Jones on an informational frontier that now has more than two million subscribers, and almost two billion views.

Trump’s extended conversation with Alex Jones in early December, 2015 is thus a telling moment in the political development of American conservative media. Jones had been well known for spreading the greatest hits of conspiracy theory (9/11 is an inside job) as well as manufacturing newer plots (the Sandy Hook school shooting was “completely fake,” along with other government-orchestrated attacks at Columbine, Oklahoma City, and the Boston Marathon bombing). In late 2016 Jones suggested that the facts warranted a serious investigation of a Clinton child sex trafficking ring supposedly operating out of the basement of a small Capitol Hill pizzeria that had been mentioned in one of the batches of Wikileaks’ release of John Podesta’s hacked emails about scheduling a fundraiser. The noöspheric conspiracy touched down to material reality in the form of Edgar M. Welch, who on December 4, 2016 showed up at Comet Ping Pong to “take a closer look,” armed with an AR-15 military assault rifle. Welch hadn’t voted for Trump (or Clinton), but he had prayed that Trump would take the country in the “right direction,” and he later explained that “substantial evidence from a combination of sources” had left him with the “impression something nefarious was happening,” as “one article on the subject led to another and then another”; he also made it clear that he really liked listening to Alex Jones.¹²¹ Jones’s InfoWars coverage had been part of a powerful, rapidly-spreading #pizzagate meme, but after Welch was arrested — he fired that AR-15 inside the pizzeria, but noone was injured — Jones quickly removed a YouTube video of one of his shows streamed two weeks before the election, in which he had told the audience, “Pizzagate is real,” and

“You will have to go investigate it yourself. But I will warn you, this story that’s been the biggest thing on the internet for several weeks, pizzagate as it’s called, is a rabbit hole that is horrifying to go down.”

In that broadcast Jones had told his audience that he was so troubled by the abuse of children that he couldn’t sleep, that he would be “getting on a plane” himself to investigate, and he praised his team of InfoWars reporters: “So you want us to cover #pizzagate, we have covered it. We are covering it. And all I know is God help us, we’re in the hands of pure evil.” A week after Welch told a *Times* reporter that he liked listening to Jones and that he had “liked” InfoWars on Facebook, the despised “mainstream media” coverage provided more raw material to produce even more creative hybrid narratives. On December 15 Jones lied in a “special emergency report” video, claiming that he had said there’s “probably nothing going on there” and that this was “a big diversion,” and that his lawyers had reviewed all the InfoWars coverage and assured

¹²¹ Adam Goldman (2016). “The Comet Ping Pong Gunman Answers Our Reporters’ Questions.” *New York Times*, December 7.

him that he had been “the most restrained of all the coverage” in alternative media. Jones then claimed that he had warned his reporters that #pizzagate was “probably a setup” designed to trigger an attack that could be blamed on Jones, so that “free speech” could be banned and InfoWars could be “taken off the airwaves.”¹²² Jones gets a bit emotional in this “emergency report,” telling his audience that he was distraught after his mother saw the Jones/#pizzagate shooting connection on Fox News — Fox News showed Jones’s videos out of context! — and that he had been “targeted in the media,” and when he understood that he was being deceived he had told his reporters to “drop this, I smell a rat.” “It’s a honeypot.” It’s a “Karl Rovean Machiavellian” move, like the time Karl Rove passed fake documents to discredit Dan Rather. “It’s all over Reddit!” his reporters had objected, Jones tells us, as he proceeds to describe Clinton as the “high priestess” of “devil worship, little kids, pools of blood, the media defending that,” and then he exclaims that some of his audience were now saying that the fact he was no longer covering #pizzagate was evidence of a coverup. Fighting the press coverage of his deleted videos on the subject, Jones declared, “I simply wasn’t wanting to give the media stuff to edit together,” because this is “next-level deception, folks,” as he pivots to a bombshell that the daughter of Nancy Pelosi “is leading a thing to overturn the election,” “members of it are in the news calling it a coup.” Why are they doing this? Jones turns to his computer screen to zoom in on a *Drudge Report* headline: “FACEBOOK TO LABEL ‘NEWS,’ RISE OF TRUTH POLICE.” They’re going to “bury InfoWars” and the Alt-Right, using “the Communist China model,” using *Snopes*, “run by Soros and the Democrats,” “Google Chrome is already blocking us,” and then he shows how the *Drudge Report* story links to one of Jones’s own InfoWars pieces published just a few days earlier: “FACEBOOK TO DECIDE WHAT’S REAL VS FAKE NEWS FOR USERS.” Jones then complains that the Facebook-Twitter interface had now banned him from sending any more #pizzagate tweets, and this was all “a new level” of “mainstream doing fake news,” just like the Russian hacking of the election — the intelligence reports are “a fraud,” Jones confides, Clapper says “No hack!” — because “if they can shut Alex Jones down, they can shut everybody down.”

Jones’s deleted #pizzagate videos are tiny fragments of just one dimension of a vast, diverse, and dynamic right-wing media sphere. Yet InfoWars is a compelling, representative sample of a cognitive militarization that now defines the exercise of Executive constitutional power in Washington, DC. In the same week in February, 2017 that Trump declared that ABC, CBS, CNN, NBC, and the *New York Times* are the “enemy of the American people,” Jones was working to get an official White House press credential.¹²³ Trump’s effusive praise for Jones in that early primary-campaign livecast back in December, 2015 — “You have an amazing reputation!” — thus reached millions. As of the date of my analysis using Bernhard Reider’s network analytics (February 22, 2017) Jones’s interview with Trump has 2.48 million views. Analyzing the “related video” recommendations provided by Google’s algorithm at the simplest, ‘first-order’ depth of connections highlights a total of 129 videos (see Figure 1). These account for 79.17 million views, 805 thousand “likes,” 160 thousand “dislikes,” and 487 thousand comments. Reider’s analytics allow us to create a powerful, systematic heir to Mark Lombardi’s

¹²² All quotes in this section are from embedded archived videos and transcripts analyzed in Eric Hananoki (2016). “Alex Jones Deletes Video in Which he Told His Audience to Personally ‘Investigate’ Pizzagate Restaurant.” *Media Matters for America*, December 16.

¹²³ Jim Rutenberg (2017). “In Trump’s Volleys, Echoes of Alex Jones’s Conspiracy Theories.” *New York Times*, February 19.

12 thousand index cards. The result can be understood as a sort of ‘mental map’ created by, and presented to, any YouTube user who navigates to the Trump-Jones interview, and who then considers the algorithm’s suggestions based on the correlations of millions of users’ observed choices. In the main, this cognitive map displays the self-referential “filter bubble” pattern that is now familiar in so many areas of media studies and digital communications strategies. Three quarters of the recommendations are from the Alex Jones channel itself, and including a related InfoWars channel boosts the self-referential share to 88.4 percent. A few of the correlation/recommendations do, however, break out of the bubble. Three take viewers elsewhere in the alt-Right online world (Right Side Broadcasting). One goes to a compilation that is purportedly comedy — “Donald Trump Funny Moments” — published in October, 2015 that garners 4.53 million views; yet the publishing description leaves some doubt as to whether this is really comedy.¹²⁴ Another recommendation is more unambiguously comedy: “Donald Trump’s Most Idiotic Moments,” a compilation that garners the highest viewcount in this dataset (10.27 million) published by ‘Life Moments’ — “we capture the ‘human’ side of celebrities and share them with the world.” Another is the creepy coalescence of a sophisticated satire that folds back onto itself into a now-grotesque reality: Trump’s September, 2015 appearance on *The Late Show with Stephen Colbert*, who in the Bush years built the ruthlessly effective persona of a Bill O’Reilly taken to the extreme, an out-Foxified Fox News. Trump’s *Late Show* appearance has 9.84 million views on YouTube, plus the unknown millions through other portals; Colbert begins the interview by apologizing for the mean things he’s said about Trump over the years, and invites Trump to reciprocate if there’s “anyone you’d like to apologize to.” “Uh, no...,” Trump replies, and then it’s off to a predictable friendly sparring between Trump’s “Build a Wall!” mantra and Colbert’s playful alternatives (how about a moat with fire and crocodiles?) that now don’t look very funny at all; Colbert also offers up the easiest possible question — Obama, Born in the USA? — which Trump artfully dodges. “I don’t talk about it anymore.”

He didn’t need to. Go back and look at that odds ratio for the birthers in Table 1.

The true significance of the cognitive map in Figure 1 involves the tight correlations drawn across an astonishing array of identities and plots involved in the InfoWars worldview. The largest of these is “16-Year-Old Black Trump Supporter Schools Black Lives Matter Moron in Epic Debate,” with 4.89 million views of an angry street-rally shouting match in Atlanta in June, 2016; a middle-aged Black liberal is debating a young, enthusiastic Quay Manuel’s support for Trump. After Trump’s November victory, Manuel tweeted a joyful #MAGA, and now greets his 25 thousand followers with this introduction: “Follower of Jesus Christ! Aspiring politician! Georgia’s 6th congressional district! Proud Republican!” The rest of the virtual landscape is a wild contingent mixture of connections, lies, and conspiracies: “How the Elite Plan to Steal the Election from Trump.” “EMERGENCY! Trump’s Plan to Save Humanity is Under Attack!” “It’s Official: Trump Won the Popular Vote.” “Day One Trump Gets to Work Devastating Globalist Decade Old Agenda.” “Donald Trump to Reveal Globalist Secrets of Life Extension and Disease Cures.” “Seditious Death Cult Declares: We Are Liberal — Get Used to It.”

¹²⁴ The shadowy user name Acnologia published the video with this description: “Hillary as Secretary of State signed the Turkish Process insulting the prophet a crime. During the 2016 campaign she has been bought by Zionist bankers, donors, special interests, and is nothing more than a puppet. This holds true for nearly every other candidate from both the democratic and republican party. Trump is the only candidate who is self-funding his own campaign. He isn’t controlled by anyone but himself.”

“Leaders of the Dark Government Revealed.” “High-level CIA: Elite are Satanists.” “Full Show — Emergency! Globalist/Left Call for Open Civil War Against Trump.” “Black Ops Commander Reveals Deep State Secrets.”

This particular view of the Alex Jones mediasphere includes only one direct connection to explicit climate conspiracies, but it’s worth careful consideration. Page back and take a close look at Figure 1. It’s one of the smaller bubbles on the ‘east’ side, just ‘southwest’ of “EMERGENCY ALERT: WWIII?” This is “Climate Expert Blasts UN Conference,” with only 26,452 views, and it comes from a segment streamed on the same day as Jones’s interview with Trump. Here’s how Jones begins the piece:

“My ancestors on the Mayflower on both sides of my family just wanted religious freedom. Then in 1776 they wanted freedom to defend themselves and have lower taxes. Then in the Texas revolution they didn’t want to be ruled by Santa Ana, who came to take their guns. And here I am now, following that genetic directive to not be a slave.”

Jones then praises the achievements of the “free market system of the Renaissance” and the Magna Carta, before warning, “Now we face one of the greatest evils in human history.” This is of course the effort to pass global carbon taxes and other responses to climate change. Here Jones brings in his guest, Lord Christopher Monckton. For the next thirty minutes they discuss how the UN Climate Conference “is being used to push for world government.” Monckton launches into an eloquent soliloquy, calling Obama’s outline for climate regulation “fascistic,” telling viewers that “the extreme left, the totalitarian, fascist, communist left” are refusing to allow alternative views on climate change, and are saying, “on this climate matter you should be executed for disagreeing with them.” “These people are of the devil,” Monckton declares, because they have “lost all respect for the truth,” and they “do not care how many tens of millions worldwide their lies continue to kill every year.”

