

The Wicked Problem of Climate Change

with Karl E. Peters, "Living with the Wicked Problem of Climate Change"; Paul H. Carr, "What Is Climate Change Doing to Us and for Us?"; James Clement van Pelt, "Climate Change in Context: Stress, Shock, and the Crucible of Livingkind"; Robert S. Pickart, "Climate Change at High Latitudes: An Illuminating Example"; Emily E. Austin, "Soil Carbon Transformations"; David A. Larrabee, "Climate Change and Conflicting Future Visions"; Panu Pihkala, "Eco-Anxiety, Tragedy, and Hope: Psychological and Spiritual Dimensions of Climate Change"; Carol Wayne White, "Re-Envisioning Hope: Anthropogenic Climate Change, Learned Ignorance, and Religious Naturalism"; Matthew Fox, "Climate Change, Laudato Si', Creation Spirituality, and the Nobility of the Scientist's Vocation"; Christopher Volpe, "Art and Climate Change: Contemporary Artists Respond to Global Crisis"; Jim Rubens, "The Wicked Problem of Our Failing Social Compact"; and Peter L. Kelley, "Crossing the Divide: Lessons from Developing Wind Energy in Post-Fact America."

THE WICKED PROBLEM OF OUR FAILING SOCIAL COMPACT

by Jim Rubens

Abstract. The United States is an outlier among nations in its failure to adopt robust climate policy. The underlying cause is not unique to the climate issue. Climate, like growing national debt, embodies a trade-off between individual consumption now versus investment yielding long-term societal gain. Over human history, social norms favoring one over the other wax and wane with the pervasiveness of transcendental values as embodied in personal virtue, social connectedness, spirituality, and religious faith. Over the past few decades, many indicators show that American social norms and extended cooperation have weakened. Given entrenched political corruption and continuing institutional failure to address multiple long-term societal challenges, individuals are called upon personally to practice and to enforce pro-social norms and to advance high-leverage systemic changes, some identified in this article, which will allow extended cooperation to once again flourish.

Keywords: climate; debt; ethics; evolution; extended cooperation; group selection; political corruption; social compact; social norms; transcendental values

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Humans dominate and shape our planet as no other species since Cyanobacteria 2.4 billion years ago. Cyanobacteria ruled during their time by oxygenating the atmosphere, transforming both geology and forms of life. While chart-topping intelligence is central to the human story, our “killer app” is a complex form of social organization I’ve called “extended cooperation” (Rubens 2009).

Extended cooperation is a shared social behavior fostered by cultural institutions including religion and the transcendental philosophies (Murray 2003). Extended cooperation encourages us to give and to make anonymous costly sacrifice to genetically unrelated individuals in our group while expecting nothing in return other than the dopamine rush and good feeling we get when doing so.

When cooperative giving becomes widespread in a society, it is self-reinforcing and expands shared material and psychological prosperity. These gifts are sometimes immensely valuable inventions that quickly become free of charge and are handed down across generations through imitation and teaching and have powerfully accumulated in number and synergy to everyone’s benefit. Although extended cooperation has waxed and waned over human history, its pattern of invention, gifting, teaching, and accumulation is one of directional progress and expansion. The lastingly sweet fruits of extended cooperation include agriculture, written language, calculus, musical polyphony, constitutional government, the internet, one-size coffee cup lids, and politeness to strangers.

OUR FAILING SOCIAL COMPACT

However, extended cooperation has waned in the United States starting in the late 1960s. The wicked problem of climate change has as its root the even more wicked meta-problem of our failing social compact. This failure is characterized by a shift in unwritten behavioral norms away from long-term shared thriving and to immediate self-gratification.

A straightforward and precisely quantified indicator of this shift is debt. Absent war and natural disaster, more debt in a society can indicate preference for consumption now over investment for later; more for me, less for the grandchildren. Since 1980, when the consume-now, pay-later debt binge began, total nonfinancial business, household, and government debt has more than doubled from 150 to 370 percent of gross domestic product (Federal Reserve Board 2017). These numbers do not include nearly \$50 trillion in unfunded future liabilities for the Social Security and Medicare programs (Centers for Medicare and Medicaid Services 2017). A growing fraction of this debt has been used to fund current consumption and financial engineering over saving and future payoff investment in education, research, capital goods, and infrastructure.