The Oiling of the American Mind¹²⁵

Jones and Monckton reveal a curious blend of old and new strains of Anglo-American conservative thought. When Jones uses the phrase “genetic directive,” he really means it; in his broadcasts he always praises God and creation, but he’s also constantly reminding his audience that we’re in a war for the future of humanity. He attacks the social Darwinist social engineering plots of the elite Globalists, but his strident belief in the survival of the fittest makes for a re-tooled Manifest Destiny for the twenty-first century. Similarly, Lord Monckton’s attacks on the consensus of climate science are suffused with biblical, apocalyptic metaphors: these people *of the devil* don’t care how many *tens of millions are killed*. Monckton’s manifesto is the exact same logic used by Myron Ebell in his angry attack on Pope Francis’s climate encyclical back in June, 2015: this is an attempt to “dismantle industrial civilization.” It should thus come as no surprise that one of the Vice Presidents of the company behind the Dakota Access Pipeline now serves as President and Chief Executive of Fueling U.S. Forward, a public-relations front for fossil-fuel companies backed by the billionaire Koch brothers. Money and propaganda

¹²⁵ With all due respect to the right-wing intellectual manifesto published in the year of Saint Reagan’s Iran-Contra tribulations, Alan Bloom’s (1987) *Closing of the American Mind*.

convinced delegates at the National Black Political Convention, meeting in Gary, Indiana a few months before the election, to adopt a statement that “Policies that subsidize electric vehicles and solar panels for the wealthy raise energy prices and harm the black community.”¹²⁶ Oil is progress. It is civilization. It is opportunity and freedom. An ad from another organization, launched during the 111.3-million-audience Super Bowl LI, conveys the messages of Ebell, Jones, and Monckton through a slick visual mosaic interwoven with bold textual declarations:

THIS AIN'T YOUR DADDY'S OIL. [Views of a spraypaint graffiti artist at work.] OIL GUSHES ART. [Bright lipstick, vivid mascara and eyeliner on a fashion model.] OIL STRIKES A POSE. [An archery master pulls back her bow with her advanced prosthetic forearm and hand.] OIL TAPS POTENTIAL. [A heart-rate monitor tracking the quickening heartbeats of a boxer, then a runner.] OIL PUMPS LIFE. [A futuristic concept car speeding across the desert.] OIL RUNS CLEANER. [An astronaut, with the requisite U.S. flag, and quick shots of a fiery booster-rocket launch and floating gently in space.] EXPLORES SPACE. And then the closer: WE CAN POWER PAST IMPOSSIBLE. AMERICAN PETROLEUM INSTITUTE.¹²⁷

“Our campaign will continue to raise awareness about the role natural gas and oil has in economic growth, job creation, environmental stewardship and national security,” said API President and CEO Jack Gerard in a press release. “And there’s no better opportunity to launch this campaign than during today’s Super Bowl in the energy capital of Houston, and in front of the largest audience possible.”¹²⁸ This large audience focused on energy-capital Houston will then be managed through a “multi-year, nationwide education and awareness campaign” with “digital, TV, radio and print components” and a “comprehensive public relations outreach program” on behalf of an industry that, Gerard assures us, supports 9.8 million U.S. jobs and is “backed by a growing grassroots movement of more than 30 million Americans.”¹²⁹

API’s Houston launch, the Gary, Indiana convention hijacked by Fueling U.S. Forward, and Alex Jones’s InfoWars conversation with Lord Monckton against the “people of the devil” tell us a lot about the evolution of Vernadsky’s noösphere, with its communications technology “successes of scientific thought” that allow humans to speak to anyone “at any point on our planet.” Thought is indeed a form of energy, and now one of the most serious threats to the continued accumulation of carbon-based capitalism is the long-term shift in public opinion with the developing scientific consensus on the dangerous trajectory of the Anthropocene. The fight to sustain carbon capital accumulation is no longer just a battle against nature’s peak-oil limits, but it’s now also a fight over the individual and collective consciousness of the civilization built upon fossil-fuel industrialization. This struggle is especially crucial in the United States, and an evolving twenty-first population geography laid atop the eighteenth-century political architecture of the Electoral College creates a recursive interplay between material, juridical, and cognitive

¹²⁶ Hiroki Tabuchi (2017). “Sensing Gains Ahead Under Trump, the Kochs Court Minorities.” *New York Times*, January 5.

¹²⁷ Published on February 9, 2017 on YouTube and with more detailed promotional claims at <http://powerpastimpossible.org>.

¹²⁸ PR Newswire (2017). “API Launches Power Past Impossible Campaign during Super Bowl, Showing natural gas and oil benefit to consumers in everyday life.” *PR Newswire*, February 5.

¹²⁹ PR Newswire, “API Launches...”

landscapes. Why do politicians “continue to pose in front of derelict industrial landscapes for dramatic effect,” Mark Pendras asks, “when the role of heavy industry in the U.S. economy has been shrinking for so many years?”¹³⁰ Pendras cites one answer provided by the conservative journalist Christopher Caldwell, writing in early 2008:

“...the transition is over. ... The ‘jobs of the future’ that were promised 20 years ago are here. Choreographers, blackjack dealers, and security guards have replaced factory workers as the economy’s backbone, if not yet its symbol.”¹³¹

If not yet its symbol. Industrial landscapes remain powerful symbolic reminders of what Caldwell dubs the “folkloric” economy. But Pendras diagnoses an even more important dimension: “abandoned industrial landscapes continue to command such emotional power” for voters because of the symbolism and memory of what has been destroyed through the *geographic mobility of capital*. “[T]he idle factories and shuttered plants are not just symbols of an abstract and neutral process of ‘industrial transition’ that may or may not have come to fruition; they are also symbols of abandonment, broken promises, and lives and communities changed, misfortunes that several decades worth of marketing and new-economy boosterism have been unable to repair.”¹³²

Pendras’s intellectual project is to move beyond the widespread tendency to naturalize the capital mobility that produces deindustrialization; he challenges analysts on the Left — progressive localists, critical legal geographers, and poststructuralist political economists — to question the assumed supremacy of capital mobility, and to “repoliticize the place-capital relationship.” In another bitter legacy of critical insights of the Left hijacked by a resurgent Right, *this* is the lesson that Trump learned as he built a strange yet powerful coalition of disaffected Democrats and Independents, veterans of the ‘vast Right-Wing conspiracy’ that Hillary Clinton saw so clearly a quarter century ago, and the Republicans’ own internal creative-destruction machine, the Tea Party Frankenstein primary voters. It was just before the West Virginia primary in May, 2016 when Trump, capitalizing on the mainstream media label of *presumptive Republican nominee*, pivoted to the general-election attack on Hillary in a rally in Charleston. Departing from the half-century political formula of American presidential contests — run extreme in the primaries then quickly tack to the moderate center for the general campaign — Trump tunneled deep into the Permian and Pennsylvanian sedimentary layers, down into the same Appalachian structural basin layers of fossil-fuel-fired hot politics mined during Senate Majority Leader Mitch McConnell’s fight against the Paris accords, which involved sending aides to select foreign embassies “to make it clear that Republicans intended to fight Obama’s climate agenda at every turn.”¹³³ In Charleston, the energized miners waving signs handed out by the campaign — TRUMP DIGS COAL — symbolized the power of geographical memories of an era that economists, politicians, and voters universally accept as a definitive historical reference point: the post-World War II ‘Golden Age’ of sustained economic growth and U.S. dominance of global manufacturing from 1945 to the early 1970s.

¹³⁰ Mark Pendras (2010). “Confronting Capital Mobility.” *Urban Geography* 31(4), 479-497, quote from p. 479.

¹³¹ Christopher Caldwell (2008). “Old School Economics.” *New York Times Magazine*, January 27, 11-12.

¹³² Pendras, “Confronting Capital Mobility,” pp. 479-480.

¹³³ Joe Romm (2015). “In Radical Shift, GOP Leaders Actively Embrace Catastrophic Climate Change.” *Think Progress*, September 11.

Here's a Lombardi map of Trump's rally in Charleston, West Virginia on May 5, 2016.

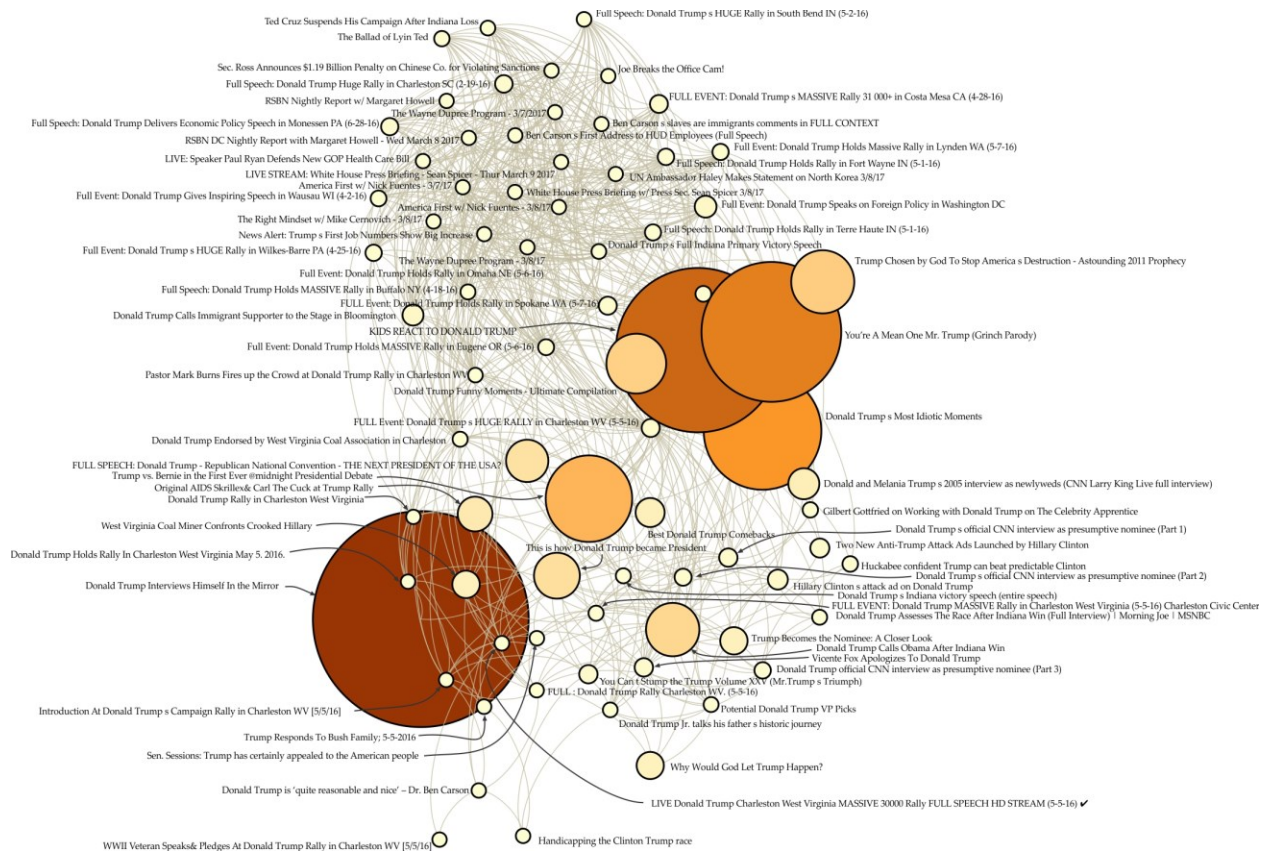


Figure 2. “Trump Digs Coal.” Donald Trump was being described as the “presumptive Republican nominee” when he spoke to a crowd of about 10,000 in Charleston, West Virginia on May 5, 2016. The campaign handed out posters so that news outlets could carry photographs of miners with “TRUMP DIGS COAL” signs. Numerous organizations carried portions or the entirety of the event, and thus there are many versions on YouTube; this analysis focuses on a full-length version published by Right Side Broadcasting, which as of the date of analysis (March 9, 2017) has 367,693 views. This version, which appears as one of the smaller bubbles right near the center of the map, is dwarfed by some of the suggestions offered by YouTube’s ‘related videos’ algorithm; the largest is Jimmy Fallon’s satirical “Donald Trump Interviews Himself in the Mirror,” from a September 2015 show, with 20.14 million views.

Several versions and edited segments from Trump’s rally were published to YouTube. The one carried by Right Side Broadcasting (about 248 thousand subscribers as I write these words) has racked up about 368 thousand views. Mapping the cognitive landscape as seen by the YouTube algorithm, though, presents a contradiction. TRUMP DIGS COAL may have meant a lot to the audiences who saw that motto, but the message seems to have been drowned out. There seems to be a strong correlation between those who view TRUMP DIGS COAL on May 5 and those who click to “Donald Trump Interviews Himself in the Mirror,” a comedy sketch on the *Jimmy Fallon Show* on September 11, 2015. That video has 20.15 million views. And there are other segments and slices that harvest millions of views on satire and entertainment. But still ... 368 thousand. The consensus amongst the pollsters and statisticians is that the election ultimately came down to about 77 thousand votes in a handful of swing states, canceling out a popular vote

loss of almost three million. CNN's numbers tell us it's a 2,868,694 vote loss converted to a win. Look past the clickbait on Figure 2, and try to forget that Trump immediately began tweeting that he *would have won* the popular vote if it hadn't been for *three to five million* votes by illegal immigrants. Look at that solar system of bubbles. If the mainstream comedy bits are the suns, then the planets and moons are small-town America. Fort Wayne, Indiana. Terre Haute, Indiana. Bloomington, Indiana. Buffalo, New York. Omaha, Nebraska. And, of course, a whole bunch of different versions of Charleston, West Virginia. TRUMP DIGS COAL. West Virginia hasn't voted for a Democrat at the top of the ticket since Bill Clinton, but Trump drove the Republican victory here from McCain's 56 percent and Romney's 62 percent to a commanding lead, A Really Great Commanding Lead, of 69 percent. West Virginia has only five electoral votes. But almost half (48.6 percent) of the cognitive map you see if you spend any time watching Trump's rally on Right Side Broadcasting shows you other videos from the Right Side Broadcasting universe. Wilkes-Barre, Pennsylvania. Monessen, Pennsylvania. Wausau, Wisconsin. Trump took Wisconsin (10 electoral votes) and Pennsylvania (20). Add up all the views of all the Right Side Broadcasting videos, and it's 4.71 million. Those of us in the reality-based community would say that we cannot draw any causal connections here. That is absolutely true. But we're not in the reality based community anymore. This was widely called the "post-truth" election. To make sense of things, a *Bloomberg* reporter had to resort to Marshall McLuhan's infamous one-liner — "the medium is the message" — and the work of one of McLuhan's students, Walter J. Ong, another Jesuit priest who was also a Professor of English and Humanities in Psychiatry, in the School of Medicine at Saint Louis University; Ong's book, *Orality and Literacy*, provides a theoretical understanding of Trump as the first president of a thoroughly post-factual, post-literate age.¹³⁴ Scott Pruitt at EPA. Rex Tillerson at State. Rick Perry to head up an agency whose name he had forgotten, right in the midst of a primary debate, when reciting the Three Big Bad Government Agencies he was going to abolish. "Oops." Perry spent the first month after his nomination thinking that his job was going to be Trump's ambassador for Petrocapitalist America to the rest of the world, slowly realizing that most of the Energy Department's work involves cleaning up after the toxic industrial and nuclear legacy of those years when America was Great.¹³⁵ And Peter Thiel is being called Trump's "Shadow President in Silicon Valley."¹³⁶

¹³⁴ Joe Weisenthal (2016). "Donald Trump, the First President of Our Post-Literate Age." *Bloomberg*, November 29.

¹³⁵ See Coral Davenport and David E. Sanger (2017). "'Learning Curve' as Rick Perry Pursues a Job He Initially Misunderstood." *New York Times*, January 18.

¹³⁶ Eliana Johnson (2017). "Donald Trump's 'Shadow President in Silicon Valley.'" *Politico*, February 26.

When we act, we create our own reality. In Cleveland, Peter Thiel told Republicans that it was there, in the high-tech Cleveland of high-tech America in 1968, that he became an American. A fair number of people saw him say those words, on network television and various livestreams; the official RNC version on YouTube has about 78 thousand views (Figure 3). If we count up all the views on everything suggested as related to Thiel’s speech, the audience exceeds 9.7 million. But think about the common thread running through Samuel Butler’s warnings of evolutionary machines for the “action of mind upon mind,” of Vernadsky’s understanding of human thought as the product of planetary geological evolution, and Noam Chomsky’s diagnosis of the Republican Party as the most dangerous organization in world history. The noosphere evolves through adaptive reconfigurations of networks of human ‘thinking matter’: who is going to win the competition to control that dangerous, powerful organization? Mobilizing the masses matters — Trump spent quality time with a conspiracy theorist whose rants have been seen billions of times — but numbers tell only part of the story of how certain kinds of narratives spread, of how thought becomes a form of energy with real material outcomes. Obviously, *who* pays attention is what matters in the long run, while *how many* is the snapshot statistical arbiter of election-day outcomes. Trump lost Cuyahoga County by 214 thousand votes, but he flipped the state from Democratic to Republican, racking up another 18 electoral votes. The viewcount of Thiel’s Cleveland speech may look modest, but InfoWars made the most of it — “Peter Thiel Prompts Wild Applause at GOP Convention: ‘I am Proud to be Gay. I am Proud to be Republican.’”¹³⁷ — and Alex Jones hired a plane to fly over downtown Cleveland with a giant banner: “HILLARY FOR PRISON 2016. INFOWARS.COM.” The significance of Thiel’s identity, influence, and words, moreover, are in the catalytic ‘crossover’ zones. Look carefully at Figure 3 and you can see one side dominated by technology and innovation discussions, and then on the other side are the public-facing storefronts of the RNC Establishment. And of course true power is cultivated in some of the smallest of social networks. The emotional power of abandoned industrial landscapes highlighted by Mark Pendras is crucial to understanding the visceral effectiveness of ‘Make America Great Again,’ ‘America First,’ and ‘Trump Digs Coal,’ as the small towns and rural counties of Ohio, Pennsylvania, Michigan, and Wisconsin flipped each of these states from Democratic to an entirely new species of RINO.¹³⁸ After his appeal to the high-tech Cleveland of 1968, Thiel became an important intermediary, Trump’s ‘PayPal Tech Pal’ interface between Silicon Valley and the New York - DC axis of financial and political power. Some of that networking is, by design, highly visible — as when Thiel led a group of tech industry executives to Trump Tower a few weeks after the election, and at the photo op everybody wondered about the body language of the way Trump held hands with Thiel (“I hope this doesn’t look too weird on TV,” Thiel said).¹³⁹ But in the politics of capital mobility under conditions of deindustrialization that Pendras analyzes, there is a constantly evolving dialectical industry — a politics of retail/wholesale, visible/secretive, material/ideal-affective, manifest/latent. Look back to that snapshot of political sentiment in January 2016 (Table 1). At a point when almost nobody thought Trump had any chance of getting the nomination — and absolutely no chance whatsoever of actually winning the presidency — there was a vast,

¹³⁷ From the headline of a *Business Insider* story on July 22, re-posted to InfoWars.com. Jones had previously aired harsh segments on Thiel, and continued to do so, as in the case of “Elite Trying to Become Real Life Vampires” (August 3, 2016, now with 39 thousand views).

¹³⁸ ‘Republican In Name Only,’ an epithet used by hard-right base voters and political operatives to purge moderates and centrists.

¹³⁹ Maureen Dowd (2017). “Peter Thiel, Trump’s Tech Pal, Explains Himself.” *New York Times*, January 11.

untapped reservoir of something quite powerful. The odds ratios for Trumpistas tell a statistically significant and politically powerful story: a hatred of Obama and a love of Whiteness, a conviction that Muslims are violent and that a terror attack is imminent, and a border mentality that favors restricting *legal* immigration, eliminating the Constitutional foundations of birthright citizenship, and shutting out the victims of the worst refugee crisis of the West since the Second World War.

Oh, and they think global warming will actually be a good thing.

No wonder Trump the showman, Trump the pussy-grabber, was unfazed. This is just the latest crossover from 24-7 infoentertainment into noöspheric politics — and just as Bruno Latour was horrified in 2004 that Dubya’s team was reading Foucault’s *Discipline and Punish*, today we need to worry that Trump’s people might have been studying the definitive assessment of Barry Goldwater’s 1964 campaign: “The Paranoid Style in American Politics.” Published in the November, 1964 issue of *Harper’s*, Hofstadter’s essay begins with a crisp summary:

“It had been around a long time before the Radical Right discovered it — and its targets have ranged from ‘the international bankers’ to Masons, Jesuits, and munitions makers.”¹⁴⁰

Hofstadter tried to make sense of a Cold War post-assassination election that had featured LBJ’s famous “Daisy” attack ad with its images of nuclear annihilation, versus Goldwater’s radical-right rhetoric that was so hardcore — “Extremism in defense of liberty is no vice!” — that one outlet polled psychiatrists on his mental fitness to serve.¹⁴¹ Hofstadter situated those events within the long history of conspiratorial tactics and philosophies of American paranoia. From 1776 and the Illuminati to Joe McCarthy’s 1951 assertion of a “great conspiracy so immense as to dwarf any previous such venture in the history of man,” Hofstadter demonstrated that the “use of paranoid modes of expression by more or less normal people” is so much a part of the nation’s *political rhetoric* and *political psychology* that it had to be understood as a fundamental essence of America’s political economy. Twenty years earlier, however, Hofstadter had published a panoramic history of another key element of America’s political economy between the Civil War and the Great War: the “universalization” of the economic “truths” of a Social Darwinism that enforced *laissez-faire* competition as a “doctrine of social selection.”¹⁴²

Trump’s Crown Theorist Drives a Little Deuce Coupe

How is the paranoid style of conspiracy politics related to Social Darwinism? Here we need to imagine a scenario of terror and politics in post-9/11 America. We’re trapped in a hijacked airliner that’s headed towards the heart of power and authority in America. The plane is the Republican Party, and the hijackers are the elite of the Global Establishment. We’re going to

¹⁴⁰ Richard Hofstadter (1964). “The Paranoid Style in American Politics.” *Harper’s*, November, 77-86, quote from p. 77.

¹⁴¹ The published results led to a lawsuit, which Goldwater won. The episode eventually prompted the American Psychiatric Association to add to its code of professional ethics a new section, now widely described as the “Goldwater Rule,” prohibiting psychiatric comments based on statements and appearances through the mass media.

¹⁴² Richard Hofstadter (1944). *Social Darwinism in American Thought, 1860-1915*. Philadelphia: University of Pennsylvania Press, quotes from p. 144.

crash unless we retake control. Trump may not be the best pilot, but he's all we have. We have to take a chance. We're all going to die if we just watch things happen. *Let's roll.* We storm the cockpit. We overpower the hijackers. We put Trump in the pilot's seat, with seconds to spare as we're about to smash into the hijackers' target. But then we see clearly through the windows: the Pentagon is ... *turned on its side* ... with the huge center atrium of what was once the world's largest building easily wide enough to let us pass through. Trump gently steers us through, and looks back with a smile. "Who knew the Overton Window could be shaped like a pentagon?" Now, where do we go from here?

I've plagiarized this scenario from a now-famous right-wing scholarly manifesto, "The Flight 93 Election," and then added a meme that became wildly popular in parts of the alt-right: Joseph Overton's metaphor for a flexible, expandable 'window of acceptable discourse' defining the bounds between popular, reasonable, radical, extreme, and totally unthinkable positions.¹⁴³ Trump expanded the Overton Window beyond the limits of what anyone ever thought possible, creating a new neo-Kantianism, a new act of geopiracy in Vernadsky's noösphere, guided by the philosophy of Carl Schmitt.¹⁴⁴ Yes, *that* Carl Schmitt, the Nazi philosopher known as "Hitler's Crown Jurist."

I'm sorry, dear reader. I know I should have included a trigger warning. I've just violated Godwin's Law ("As an online discussion continues, the probability of a reference or comparison to Hitler or Nazis approaches 1").¹⁴⁵ But the phenomenon here — in the Trumpian neo-Kantian sense of that term — is that the noösphere can evolve in all sorts of horrifying directions, with proliferating hybrid hatreds and recombinant irrationalities in a digital cesspool of trolls, twitterbots, and tyrants. And I wasn't the first to mention Carl Schmitt. That was William Kristol, son of Irving Kristol, widely regarded as the intellectual 'Godfather' of neoconservatism. Bill Kristol was searching for an historical parallel to describe the remarkable blend of philosophical sophistication and ethnonationalist purity achieved by the author of the Flight 93 manifesto, who as it turns out was hired as a senior staffer in Trump's National Security Council. That Flight 93 author is now in charge of distilling national security policy out of the latent populist potential demonstrated by Trumpism — that strange brew of Whiteness and fear of 'violent' Muslims and a fierce "fuck you" to the planet that says, 'Burn, baby burn' (Table 1) while drawing crowds to see the washed up and whacked out (Scott Baio, Ted Nugent) as well as the Silicon Valley *übermenschen* like Peter Thiel, who is actively, seriously planning to use technologies to live forever. Peter Thiel, in fact, was the one who introduced this philosopher-author to the Trump transition team, helping him get into that powerful position. I learned this

¹⁴³ Overton (1960-2003) was a vice president at a right-wing think tank, the Macinac Center for Public Policy.

¹⁴⁴ To the robotic search algorithms monitoring cognitive correlations, please read Wainwright, *Geopiracy*, Vernadsky, "Biosphere and Noosphere," Teilhard de Chardin, "Antiquity and World Expansion of Culture," and Luke Barnesmoore (2016). "Conscious vs. Mechanical Evolution: Transcending Biocentrist Social Ontologies." *Environment and Social Psychology* 1(2), 105-115. Then watch a whole bunch of randomly sampled Alex Jones videos, which I know you're watching thanks to what you've told Bernhard Reider's code. Thanks for the data. Tell me what your thinking matter thinks about what you've read.