Another indicator of failing extended cooperation is that an astounding 80 percent of mid-level employees steal from their companies. A survey by the Ethics Officers Association found that nearly half of US workers anonymously admitted to unethical or illegal actions over the prior year, such as expense account padding, discriminating against coworkers, paying or accepting kickbacks, forging signatures, trading sex for sales, breaking environmental laws, time theft, and lying to customers (Callahan 2004).

One in four Americans surveyed think it is OK to defraud an insurance company (Oster 2003). Cheating on taxes cost the United States government at least \$458 billion in 2010, up from \$100 billion in 1990. One-third to one-half of the taxpaying population participates in the game. High tax rates have nothing to do with it; after the tax cuts of 1981 and 1997, underreporting of taxable income actually increased (Internal Revenue Service 2017).

Nearly four in ten doctors admit to making false claims to insurance companies over the prior year (Wynia et al. 2000). Gaming by hospitals, doctors, and drug companies to squeeze increased payments from insurers and governments has become increasingly aggressive and devious (Rosenthal 2017). Dr. Marcia Angell, a physician and longtime editor-in-chief of one of the world's leading medical journals, wrote, "[i]t is simply no longer possible to believe much of the clinical research that is published, or to rely on the judgment of trusted physicians or authoritative medical guidelines. I take no pleasure in this conclusion, which I reached slowly and reluctantly over my two decades as an editor of *The New England Journal of Medicine*" (Angell 2009).

The Educational Testing Service in its long-running survey of college students reports that, whereas about 20 percent admitted to cheating in high school during the 1940s, today at least three in four do. Among married and engaged couples, one-third of women and one-quarter of men admit to concealing substantial personal expenditures or investments from their partners (Redbook, and lawyers.com 2017).

The General Social Survey, run at the University of Chicago, generally considered to be the gold standard source for social science data, has measured a decline in community coherence over recent decades. Between 1972 and 2016, Americans reporting that "most people can be trusted" has dropped from 46 to 32 percent. Those without a single close friend have tripled to one in four of us. In another survey showing the worsening loneliness trend over recent generations, 43 percent of those aged 45–49 classified themselves as lonely compared with only 25 percent of those aged seventy plus (AARP 2010). Those of us with no religious preference rose from 5 to 20 percent (NORC 2017). According to a recent Gallup poll, a scant 17 percent of Americans think we have good moral values, with

77 percent of us thinking these have become worse over time (Norman 2017).

In his seminal book, *Bowling Alone*, Robert Putnam carefully documents the decline of what he terms “social capital” in the United States over the decades following World War II (Putnam 2000). This deterioration has continued in the new century, marked by shorter lifespans, acts of extreme violence against random strangers, increased prevalence of major depression, substance and behavioral addictions and, now, almost unbridgeable ideological tribalism. We are witness to the reality that strong extended cooperation is not guaranteed, even in our economically advanced societies.

America’s formal institutions—law enforcement, courts, Congress—have become overtaxed as weak and unwieldy substitutes for the pro-social norms on which extended cooperation is built. When Hurricane Katrina temporarily shut down those institutions in New Orleans, our failing behavioral norms became glaringly obvious. The breakdown was not just the thousands of fundraising benefit scams, looted TV sets, stinking feces everywhere, and the dead left untended. Well before the subprime mortgage collapse triggered the great recession, almost everyone knew that fraud had become pervasive, from homebuyers falsifying their incomes to brokers waving off concerns about the rate reset clauses to rating agencies assuring investors that subprimes were no more risky than T-bonds. As I write this paragraph, across my newsfeed comes a depressingly typical story of bystanders having fun taking selfies and robbing a woman as she lay sucker-punched and unconscious on a Pittsburgh sidewalk (Perez 2017).

TWO WICKED PROBLEMS

The erosion of extended cooperation in the United States has made it far more difficult for our political system to deal with problems whose solutions entail short-term personal sacrifice in return for long-term shared gain. Emblematic are two wicked problems with the same deeper root: climate change, whose urgency is proclaimed by the left; and our exploding national debt, trumpeted by the right. The ideological and partisan divide on both these issues is sharp, making conventional give-and-take political compromise almost impossible.