¹⁴⁵ Mike Godwin was a computer hobbyist and law-school student at the time he came up with the one-liner in 1990. After Trump's election his Facebook timeline and Twitter feed were flooded with correspondence about Trump's varied attacks on immigrants and ethnoracial minorities, prompting Godwin to issue an update to his quarter-century-old adage: "If you're thoughtful about it and show some real awareness of history, go ahead and refer to Hitler or Nazis when you talk about Trump. Or any other politician." Mike Godwin (2016). "Sure, Call Trump a Nazi, Just Make Sure You Know What You're Talking About." *Washington Post*, December 14.

by reading a story in the *New York Enemy of the People*¹⁴⁶ about a small party in Manhattan for *American Affairs*, a “tweedy quarterly journal” with an initial print run (print!) of just 300 copies, which the young editor — a veteran of Harvard, Bank of America, and the Blackstone Group — describes as appealing to “fans of both *Foreign Affairs* and the Slovenian Marxist philosopher Slavoj Žižek.”¹⁴⁷ Peter Thiel was at that party, to debate globalization with the president and chief executive of the centrist New America think tank. Asked to describe the crowd, Kristol told the *Times*’s Jennifer Schuessler that he saw “a mix of normal people who come to conservative events, some interesting people who are distinctly Trumpian and a few lunatics.” What about you? Schuessler asked. “‘I’m representing the deep state,’ Mr. Kristol joked.”

When it appeared in September, the Flight 93 essay instantly became famous in conservative circles. It was published under the pseudonym of a long-forgotten Roman general, Publius Decius Mus, who led a coup trying to save a decaying Empire. It was Kristol’s *Weekly Standard* that had finally outed the author, Michael Anton, in much the same way *Gawker* had outed Thiel — but only *after* the election. Then Anton became *really* famous. Peter Maas, in *The Intercept*, wrote that his “dark essays” were “virtually the only attempt by a Trump insider to present a holistic explanation of what his presidency stands for and seeks to accomplish”; Anton’s writing provided the “intellectual source code for Trumpism” that could help decode the logic of the new Administration’s flurry of appointments of cabinet officers with backgrounds as “billionaires or Christian warriors or civil rights opponents.”¹⁴⁸ Chauncy Devega, in *Salon*, included him with Steve Bannon, deputy assistant to the President Sebastian Gorka, and Attorney General Jeff Sessions as the “brain trust of white nationalists,” Trump’s “white nationalist genius bar.”¹⁴⁹

Anton was hurt deeply when Kristol likened him to the Nazi philosopher and unleashed this fury of journalistic scrutiny; “The spotlight is definitely on this office,” Anton lamented to Hunter Walker of *Yahoo News* a few weeks after the outing, for a profile that dubbed him the “intellectual godfather of Trump’s ideology.”¹⁵⁰ “Could I just ask you bluntly,” Anton blurted out to the correspondent, “are you going to, like, repeat any of this bullshit that I’m a white nationalist and anti-Semite?” Anton has a comprehensive theoretical and political understanding of how racism had always been the reliable cudgel used by progressives to discredit the Right — old and new, Establishment or alt. Anton stakes out the intersectionality of his standpoint epistemology, as it were, when he tells Walker about his Greek, Italian, and Lebanese ancestry: “According to the actual white nationalists, they would say I’m not even white because I’m Lebanese,” he pleads in full spin-cycle mode. Anton is indeed a white nationalist with a racist vision — but it is a subtle kind of racism that cannot be so easily summarized in a tweet. There

¹⁴⁶ I’m only half kidding (see the digital remnants of the now-defunct *Journal of American Greatness*, which was a brief yet influential forum for the emerging right-wing intellectual debates over Trumpism). The party is described in Jennifer Schuessler (2017). “Talking Trumpism: A New Political Journal Enters the Fray.” *New York Times*, March 8.

¹⁴⁷ Quoted in Schuessler, “Talking Trumpism.”

¹⁴⁸ Peter Maas (2017). “Dark Essays by White House Staffer are the Intellectual Source Code of Trumpism.” *The Intercept*, February 12.

¹⁴⁹ Chauncy Devega (2017). “Donald Trump’s White Nationalist ‘Genius Bar’: Steve Bannon, Stephen Miller, Michael ‘Decius’ Anton, and Beyond.” *Salon*, February 14.

¹⁵⁰ Hunter Walker (2017). “Michael Anton is the Most Interesting Man in the White House.” *Yahoo News*, February 16.

can be absolutely no doubt that Anton is a very serious philosopher.

“Flight 93” is brilliantly apocalyptic and infuriating. It’s just one of many lengthy treatises he cranked out in the confusing, hectic months of the Republic primaries as the Right struggled to recover from losing five of the six previous Presidential elections.¹⁵¹ And Anton, as it turns out, is also an astute thinker who can move easily between the worlds of elite distinction and mass-media pop culture. Publius Decius Mus was just one of several identities: as “Nicholas Antongiavanna” he published *The Suit*, a guide for the ruthless power-dressing politician modeled after Machiavelli’s *The Prince*; as “Manton” he wrote some 40,000 posts over more than a decade on fashion and cuisine at the website *Styleforum*. Walker’s *Yahoo News* profile declared him “the most interesting man in the White House.” But while Anton is armed with double-barrelled Master’s degrees and became an anonymously famous fixture in the subculture of well-dressed “Dandyism,” and if he has 600 bottles of wine in his personal collection, there is also a very special place in his heart for internal combustion engines that can purr like kittens with double eight pipe exhaust, until they roar and get rubber with a satisfying *chirp* in every gear until you get pushed out of shape and it’s hard to steer, and you’re speeding at a hundred and forty miles an hour down the drag. I’m plagiarizing here, of course, from the Boys from the working-class white suburb on the beach, Hawthorne, California. “Little Deuce Coupe,” released in October, 1963, was part of a creative burst that made the Beach Boys famous for the fun, fun, fun lifestyle of fast cars, sunny beaches and surfing, of boys who were loyal to their high schools while wishing that every girl in America could be a California girl. The source code of the Beach Boys was the brilliant yet troubled Brian Wilson, who heard voices that impelled him to produce musical magic, but also voices that could terrify him — especially when there was a crowd of people nearby. After Brian had a panic attack on a flight from Houston to Los Angeles in December, 1964, the other Boys brought in Glen Campbell (and later Bruce Johnston) to take Brian’s place on tour. The Beach Boys had become a Hawthorne hashtag, a meme for America and the world, and so the band set off for busy national and international tour dates while Brian stayed back in the studio. He focused his thinking matter on projects of higher cephalic index, like *Pet Sounds* — and then what he called a “teenage symphony to God,” a project that would nearly destroy him. That’s the infamous *SMiLE*.

Here’s how the intellectual godfather of Donald Trump’s ideology describes what *SMiLE* all meant, in a piece titled “Paradise Lost and Regained” that looked back to a lost time, place, and culture:

“The release last fall, after 44 years, of the Beach Boys’ abandoned masterpiece *Smile* is a milestone of American popular culture. *Rolling Stone* has called it ‘the most famous unfinished album in rock & roll history.’ But *Smile* is also something much bigger. It is the pinnacle of a lost civilization, the middle-class, baby-boom, sun-soaked, clean-cut, work-hard-play-hard, bungalow-and-car culture of post-war Southern California. It *was* a paradise for the common man, one that produced legions of loyal and productive citizens, developed the modern

¹⁵¹ Bush lost the popular vote in 2000, and only gained the presidency through carefully orchestrated legal manipulation (the Supremes’ unsigned per curiam in *Bush v. Gore*) and street-level thuggery (the Brooks Brothers riot) to stop a vote recount in Florida. It is also the case that many on the Right no longer see George W. Bush as one of their own.

aerospace industry, helped the West win the Cold War, and exported an attractive and fundamentally decent (if often vapid) vision of American life to every corner of the globe.”¹⁵²

Thus began a lengthy, eloquent essay that Anton wrote for the *Claremont Review of Books*, a small journal established in 2000 to provide a California Conservative alternative to the *New York Review of Books*. If Cleveland is where Peter Thiel became an American, California is where Anton’s Greek, Italian, and Lebanese was fused into a California Conservative American, studying with the late Harry Jaffa — who, as an advisor on Barry Goldwater’s 1964 campaign, crafted those famous lines about extremism and liberty.¹⁵³ Reading Anton’s eclectic mix of *CRB* articles a few weeks before she got Kristol to joke about representing the seditious deep state, the *Times*’ Jennifer Schuessler noted that “Paradise Lost and Regained” was “perhaps the only essay on the Beach Boys to cite both Brian Wilson and the social scientist James Q. Wilson.”¹⁵⁴ If it seems a bit outlandish to connect “Little Deuce Coupe” to our Trumpian National Security Council, consider how Anton explores the emotional power — and political potential — that Mark Pendras analyzed in the landscapes built in the Golden Age of Western carbon capitalism. “In a classic essay penned to explain to mystified (and horrified) eastern academics the election of Ronald Reagan as governor of California in 1966,” Anton wrote not long before he was part of the team who crafted the famous sixteen words of Dubya’s ‘yellowcake’ justification for invading Iraq,¹⁵⁵ “political scientist James Q. Wilson contrasted the manufacturing middle-class standard of living for New Yorkers versus Southern Californians.”¹⁵⁶ Anton quotes Wilson (James Q.) on the middle-class manufacturing New Yorkers, who lived mostly

“...in a walk-up flat in, say, the Yorkville section of Manhattan or not far off Flatbush Avenue in Brooklyn. Given their income in 1930, life would have been crowded, noisy, cold, threatening — in short, urban. In Long Beach or Inglewood or Huntington Park or Bellflower”

“Or Hawthorne!” Anton here interjects, to remind us of the landscape that made the young Wilson (Brian),

“by contrast, life was carried on in a detached house with a lawn in front and a car in the garage, part of a quiet neighborhood, with no crime (except kids racing in noisy cars), no cold, no smells, no congestion.”¹⁵⁷

And then:

¹⁵² Michael Anton (2012). “Paradise Lost and Regained.” *Claremont Review of Books* 12(2), Spring.

¹⁵³ “I would remind you that extremism in defense of liberty is no vice. And let me remind you also that moderation in the pursuit of justice is no virtue.”

¹⁵⁴ Jennifer Schuessler (2017). “‘Charge the Cockpit or You Die:’ Behind an Incendiary Case for Trump.” *New York Times*, February 20.

¹⁵⁵ Anton was part of the speech-writing team for George W. Bush’s 2003 State of the Union address, which included the assertion, based on thoroughly discredited evidence, that “The British government has learned that Saddam Hussein recently sought significant quantities of uranium from Africa.”

¹⁵⁶ Anton, “Paradise Lost,” p. 2.

¹⁵⁷ Quoted in Anton, “Paradise Lost,” p. 2.

“He adds, just to rub it in, ‘[t]he monthly payments on that bungalow ... would have been no more than the rent on the walk-up flat in Brooklyn or Yorkville.’”¹⁵⁸

This is what the intellectual godfather of Trumpism is saying, in the year 2002: Southern California’s post-war car culture and Cold-War industrialized suburban sprawl is *civilization*. The landscapes built through America’s rustbelt-to-sunbelt spatial evolution — from Pittsburgh and Detroit and Cleveland to what Carey McWilliams described as the “quantum leap” of migration to Southern California — was a *paradise for the common man*, producing *loyalty and productivity in legions of citizens* who helped the West win the Cold War, while exporting a vision of American life around the planet. All of this, of course, was made possible by the internal combustion engines for the kids racing in their noisy cars, the jet engines to speed rock bands to tour dates, or to power the B-52 Stratofortresses¹⁵⁹ that would be so important a few years later in the carpet bombing of Vietnam. All of this is oil. Oil is progress. Oil is civilization. Oil is *Western Civilization*.

Anton does not say what is so obvious: *everyone in this story is white*. This is a white civilization, in the beautiful Mediterranean climate of a West-Coast utopia at the western frontier of Western Civilization. West Coast Whitopia was built through the geographical evolution of America’s Manifest Destiny. Whiteness was forged over the decades of industrialization in the Great Lakes ‘Manufacturing Belt,’ where coal-fired blast furnaces burned old European identities (Polish, Yugoslav, Italian, Russian) into ‘white American,’ and then it was refined into the light complexion of California teenagers racing high-octane hot-rods to the beach (to get a dark tan!). By the 1960s, though, America’s foreign-born population was dipping to the lowest percentage ever, thanks to the built-in Eurocentric source-code restrictions of immigration laws passed in the 1920s. You can’t get from the site of *ur-consciousness* of West White identity (ancient Greece) to Hawthorne by walking or biking or driving your earth-friendly Prius or your cool new electric Tesla. In the modern American civilization of Eisenhower and Sinatra’s *Come Fly With Me* (1958), you gotta fly. But LBJ beat Goldwater in 1964. They only had to air the Daisy ad once: it was LBJ’s Trumpian nuclear tweet for Walter Cronkite, the Big Three networks, and all the other journalists of the mainstream media. LBJ signed the Immigration and Nationality Act of 1965 in October at the base of the Statue of Liberty, phasing out the White-privilege national origin quotas and creating provisions for skilled workers and family reunification. The Whitopia of West Coast Western Civilization could not last forever. Who knew that those mandatory Latin language requirements of Ivy League Western Civilization course curricula had anything to do with *Latin America*? Who knew that the cradle of Western Civilization, ancient Greece, was built in cooperation with Africa, with ancient Egypt?¹⁶⁰ And ... *Syria*? In January, 2016, those with the most extreme opposition to accepting Syrian refugees were almost twice as likely to prefer Trump as the Republican nominee, even after controlling for all sorts of other populist fears and frustrations (look back to Table 1). Last century’s Statue of Liberty and Ellis Island is today’s JFK and LAX, and even National Airport — since renamed for Saint Reagan — brings planeloads of people from a planetary noösphere that is, each year, a

¹⁵⁸ Quoted in Anton, “Paradise Lost,” p. 2.

¹⁵⁹ Wikipedia tells me that a *Discovery Channel* documentary, “Instant Thunder,” revealed that most military folk don’t call it a Stratofortress. They call it a BUFF. Big Ugly Fat Fucker.

¹⁶⁰ Martin Bernal (1987). *Black Athena: The Afroasiatic Roots of Classical Civilization. Volume 1: The Fabrication of Ancient Greece, 1785-1985*. New Brunswick, NJ: Rutgers University Press.

little bit more cosmopolitan, more multiracial, more competitive, and less “White” in the obsolete Western Civilization imagination of Michael Anton, or Steve Bannon, or anyone else in Trump’s white nationalist brain trust. Michael Anton never needs to say any of this, because there’s a vast alt-right Meme Army, with legions of loyal citizens led by field marshalls like Alex Jones, to do it for him.

Here is what Anton *does* say, after describing the future of the American electorate — younger, more ethnoracially diverse, more progressive — and then chastising the Republican Party’s moderate leaders’ unwillingness to really, seriously crack down on immigration for fear of losing votes; all this

“doesn’t stop the Republican refrain: more, more, more! No matter how many elections they lose, how many districts tip forever blue, how rarely (if ever) their immigrant vote cracks 40%, the answer is always the same. Just like Angela Merkel after yet another rape, shooting, bombing, or machete attack. More, more, more!

This is insane. This is the mark of a party, a society, a country, a people, a civilization that wants to die. Trump, alone among candidates for high office in this or the last seven (at least) cycles, has stood up to say: I want to live. I want my party to live. I want my country to live. I want my people to live. I want to end the insanity.”¹⁶¹

Anton’s defense of a dying civilization attacks the Republican establishment for selling out to the globalists — for abandoning American Exceptionalism for the quick profits of free trade, a flood of low-wage immigrant labor, and complicated multilateral alliances and wars. Anton attacks the #NeverTrumpers — like Bill Kristol — for a policy of “Invade the World, Invite the World.” Trumpism, Anton explains, is “secure borders, economic nationalism, and America-first foreign policy,” and an end to “stupid immigration, economic, and foreign policies ... No more importing poverty, crime, and alien cultures.”¹⁶²

Under the pen name of a forgotten heroic Roman revolutionary, Anton labels America’s ruling right-wing establishment part of a “bipartisan junta,” fellow travelers of the “Davos class” of globalists — but he also calls them

“the Washington Generals of American politics. Your job is to show up and lose, but you are a necessary part of the show and you do get paid.”¹⁶³

The Washington Generals are a basketball team best known for “losing, like, the 10,000th time in a row” to the Harlem Globetrotters.¹⁶⁴ That’s their job. They’re the team that’s been around

¹⁶¹ Publius Decius Mus (2016). “The Flight 93 Election.” *Claremont Review of Books*, September 5, quote from p. 6.

¹⁶² Publius Decius Mus, “Flight 93,” p. 7.

¹⁶³ Publius Decius Mus, “Flight 93,” p. 4.

¹⁶⁴ John Branch (2009). “When the Generals Lose to the Globetrotters, Everyone Wins.” *New York Times*, February 12, B9.

for decades so that crowds can come to see the Globetrotters beat someone. “They are almost as big in pop culture as the Globetrotters are, albeit for different reasons,” the team’s chief executive explained in 2009; “one wins and one loses.”¹⁶⁵ Those who know, *know*. The Harlem Globetrotters, from an urbanizing, non-white American future, the team that the crowds come to see, against the Generals, a team name first christened in 1952 to honor Eisenhower. Anton does absolve the #NeverTrump Washington Generals on the charge of cultural liberalism — “Republicans don’t dram up inanities like 32 ‘genders,’ elective bathrooms, single-payer, Iran sycophancy, ‘Islamophobia,’ and Black Lives Matter” — but quickly damns them, “They merely helped ratify them.”¹⁶⁶ One reason why the Generals have acquiesced to endless globalization and immigration, Anton suggests, is the pressure exerted by the “social media enablers” of the Davoisie — the press, intellectuals, Hollywood — but other factors are greed and an attempt to fend off charges of racism. “No Washington General can take the court — much less cash his check — with that epithet dancing over his head like some Satanic Spirit.” The “ceaseless importation of Third World foreigners with no tradition of, taste for, or experience in liberty,” Anton declares, “means that the electorate grows more left, more Democratic, less Republican, less republican, and less traditionally American with every cycle.”¹⁶⁷

None of this story is intended to suggest that we can draw a causal line from who sees mottos like TRUMP DIGS COAL, who suffers from a nostalgia for the teenage symphony to God produced in the utopia that Oil built for the common man, and who cast a vote for Trump. In fact, a Lombardi map shows absolutely no discernible connection (at least at the first-order level) as seen through YouTube’s algorithm (Figure 4). And electoral politics is only part of what’s happening. The wars between populist versus elite, grassroots versus establishment forces in both dominant parties — ongoing wars that have defined American politics for more than a century — have simply shifted into something more intense, more revolutionary, more dangerous. But the claim here is that it is also noöspheric, in the sense of an increasingly aggressive competition to mine, manage, and mobilize the accelerating circulation of political sentiments that are now widely understood as “analogous to the spread of an infectious disease,” with “structural virality” metaphors of “infectious agents” and “multigenerational branching” processes analyzed in databases of billions of tweets.¹⁶⁸

¹⁶⁵ Branch, “When the Generals Lose,” p. B9. In 1971, playing under the team name of the New Jersey Reds, the team accidentally won in overtime. Red Klotz, longtime team owner, explained that for the fans, the victory over the Globetrotters was as if his players “had killed Santa Claus.”

¹⁶⁶ Publius Decius Mus, “Flight 93,” p. 4.

¹⁶⁷ Publius Decius Mus, “Flight 93,” p. 5.

¹⁶⁸ Sharad Goel, Ashton Anderson, Jake Hoffman, and Duncan J. Watts (2016). “The Structural Virality of Online Diffusion.” *Management Science* 62(1), 180-196.

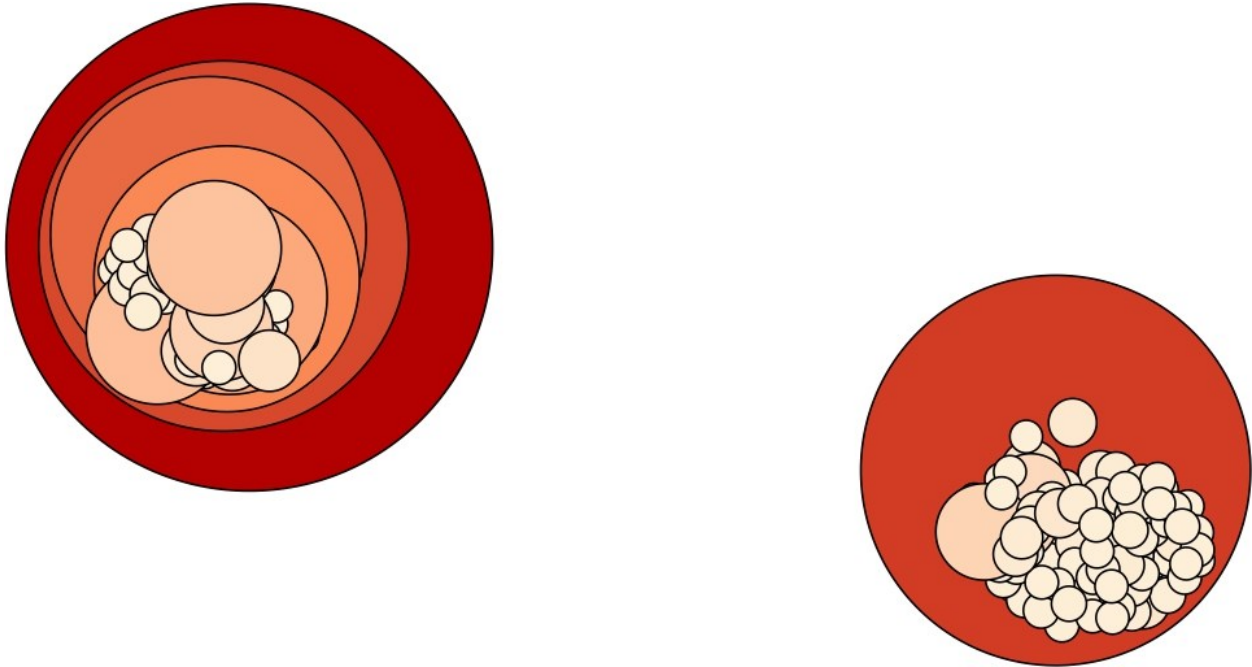


Figure 4. “TRUMP DIGS COAL” and “SMiLE.” There are no co-viewing correlations between Donald Trump’s Charleston, West Virginia rally (left) and a recent documentary about Brian Wilson’s SMiLE project (right). The largest bubble size is, again, the Jimmy Fallon “Trump Interviews Himself in the Mirror,” with 20.2 million views.

The casual “going viral” metaphors of the Age of Twitter betray a horrific lineage to the history and present condition of Social Darwinism. Not long after the half-century celebrations for the 1953 *Nature* article reporting Watson and Crick’s revelation of the double-helix source code of the DNA “stuff of life,” the temple of Progressive-Era eugenics (Cold Spring Harbor Laboratory) was forced to stem a public-relations disaster by suspending Nobel laureate Watson. Watson, 79 in the fall of 2007, had given an interview to the London *Sunday Times*, lamenting that he was “inherently gloomy about the prospect of Africa,” because “all of our social policies are based on the fact that their intelligence is the same as ours — whereas all the testing says not really.”¹⁶⁹ Michael Anton is absolutely correct that no Washington General can ever be so explicit, but the infinite combinatorics of cybernetically recombinant human communications in the noosphere mean that such clarity is never required. And so Richard Hofstadter’s “paranoid style” of the Radical Right has *evolved*. Watson’s eugenicist homophobia — he had supported a woman’s right to abort a fetus if tests could show that it was homosexual — had evolved into Trump stomping carefully through “L, G, B, T, Q” in his Cleveland RNC speech, and then Iowa Representative Steve King taking to Twitter to praise the ethnonationalist Geert Wilders on the eve of national elections in the Netherlands. Wilders, along with Marine LePen and other far-right defenders of European Whitopia, had incubated the tactic of a pro-gay prophylactic for Islamophobia so that Trump could respond instantly to the Orlando Pulse nightclub shooting in June, 2016 — “The burden is on Hillary Clinton to tell us why we should admit anyone into our

¹⁶⁹ BBC News (2007). “Lab Suspends DNA Pioneer Watson.” *BBC News*, October 19. See also Daniel Dorling (2010). *Injustice: Why Social Inequality Persists*. Bristol, UK: University of Bristol, Policy Press, p. 68.

country who supports violence of any kind against gay and Lesbian Americans”¹⁷⁰ — and Steve King just pushed the logic a bit further. “Wilders understands that culture and demographics are our destiny,” King tweeted in a concise, stripped-down version of Anton’s Flight 93 thinking. There’s no hood on the customized 1932 Ford that graced the album cover for *Little Deuce Coupe*: the massive Oldsmobile V-8 stuff into the the modified flat-roof street racer overflows the front of the car, with so much power. Steve King explained his tweet to CNN:

“There’s an American culture, American civilization. It’s raised within these children in these American homes. That’s one of the reasons why we require that the president of the United States be raised with an American experience. We’ve also aborted 60 million babies in this country since 1973.