Where only 15 percent of conservatives believe that measured warming is caused by human activity, 80 percent of liberal Democrats do (Funk and Kennedy 2016). The most recent vote on any substantive policy to address climate change happened in the House in 2009, which very narrowly approved a national carbon cap and trade system. Only eight House Republicans backed this bill which died without a vote in the Senate. More recently in 2016, on a nonbinding resolution opposing a

national carbon tax, every House Republican voted to oppose such a tax and all but six Democrats voted in support (Cama 2016).

When it comes to the long-range problem of national debt, conservatives point blame's bony finger at liberals and Democrats. Federal debt on the books exceeds \$20 trillion, now growing by an average of \$1 trillion each year. Most of this debt constitutes a transfer of wealth and income to present beneficiaries and from young and unborn people who cannot vote on this massive inter-generational theft. Apart from World War II, in past decades federal debt was added primarily to fund investments such as infrastructure and research. Today, debt is added primarily to fund current spending and unfunded tax cuts. We are taking out mortgages to buy our groceries. Like climate change, the debt bomb will not explode until some uncertain time in the future beyond the next election.

The most recent votes in Congress over substantive policy to address national debt and deficits, a constitutional balanced budget amendment, happened in 2011. The amendment gained support of 236 Republicans and 25 Democrats in the House. In the Senate all 47 Republicans voted in favor and all 53 Democrats voted against a similar measure.

The fundamental connection between these two hardened partisan issues is not a difference in preference for science or facts. Many conservatives are in denial about climate science and rising sea levels. Many liberals are in denial about the rising cost of entitlement programs. Both problems are easy to back burner because their most serious consequences are imprecise and will not happen until some time in the future, with heaviest burdens falling on future generations currently lacking political power.

When the two critical matters of climate and debt are raised, they are used as wedges to advance partisan advantage rather than substantial and politically feasible solutions. Short-term political careerism starves out long-range national well-being. Conservatives push debt-financed tax cuts with little Democratic support and which avoid touching the entitlements third rail. Democrats advance climate measures likely to secure few Republican votes.

These unaddressed existential challenges of debt and climate plus health-care costs and military over-extension impelled me to run my underfunded 2014 and 2016 campaigns for the US Senate.

On climate, policy experts and activists fully recognize that nothing of substance will become law without at least one or two Republican champions in the Senate. So during my campaign, I worked to narrow the partisan divide on the climate issue, launching my 2014 primary campaign with a detailed proposal for a revenue-neutral carbon tax. There would be no net tax increase because all proceeds funded cuts to corporate and payroll taxes, and a tax of equal size was removed entirely from statute. The plan fully complied with Grover Norquist's Americans for Tax Reform and the Koch Brothers' Americans for Prosperity tax and energy campaign pledges.

Conservative academic economists have rated similar plans as stimulative to long-term American economic and job growth.

My prior consulting work for the Union of Concerned Scientists gave me credibility as a Republican with the nation's leading environmental organizations and got me pitch meetings with the top decision makers at their political arms. All agreed that a Republican Senator was needed to lead on the climate issue and that my specific plan was substantive, credible and politically appealing. Adding to the uniqueness of my case, Huffington Post surveyed all 108 Republican Senate primary candidates that year. I was the single candidate to openly support published climate science and my Republican primary opponent was a science denier (Stein and Sheppard 2014). In backing me, these environmental groups could demonstrate organizational bipartisanship and support the political courage needed to advance climate policy.

The outcome? Under only extraordinary circumstances do environmental organizations break ranks with Democratic incumbents. I received no support and not even a specific reply from any of them. The logic behind this seemingly anti-environment behavior by leading environmental groups is actually sound—in the short term. Incumbents usually vacuum up all the interest-group campaign money and get re-elected about 95 percent of the time. The Democratic incumbent in my campaign, while not a climate leader, likely did not want environmental groups saying good things about a Republican rival. A cardinal operational rule in Washington is to avoid risk. Do not bite the hand of an incumbent if you want member meetings for the next six years.