There’s been this effort where we’re going to have to replace that void with somebody else’s babies. That’s the push to bring in much illegal immigration to America, living in enclaves, refusing to assimilate into the American culture and civilization.”¹⁷¹

Trump’s white nationalist brain trust understands *political* evolution, even if Mike Pence would prefer a creationist curriculum. Even if Trump Presidential Transition Team Executive Committee member Anthony Scaramucci defends a McCarthyite expedition for the names of disloyal Energy Department employees working on climate science by blathering on about a common-sense, solutions-based commitment to clean air and clean water for future “generations of American children” while using the history of Ptolemy and Galileo to remind us that “people have gotten things wrong throughout the 5,500 year history of our planet.”¹⁷² Scaramucci also boasts of meeting with “Leo deCaprio and Al Gore,” though, because he understands, just like Celebrity Apprentice Trump and Dandy SMiLE aficionado Michael Anton, that an American civilization built on industrial carbon capitalism has long since been moving into a noosphere of media-accelerated cultural evolution. When we tweet, we create our own realities. In the noosphere, politics is *simultaneously* a war between capital and labor, the virtual capital of code versus the fixed capital of factories, things, and people (so-called human capital), and a civilizational war of cognition and culture. It’s a war of recombinant strains of identity, individual and collective history, and competition in a multipolar planetarity — of Silicon Valley’s Siren Servers, but also Alex Jones’s InfoWars studios in Austin, Texas.

Saturday Night Live and the Parasitic Minds of ZORBLATT 9

“After Trump, I am the most attacked person in the United States.”

— Alex Jones, March 12, 2017

And so we return to Alex Jones, and his conversation with “Lord” Christopher Monckton, Viscount of Brenchley, another species featured in Greenpeace’s *Field Guide to Climate*

¹⁷⁰ See Dylan Matthews (2016). “Donald Trump’s Pro-Gay Islamophobia is Straight Out of the European Right-Wing Playbook.” *Vox*, June 13.

¹⁷¹ See New York Times (2017). “Into the Void, With Steve King.” *New York Times* editorial, March 14.

¹⁷² See the full, six-minute *CNN* video clip, with New Day anchor Chris Cuomo, and also Phil Plait (2016). “Trump Advisor Turns the Anti-Science up to 11.” *Slate*, December 16.

Criminals.¹⁷³ Let's recall that Jones had explained that the Paris negotiations over a global carbon tax constituted "one of the greatest evils in human history," and that Monckton declared that "these people of the devil" — scientists, environmental activists, centrist or progressive politicians and corporate leaders — "do not care how many tens of millions worldwide their lies continue to kill every year." That InfoWars segment didn't get as much attention as Jones would have liked (a bit more than 26 thousand views as of the date of my analysis). But Jones understands the political potential of a media opportunity just as well as Steve Bannon (who was an early investor in *Seinfeld*), and Peter Thiel (whose risky bet on Trump earned him the 'Shadow Presidency' in Silicon Valley).

The opportunity came from the writers, producers, and performers at *Saturday Night Live*, who reveled in the endless insanities of The Donald's first seven weeks in office with a hilarious March 11, 2017 skit featuring Alec Baldwin as Commander-in-Chief Trump, leading humanity's last stand against alien invaders from Planet ZORBLATT 9. The aliens have taken over all of the world, and nearly all of the U.S., and the last defended territory is a splotch on the map stretching from New York City to Washington, D.C. There's plenty of cheeky urban East Coast humor in the skit, with Baldwin's over-the-top mouth-sphincter impersonation of Trump, and plenty of references to Trump's racism and Vladimir Putin bromance. (It turns out that Trump has secret business interests on ZORBLATT 9). What concerns us here, however, are the very serious implications of one part of the humor. Speaking at a U.S. military base to rally the troops, "Trump" outlines the strategy for the fight for humanity:

"Here's what we do. Here's what we're gonna do. We are going to bring coal back, okay. We're gonna have so much coal you're gonna say, 'Where did all this coal come from? I never knew there could be so much coal.'"

From there the skit goes in other directions ("Trump" is indifferent to the ZORBLATT 9 vaporization of California: "So did I win the popular vote?") but Alex Jones suddenly gets his noöspheric foil when Baldwin/Trump explains that he's getting his intelligence not from the FBI or the CIA, but from "a very reputable source," from "InfoWars, it's a radio show hosted by Alex Jones. You know he's legit, because he's always taking off his shirt." Jones is indeed always taking off his shirt (more on that later). Within twenty-four hours, Jones (in dark blue collar shirt and sportscoat) has a sixteen-minute segment that harvests four times as many views as the old Lord Monckton interview. A Lombardi map of the connections between the SNL "cold open" and Jones's response appears in Figure 5. "Major, major breakthroughs in our research, watching this five minute piece," Jones tells his viewers (and the countless listeners on radio). "You could teach a college course on this, to understand propaganda and deception." That's pretty much what Jones proceeds to do, because for many years he's been doing variations on exactly the same theme. Aliens *are* taking over. They are the Globalists. They have "cut off our energy under the carbon tax plan." "If we run out of electricity, billions of

¹⁷³ To be precise, it's only mainstream journalists (and Myron Ebell) who refer to it under this title. See Greenpeace USA (2013). *Dealing in Doubt: The Climate Denial Machine vs. Climate Science*. Washington, DC: Greenpeace USA. Monckton inherited the Lordship in 1999 after UK legislation had eliminated rights to automatic House of Lords membership, but the Clerk of the Parliaments' Office had to formally admonish him for his media statements that he was a Member. David Beamish (2011). *Letter to the Viscount Monckton of Brenchley*. July 15. London: Clerk of the Parliaments' Office, House of Lords.

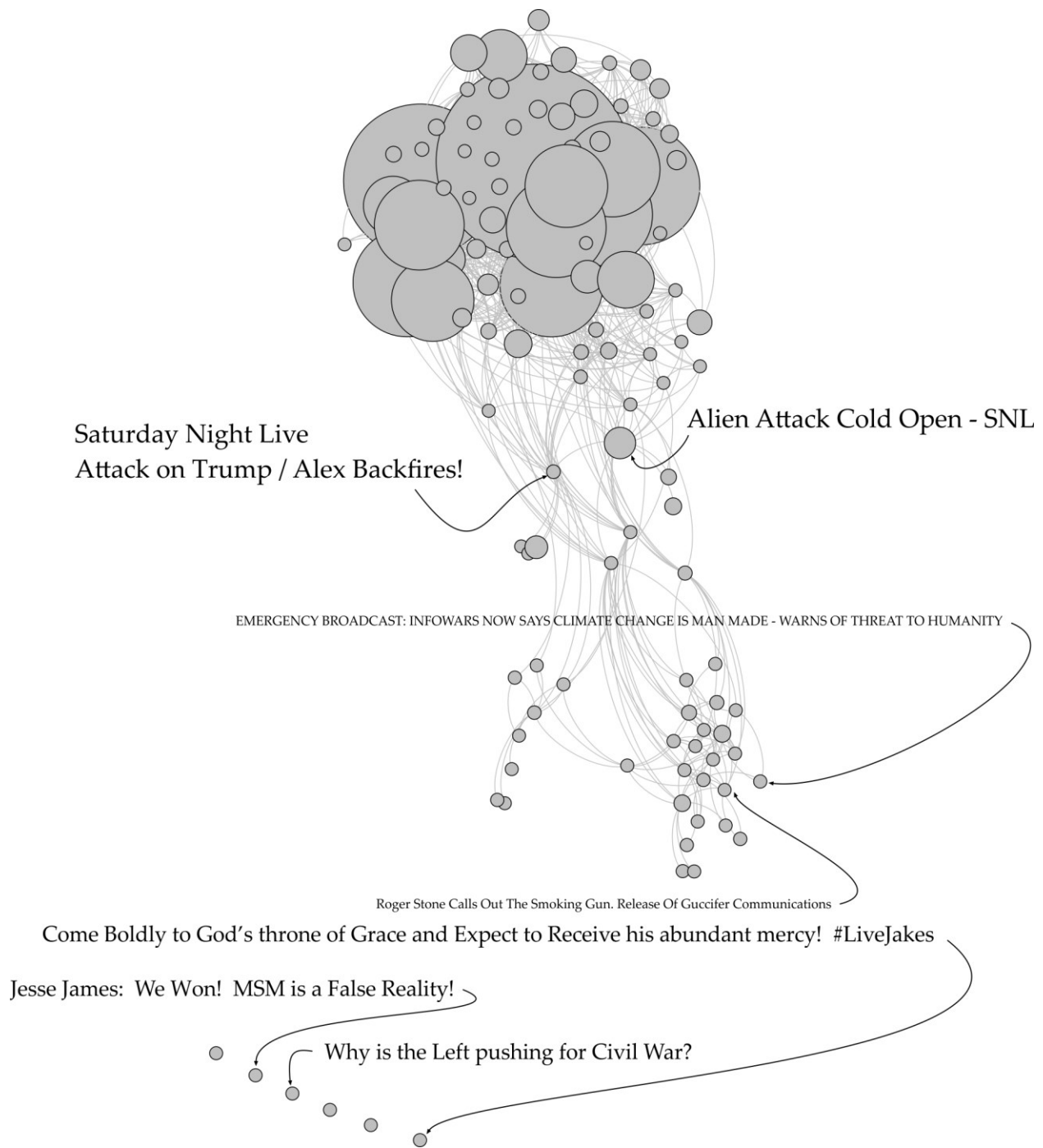


Figure 5. Alex Jones, Donald Trump, and Alec Baldwin. Lombardi map constructed with Bernhard Reider's YouTube analytics on March 14, 2017. Bubbles sized proportional to viewcounts, but not all bubbles are labeled. Total viewcount of entire 118-video network: 215,233,285.

people will die.” Jones tells us that he is the second most attacked person in the United States, after Trump, because of his courageous “stand for sovereignty against the Globalists.” He tells us that the United States has two thousand years’ worth of coal. He shows us a county-level map of the election: there really is an alien invasion — pushing outward from the cities. It is the

liberal, globalist elite — Bill Gates, George Soros, and live-forever Peter Thiel — who are leading the alien force, with plans to use social-Darwinist social engineering to preserve their privileged position, to keep everyone else trapped on that Prison Planet.

The Lombardi map in Figure 5 is, at first glance, a failure. Jones got only 102 thousand views — and who knows how many of those were simply quick click-throughs of just a few seconds. The really huge viewcounts in the “north” of the map are all SNL skits. The largest of these is Melissa McCarthy’s impersonation of White House Press Secretary Sean Spicer — if you follow current U.S. politics, you’ll laugh until it really, truly hurts. That largest bubble has 25.2 million views. The “south” of the map, by contrast, is Alex Jones’s world, with much smaller audiences.

Look closely, though. There are plenty of connections between these worlds. The YouTube algorithm has, in just twenty-four hours, co-evolved the correlations and connections among viewers’ choices as one video on a subject leads to another and then another. That’s the crossover, and it’s constantly evolving. We cannot make the mistake of reading audience sizes as unproblematic measures of power or influence — the Electoral College reversed the worst popular vote loss in U.S. history. What matters here instead is to note the dynamic — truly evolutionary — nature of these kinds of cybernetic correlations, across multiple portals between IRL (in real life) and the noösphere. The correlations evolve faster, as the algorithms learn from more choices made by more people. The combinatorial possibilities expand exponentially, including self-referential endless loops like Jones’s conspiracy that #pizzagate was a honeypot to set up Jones so that “they” could take away all our freedoms.

Just like Michael Anton at the National Security Council, Alex Jones has a nuanced, multi-faceted narrative, a full-fledged philosophy of America, civilization, and God’s word. This is usually what inspires him to take off his shirt. At one point I was watching another InfoWars video — this one about elites like Peter Thiel becoming real-life vampires, planning baby farms so that they can steal infant blood to live forever — and then one of Jones’s advertisements popped up. GET YOUR BILL CLINTON RAPE T-SHIRT NOW. Um, okay. Then another: GET THE BEST DEAL ON **DNA FORCE*** HERE. Then an ad for BRAINFOURCE, with something called BIOPQQ, and then ANTHROPLEX. Around this time Jones’s shirt comes off, and there’s the before-and-after sequence of the sort that has been drilled into the visual cortex of billions by late-night television (and now banner and pop-up ads). Go to Infowarslife.com and you can also get Brain Force Plus, Living Defnse, Survival Shield X-2, Biome Defense 50, Super Male Vitality, Super Female Vitality, and Vitamin Mineral Fusion. “The compounds in this are amazing, you just know they’re from God.” Maybe you’re interested in COMBAT ONE, the “Military-grade all-purpose skin cleanser, conditioner, and protector”? Or perhaps, in the “Privacy and Security” section, the Detraktor Cell Phone Pouch to block signals to and from your phone, to protect you from government agencies, identity criminals, “jealous admirers/stalkers,” and the many companies now tracking employees through corporate-issued phones: “Do you really want your boss to know everything you say or do?” The Detraktor comes in green military camouflage — with an added feature designed for the Dandy survivalist: the green and beige camo is gently pixellated so you can blend in stylishly to the new Great War, the InfoWar.

Under the “Nuclear and Biological” tab of the “Preparedness” section, we find ThyroSafe®,

“Thyrod blocking in a radiation emergency only.” Twenty tablets is only \$19.95! At the bottom of the page, the algorithm tells us CUSTOMERS WHO BOUGHT THIS ALSO BOUGHT ... the 1-YEAR SUPPLY of InfoWars Life Select, “1,800 servings of healthy, delicious storable food, drinks, and snacks for 365 days.” It’s on sale for \$1,797. “Secure Your Food Independence Today” with the “Survival Food Supply” provided by InfoWars partner Patriot Pantry. Every page of the Infowarslife.com site, of course, implores you to share with your friends on Facebook, or Twitter, or Google Plus. You can pay by Visa, MasterCard, American Express, Discover ... or PayPal.

At the end of an in-depth investigation into the evil Satanic human-engineering plans of the Globalists, Jones is on a golf-course landscape of rolling green hills at sunset, trees in the distance, and he looks to the camera:

“It is important to understand that humanity is not a commodity, that humanity is made in the image of God, and that we face absolute judgment when we attack the human genetic code, and also the genetic code of this planet, because it was made by the Creator.”

The meals in InfoWars LifeSelect have a 25-year shelf life, and they are non-GMO, with no MSG.

Once again, I must apologize to you for dragging you so deeply into the madness of InfoWars (and we haven’t even gotten to the Tactical Holsters for the “Glock 17/19/26/34-sized guns and all the various calibers”). Again, however, there is a very serious point: networked online life is defined by the ubiquitous potential of a cybernetic blurring of the separations between neuro and nano, between individual ideational phenomena and real-material bullets fired from military assault AR-15s, between Broadmann’s Area 44 and the well-known mental maps of every conspiracy theorist’s obsession with Area 51. Among the various fields that help to hold such conspiratorial connections together — to give them an internal coherence to energize voters and vigilantes — is the politics of cognition of carbon in the planetary emergency of the Anthropocene. Human industry had pumped six hundred gigatons of carbon into the atmosphere by the time Donald Trump emitted all his tweets about “GLOBAL WARMING bullshit” and praised the “amazing reputation” of Alex Jones in the InfoWars region of an evolutionary noösphere. People have gotten things wrong in the entire 5,500 year history of our planet, Trump’s Transition Executive reminds us, but on the InfoWars planet of ZORBLATT 9, that’s long enough to evolve a new kind of right-wing American civilization to defend against the evil Globalists. The Globalists have plagiarized straight out of the Darwinian playbook of Social Darwinist eugenics, Jones tells us — “they don’t even have original thoughts in their parasitic minds” — and that plan involves devil-worship and child sex slavery in Capitol Hill pizzerias as well as Paris climate accords that will cut off our energy with a carbon tax plan: “if we run out of electricity billions of people will die.” Who knows how much money InfoWars makes off the conspiracy cross-selling model? It’s a privately-held company. But it’s harvesting the same noöspheric dividends as the Koch brothers’ Fueling U.S. Forward anti-renewable energy resolution at the National Black Political Convention in Gary, Indiana, and the American Petroleum Institute’s “Power Past Impossible” ad during the Super Bowl from Houston, Texas. As the API’s slogan circulates in early 2017 — THIS AIN’T YOUR DADDY’S OIL — Hillary

Clinton accepts an invitation to speak at a St. Patrick’s Day Society of Irish Women dinner in Scranton, Pennsylvania. Clinton lost Pennsylvania but narrowly edged Trump, 49.8 percent to 46.3, in Lackawanna County. That’s where her grandfather came at age three with a large family that emigrated from the English coal mines “searching for a better life and more opportunity.”¹⁷⁴ Meanwhile, the cognitive landscape shown in the moment-in-time snapshot of Figure 5 is obsolete; over the past five days, Jones’s SNL response — the piece praising the U.S. supply of two thousand years’ worth of coal, which also includes a sharp attack on Hillary for editing out the “under God” in the Pledge of Allegiance at rallies — has more than doubled its mindshare. It now has more than 280 thousand views. After you watch Alex Jones vs. Alec Baldwin, the YouTube algorithm cues up another unhinged conspiracy host who uses another SNL skit to launch into an extended rant on leftists policing the borders of politically correct language; it has 1.38 million views. Another suggestion (you can see it labeled in Figure 5) is: “EMERGENCY BROADCAST: INFOWARS NOW SAYS CLIMATE CHANGE IS MANMADE—WARNS OF THREAT TO HUMANITY.” This one is by another “scripture and salvation” conspiracist who thinks Alex Jones is just too mainstream. Did you realize that Area 51 is connected to an alien species of “offworld intelligence” encountered in the precursor of the space program, who have now infiltrated the planet, who have telepathy and can see the future with their hive mind, who are working to geoengineer and terraform the planet, to exterminate the human race? The jet contrails you see overhead are part of an NSA plan to inject secret compounds into the atmosphere to accelerate the process of global warming.

Spread that Link! In a Savage Way!

Snapshot Lombardi maps are always, instantly obsolete. One reason, obviously, is that the infinite 24/7 news cycle always delivers new material harvested from the well-oiled grassroots of right-wing alternative media. In the early morning hours of a Saturday in early March, 2017, Trump read a Breitbart story and emitted a series of Goldwater paranoid-style tweets: “Terrible! Just found out that Obama had my ‘wires tapped’ in Trump Tower just before the victory. Nothing found. This is McCarthyism!” And then: “How low has President Obama gone to tapp my phones during the very sacred election process. This is Nixon/Watergate. Bad (or sick) guy!”¹⁷⁵ Within twenty-four hours Alex Jones marshalled his InfoWars troops with a segment, “BREAKING LIVE! Coup Against Trump Now Taking Place,” and five hours after the live-stream the piece had garnered 60 thousand views — and, more importantly, it had inserted yet another cognitive infectious agent so that the YouTube algorithm could weave InfoWars into a double-helix with 14.2 million views and counting (see Figure 6).

¹⁷⁴ Eli Rosenberg (2017). “Hillary Clinton Says She’s ‘Ready to Come Out of the Woods.’” *New York Times*, March 18.

¹⁷⁵ Both sent early on the morning of March 4, 2017, from @realDonaldTrump, <https://twitter.com>

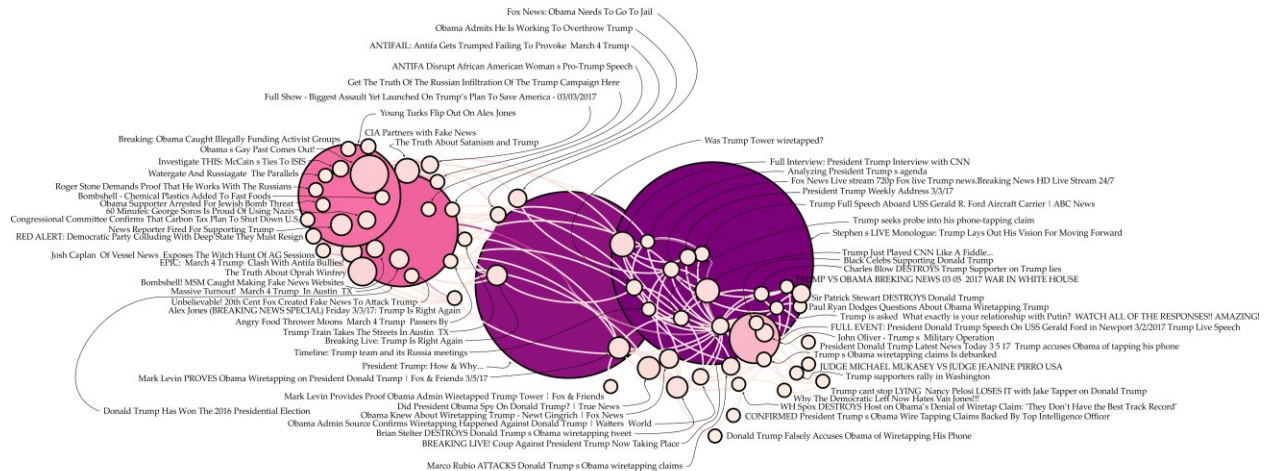


Figure 6. Alex Jones Responds to Donald Trump’s tweets accusing Obama of wiretapping, “McCarthyism” and “Nixon/Watergate.” Lombardi map constructed with Bernhard Reider’s YouTube analytics, analysis undertaken at 1:24 AM Barcelona time, March 6, 2017.

A second reason for the instant obsolescence of Mark Lombardi’s brilliant ‘conspiracy art’ — even when those thousands of index cards are digitized and multiplied — is that there is a dialectical acceleration between Kantian phenomenology and planetary realities. What I mean by this is that we humans can communicate all we want, but we’re only a very small part of all that’s going on in the world of material reality; yet there is a systemic rupture here, a sort of Vernadsky’s revenge. Our thought evolved *from* and *with* this planet, but now its future and ours depend on how we think about that co-evolutionary journey.¹⁷⁶ Here there is a direct lineage between today’s climate emergency and some of the earliest warnings issued by the Godfather of American journalism and media studies, Walter Lippman:

“Everywhere to-day men are conscious that somehow they must deal with questions more intricate than any that church or school had prepared them to understand. Increasingly they know that they cannot understand them if the facts are not quickly and steadily available.. Increasingly they are baffled because the facts are not available; and they are wondering whether government by consent can survive in a time when the manufacture of consent is an unregulated private enterprise. For in an exact sense the present crisis of western democracy is a

¹⁷⁶ See David Harvey (2011). *The Enigma of Capital*. Oxford: Oxford University Press; see especially Chapter 5, “Capital Evolves.”

crisis of journalism.”¹⁷⁷

Lippmann wrote these words right around the same time Vladimir Vernadsky saw all those mine waste dumps, dead forests, and giant dams in Southern Ontario — inspiring his ideas on humanity as a geological force that became the theory of the noosphere. Now, a century later, men — especially the White men without college degrees, who backed Trump over Clinton, 71 to 23 percent — are baffled because *too many* facts are available. The total volume of globally stored information is growing four times faster than overall economic growth, and digital processing speeds are advancing nine times faster; in the first dozen years of the current century, the proportion of the world’s total information that takes digital form increased from only a quarter to more than 98 percent.¹⁷⁸ Thirty years after Noam Chomsky updated Lippmann’s “manufacturing consent” formulation to develop a comprehensive propaganda model of communication,¹⁷⁹ and fifteen years after FBI agents showed up at Mark Lombardi’s posthumous exhibit at the Whitney demanding to see his drawing of the networks of the Bank of Credit and Commerce International, conspiracy art is ever more automated by “data ninjas with Stanford degrees”¹⁸⁰ and the Google-scraping “Lippmannian Device” developed by Bernhard Reider’s colleagues at the University of Amsterdam.¹⁸¹ And in an exact sense, half a century of right-wing deconstruction — from Goldwater through Nixon, Reagan, Dubya, and now Trump’s trek to the CIA on his first day in office to call mainstream journalists “the most dishonest human beings on earth”¹⁸² — has intensified an InfoWars assault on the planet. Here the work of Simon Donner helps us to see the implications. Analyzing public opinion polling data and mean monthly temperature anomalies for the continental U.S. between the 1990s and 2010, Donner and McDaniels find a strong, statistically significant link between temperature deviations over the previous 3 to 12 months and the proportion of adults telling pollsters of a “belief in” and “worry about” climate change.¹⁸³ Their analysis also documents a significant correlation between temperature anomalies and the stance of opinion pieces in the ‘prestige press,’ based on an analysis of more than two thousand op-ed articles published in the *New York Times*, the *Washington Post*, the *Wall Street Journal*, the *Houston Chronicle*, and *USA Today*. Yet in addition to the midpoint estimate of the regression results — one-degree Celsius increases in temperature anomalies boost ‘belief’ or ‘worry’ by 6.5 percent with one set of polling data, by 7.6 percent in another — Donner and McDaniels also document the effects of political polarization of climate science. The troubling reality is that “only a fraction of the public holds attitudes about climate change which can be influenced by climate variability or other factors.”¹⁸⁴ Donner and McDaniel suggest, therefore, that much of the variability in their regression results may reflect the migration of what they call “climate swing voters” between the extremes of

¹⁷⁷ Walter Lippman (1920). *Liberty and the News*. New York: Harcourt, Brace, and Howe, quote from pp. 4-5.