But dedicated Americans have not given up. Citizens Climate Lobby, several of whose members attended and presented at the IRAS 2017 poster session, is working to build support for a revenue-neutral carbon tax. As of this writing, its affiliated Congressional Climate Solutions Caucus has twenty-six Republican House members, admittedly most from swing states and relatively safe from primary challenges from the right. DEPLOY/US, on whose advisory board I serve, is doing extraordinary work building support for action among conservative military, business, and faith leaders. But my campaigns taught me the hard way that a carbon tax is dead on arrival in anything like our current Congress. I got no support from the left and crushed my campaign prospects by failing the global warming skeptics' litmus test on the right.

A NATIONAL "MANHATTAN PROJECT" FOR CLEAN ENERGY RESEARCH

Nonetheless, we need an aggressive policy response, far more than anything accomplished to date. Former President Obama's signature Clean Power Plan (CPP), reversed in 2017 by the Trump administration, was the United

States' chief contribution to the Paris climate agreement. But if emissions reduction is the goal, both the CPP and the Paris agreement are almost pure greenwash, another excuse for delay.

The CPP requires approximately nothing beyond what utilities are already doing in replacing coal with cheaper-to-run natural gas-fired power plants. A 2017 analysis of the CPP projected this business-as-usual outcome if states were to trade emissions credits to reduce compliance costs (Larsen and Herndon 2017). James Hansen, former head of the National Aeronautics and Space Administration's climate data program and perhaps the world's best-known climate scientist, calls the CPP "practically worthless" (Dokoupil 2015). Climate scientists say the emission reductions pledged by 196 nations in the Paris agreement—even with the United States—will barely change Earth's warming trajectory. "The pledges are not going to get even close," said Sir Robert Watson, former chair of the United Nations Intergovernmental Panel on Climate Change (Associated Press 2016).

Given worldwide political and economic reality, humans will not stop burning fossil fuels until abundant, convenient, and cheaper energy sources hit the free market. Then, energy consumers worldwide will transition to these energy sources within a generation or two, without government compulsion or incentives. Reflecting on the history of human invention and progress, I am virtually certain that cheaper clean energy sources are coming, but we do not know how quickly or who will invent and commercialize them. The political and technological solution to global warming is therefore to accelerate American energy innovation.

Politically, we can build on the strong and durable cross-partisan understanding that American prosperity is dependent on domestic innovation. Witness the enduring support by Republicans and Democrats for tens of billions in federal funding for early-stage research in defense technology and the health and biological sciences.

For national defense, annual taxpayer-funded research and development (R&D) has averaged \$80 billion over the past ten years, spinning off massive societal benefits such as microprocessors, the internet, and the global positioning system (GPS). Similarly, for blue-sky health sciences research annual taxpayer funding over the past ten years has averaged \$34 billion in federal grants, with the United States dominating the world in medical technology and biomedicine, gaining the nation millions of high-paying jobs and billions of dollars in net exports. Natural gas exports notwithstanding, America's huge missed growth and prosperity opportunity is in energy, a gigantic 8 percent of the world economy. Federally sponsored basic science energy research gets only \$3 billion per year, too little to ensure continued US energy technology leadership (Institute for Energy Research 2010).

A workable political compromise that could appeal to Republicans would start by phasing out all mandates, subsidies, and tax preferences (\$5.2 billion per year) for already-commercialized wind, solar, biomass, fossil, and nuclear power technologies (US Energy Information Administration 2015). In return, the resulting budget savings would be used to phase in funding of \$10–15 billion per year for high-risk, blue-sky research in more efficient photovoltaics (tunable nanocrystals, quantum dots, and carrier multiplication), modular thorium reactors, materials science and battery chemistry (Phys.org 2017). During my campaigns, I called this a Manhattan Project for clean energy research (Rubens 2016).

Given the abundance and global distribution of sunlight falling on Earth's surface, if today's battery energy density and costs were improved by four times and solar photovoltaics (solar PV) made 50 percent more efficient, global warming would be licked. On price and convenience alone and without government subsidies or mandates, consumers and businesses worldwide would shift *en masse* from fossil fuel use. As a citizen, I want these products to be invented and made in America, sooner not later and not in China.