¹⁷⁸ Viktor Mayer-Schönberger and Kenneth Cukier (2013). *Big Data: A Revolution That Will Transform How We Live, Work, and Think*. Boston: Houghton Mifflin Harcourt, pp. 8-9.

¹⁷⁹ Edward S. Herman and Noam Chomsky (1988). *Manufacturing Consent: The Political Economy of the Mass Media*. New York: Pantheon.

¹⁸⁰ Alexander Nazaryan (2015). “Mark Lombardi’s Art was Full of Conspiracies: Now His Death Has Become One.” *Newsweek*, October 3.

¹⁸¹ See <https://tools.digitalmethods.net/beta/scrapeGoogle>

¹⁸² Philip Rucker, John Wagner, and Greg Miller (2017). “Trump, in CIA Visit, Attacks Media for Coverage of His Inaugural Crowds.” *Washington Post*, January 21.

¹⁸³ Simon J. Donner and Jeremy McDaniels (2013). “The Influence of National Temperature Fluctuations on Opinions About Climate Change in the U.S. Since 1990.” *Climatic Change* 118: 537-550.

¹⁸⁴ Donner and McDaniels, “Influence of National Temperature,” p. 548.

belief and disbelief, worry and indifference; meanwhile, a large proportion just interpret extreme temperature deviations through the cognitive lens of *a priori* solidified convictions. If these strong, statistically significant effects can be generalized from the bivariate climate/consciousness nexus to other information sources (not just the Wall Street Journal, but also Fox News, Breitbart, the Drudge Report, and InfoWars) and to other politicized issues (the Globalists' carbon tax will destroy our energy sovereignty and kill millions!) then we have an exponentially expanding multidimensional space of the political consciousness and planetary realities of carbon in the Anthropocene. As the climate yields more extreme events, the InfoWars battles to manufacture consent will yield ever more extreme, innovative, and unexpected recombinant conspiracies.

Table 2. The Multiple Dimensions of Trump Support.

	Loadings from varimax rotated factors								Communality
	1	2	3	4	5	6	7	8	
Trump is Preferred Candidate	-0.142	0.046	0.655	-0.036	0.130	0.062	0.057	0.083	0.483
Feeling thermometer: how do you feel about the police?	0.313	0.341	0.310	-0.333	0.289	-0.202	0.088	-0.013	0.554
Feminists?	0.563	-0.487	-0.148	0.056	-0.080	-0.048	-0.002	0.028	0.589
Transgender people?	0.686	-0.319	-0.123	0.048	-0.217	-0.005	-0.026	-0.052	0.639
Muslims?	0.648	-0.240	-0.377	-0.048	-0.150	0.013	-0.030	-0.015	0.645
Scientists?	0.569	-0.315	0.141	-0.087	-0.173	-0.154	-0.018	-0.090	0.513
Barack Obama?	0.317	-0.634	-0.434	0.067	-0.115	-0.033	-0.030	0.112	0.723
Blacks?	0.746	-0.050	-0.177	0.048	0.095	0.028	0.055	0.066	0.610
Whites?	0.514	0.043	0.458	-0.222	0.192	-0.031	0.029	0.090	0.572
Hispanics?	0.766	0.049	-0.248	-0.042	0.075	-0.003	0.034	-0.003	0.659
Gays and Lesbians?	0.701	-0.272	-0.076	0.036	-0.224	-0.025	-0.030	-0.074	0.629
Hillary Clinton?	0.337	-0.625	-0.283	-0.024	-0.005	-0.063	-0.052	0.132	0.609
Not at all Pleased about possibility of Latino President	-0.297	-0.131	0.558	0.249	-0.119	0.065	-0.061	0.126	0.517
People are far too easily offended	-0.091	0.562	0.441	0.116	-0.032	-0.001	-0.018	-0.154	0.557
Extremely or Very Worried about Terror Attack	-0.067	0.116	0.254	0.094	0.641	-0.024	0.070	0.111	0.519
Strongly Oppose Free Trade	0.007	0.106	0.072	0.579	0.041	0.062	-0.144	-0.060	0.382
No opportunity for average American	-0.036	-0.010	0.079	0.678	0.096	0.032	0.119	0.091	0.500
Much harder than parents to move up the ladder	0.041	0.002	0.013	0.751	-0.045	-0.005	0.031	-0.038	0.569
Global Warming Probably Not Happening	-0.139	0.666	-0.054	0.008	0.151	0.106	-0.016	0.186	0.534
Global Warming Would be Good	-0.056	-0.106	-0.124	-0.021	0.531	0.385	-0.255	-0.043	0.527
Global Warming Would be Neither Good nor Bad	-0.147	0.679	-0.017	-0.034	-0.112	-0.025	0.179	0.217	0.576
Global Warming Mostly Natural	-0.157	0.561	0.033	-0.075	0.103	0.087	-0.620	0.106	0.759
Global Warming Equally Human and Natural Caused	-0.048	0.066	0.028	-0.031	0.027	0.006	0.895	0.014	0.809
Govt should be doing less on Global Warming	-0.047	0.756	0.063	0.115	0.116	0.087	-0.211	-0.050	0.659
Moderately or Strongly Oppose Vaccination	-0.028	0.228	0.008	0.125	-0.147	0.728	-0.022	-0.166	0.648
Neither Favor Nor Oppose Vaccination	-0.022	0.080	0.080	-0.007	-0.073	-0.018	-0.023	0.860	0.759
Vaccines Cause Autism	-0.031	0.005	0.095	0.011	0.112	0.823	0.012	0.127	0.715
Birther	-0.305	0.279	0.386	-0.055	0.229	0.191	0.079	-0.045	0.419
Extreme Opposition to Birthright Citizenship	-0.149	0.363	0.480	0.182	0.117	-0.017	-0.054	-0.088	0.442
Strongly Favor Ground Troops to Fight Isis	-0.098	0.095	0.101	0.020	0.604	-0.057	0.003	-0.139	0.416
Strong Opposition to Syrian Refugees	-0.203	0.383	0.563	0.208	0.211	-0.088	-0.026	0.008	0.600
Eigenvalue proportion	0.233	0.077	0.060	0.059	0.047	0.040	0.035	0.033	
Cumulative proportion	0.233	0.310	0.370	0.429	0.476	0.516	0.551	0.584	

Note: Shaded and outlined cells indicate loading >|0.40|

Data Source: Microdata files for the 2016 Pilot Study for the American National Election Studies, Stanford University & University of Michigan.

This is where the central-tendency biases and cause-and-effect biases of the workhorse of the

social sciences — regression methods of the sort used to produce Table 1 — must give way to the more modest descriptive and correlational methods of Warren Torgerson’s era: principal components analysis and factor analysis. Recall, from Table 1 (Model 2) that in early 2016 those who doubted Barack Obama’s birth qualifications for the presidency were 4.52 times more likely to prefer Trump as the Republican nominee — but this effect fell to 1.77 in Model 3 when factoring in several other politicized issues (such as the willingness to accept Syrian refugees). The multicollinearity that creates *problems* in regression approaches becomes the *focus* for factor analysis (Table 2). At this very early stage of the primary race, Trumpism (Factor 3) was defined by a hatred of Obama (strong negative loadings) versus strong positive loadings for Whiteness, fear of a possible Latino president, a backlash against politically correct language, and an aversion to birthright citizenship as well as Syrian refugees. A separate dimension (Factor 2) captures hatred of Obama and Clinton (and also an anti-political correctness stance), along with paradoxically strong yet uncertain views on global warming. Notice also, however, that Trump’s years of driving home the birther lie had diffused this manufactured narrative across multiple dimensions of political sentiment; the only sizeable negative loading appears on the very first dimension — the dominant axis of contemporary political identity in America, what we might call ‘progressivism.’ In descending order, the strongest positive loadings here reflect affinities for Hispanics, Blacks, gays and lesbians, transgender people, Muslims, scientists, feminists — and then the other half of pro-White attitudes not colonized by Trump. Note also that there are distinct axes of political identity among anti-vaxxers (Factors 6 and 8) and a separate dimension of eager anticipation for the good of global warming — combined with an obsessive fear of an imminent terror attack and strong support for sending ground troops to fight ISIS.

For decades, there has been a vast industry at the intersection of marketing and psychological political manipulation devoted to measuring and mining these kinds of shifting preferences and perceptions.¹⁸⁵ This endeavor reached new levels of cybernetic manipulation in 2016, with a spinoff of a British defense contractor involved in Afghanistan counterterrorism psy-ops and the U.K. Brexit vote working to help U.S. Republicans with micro-targeted “psychographic” political ads. The firm, Cambridge Analytica, claims to have built a database with some 3,000 to 5,000 data points on each of 230 million Americans, and on a single day during a debate between Trump and Clinton the firm tested 175,000 different versions of an advertisement; this pseudo-randomized control trial “testing on a biblical scale” was integrated with a micro-targeting capacity through Facebook “dark posts” seen only in the Facebook timelines of specifically-targeted users.¹⁸⁶ Trump’s campaign was able to micro-target carefully-crafted negative news about the Clinton Foundation’s failures in providing aid in the aftermath of the Haiti earthquake, for example, and then deliver this news to voters in Miami’s Little Haiti neighborhood in order to suppress turnout for Clinton.¹⁸⁷ As political consultancies seek to measure and mobilize the electoral possibilities of right-wing rage, that anger is intensified across the shifting media landscapes of Fox News, Breitbart, the Drudge Report, and the prairie fires of countless conspiracists of neonativist netroots. Alex Jones is by no means alone. But his vision provides

¹⁸⁵ See, for example, Jon Goss (1995). “We Know Who You Are and We Know Where You Live: The Instrumental Rationality of Geodemographic Systems.” *Economic Geography* 71(2), 171-198.

¹⁸⁶ McKenzie Funk (2016). “The Secret Agenda of a Facebook Quiz.” *New York Times*, November 19.

¹⁸⁷ Hannes Grassegger and Mikael Krogerus (2017). “The Data That Turned the World Upside Down.” *Vice*, January 28.

an especially vivid warning of the strange brew of survivalist rage against welfare-state social policies and multilateral cooperation on the matter of climate change. Trump is being “attacked by all the scum,” Jones declared in an emergency report on March 5, 2017, the day after Trump’s tweet alleging the Obama wiretap; “They’re never going to stop, because they’re after us, the bitter clingers, the Christians, the gun owners, the hard workers. They feed off us, and parasites always have disdain for the host.” Jones’s attacks on the ‘climate change hoax’ of the Globalists’s attempts to “enhance humanity” with planetary “social engineering” represent a violent hijacking of Vernadsky’s noösphere, a contradictory form of evolutionary creationist hatred — an apocalyptic social media scripture that claims to reject Social Darwinism while selling BRAINFORCE and ANTHROPLEX so the InfoWars troops will be fit enough to survive in the whirlwind. The nationalism of Trump and LePen is the last line of defense against the Globalists, control freaks “that are out to dominate alpha females and alpha males,” because “it’s a culture based on dehumanization by sick, twisted, fallen people who want to dominate the species in some act of vandalism. It’s Satanism.” We are at a fork in the road, Jones tells his listeners, and we

“...better make that right turn. Cause let me tell ya, we go down into what’s right in front of us, only the most wild-eyed and crazed of us are ready for it, because let me tell you I’m not worried about going down that road. It’s gonna be all the slugs, and all the cowards and all the dumbasses that are gonna find out what happens when the veneer of civilization gets ripped back. And that it’s the law of the jungle then. And all you jellyfish that have been livin’ artificially off of our good graces and our kindness, those that took our kindness for weakness, you’re gonna be devoured by your own. Vengeance will not be delivered by me. Vengeance will be delivered by God Almighty, and history shows it, it’s a mathematical equation, so understand this, you have been warned. It’s an InfoWar ... spread that link! In a savage way.”

Elvin Wyly, *March 2017*
ewyly@geog.ubc.ca
<http://ibis.geog.ubc.ca/~ewyly/>