Given its state-directed mercantilist capitalism, China may have already leapfrogged the United States, given policy gridlock in Washington. As of year-end 2015, China was second in the world in wind production at 22 percent, the United States just ahead at 23 percent. For solar PV, China was number one in the world at 18 percent, the United States number four at 13 percent. In 2016, China doubled its solar PV capacity with twice United States capacity installations. China was number one in electric vehicle (EV) unit sales, with nearly half of world sales. China is number one in installed EV fast chargers, critical to mass consumer adoption (International Energy Agency 2017a, 2017b). In 2017, the Chinese government imposed rules requiring auto importers to sell more EVs if they wanted to continue selling fossil-fuelled cars. As measured by government-sponsored renewable energy R&D in 2016, China's spending was almost twice that of the United States (Frankfurt School–UNEP Centre/BNEF 2017).

To be clear, if the United States is to retain its technology lead, federal energy spending must not be used to line the pockets of crony capitalist enterprises like Solyndra or Tesla, where politicians take campaign money bribes to pick politically favored businesses. Subsidizing commercialization over basic research, as we do now in the United States, corrupts government and distorts and freezes marketplace dynamics which otherwise drive down cost and accelerate commercialization. These distortions give us poorly located windfarms in New Hampshire and grossly uneconomic and bankrupt nuclear plants in Georgia.

Market libertarians object to my Manhattan Project clean energy plan, preferring private over federal research spending. This is exactly the

fifty-year trend across the US economy. I have already noted that federal investment yielding long-term payoff such as for infrastructure and R&D has been cut to pay for increased spending on current-year benefits such as retirement security and healthcare. In the private sector, activist investors have in most cases forced corporate management to make risk avoidance and fast payoff R&D more important than the science breakthroughs that deliver order-of-magnitude gains (Samuels 2016). Net, America's long-term competitive position has weakened, with total US R&D spending as a fraction of our economy, dropping to eleventh in the world (National Science Foundation 2016; UNESCO Institute for Statistics 2017). Once again, we can see the fingerprints of me-first short-termism.

Regardless of your position on global warming, boosting blue-sky energy research and ending subsidies and mandates means smaller, less intrusive government and a stronger, more secure America. We can reduce energy costs, bring jobs home, end free-world reliance on fossil fuels from hostile nations, and cut pollution and poverty worldwide. This Manhattan Project in clean energy research has a better shot in today's Congress than any other substantive climate solution.

ROOT-CAUSE SOLUTIONS

But long-range solutions to climate change and our several existential national challenges will remain blocked until we address the root cause: deterioration of the social compact and weakened extended cooperation. Top-down institutional change is unlikely because the American national political system is now rigidly gridlocked by powerful interest groups. Those of us dearly wanting more social good must step into this vacuum by surgically concentrating our voluntary energy on high-impact system change. Below are five suggested system changes.

The first is to reverse embedded corruption in Washington politics. The post-Watergate and McCain-Feingold campaign finance reforms focused on limiting spending have failed. A ground-breaking 2014 study by two Princeton political scientists traced the outcomes of 1,800 contested policy issues over a twenty-year period. Little surprise: economic elites and organized business interests enjoyed a substantial impact. The stunner: average members of the public have statistically zero influence over what happens in Washington (Gilens and Page 2014). While I strongly encourage all citizens to vote, see how far your vote gets you if your objective is to stop endless wars of choice or oligopoly control over last-mile internet access.

With respect to climate change politics, over the 2015–2016 political cycle, the oil, gas, and mining (primarily coal) industries spent \$406 million for campaign contributions and 722 registered lobbyists (OpenSecrets.org 2017). Ninety percent of these contributions went to Republicans, with

the average Republican Senator receiving a decisively influential \$174 thousand. Two in three of these industry lobbyists passed through the conflict-ridden “revolving door,” having previously served in capacities such as Congressional energy committee staffer or energy agency regulator.

No surprise that the public has reached the boiling point about national politics, with pitchfork-wielding “outsiders” like the Tea Party, Bernie Sanders, and Donald Trump temporarily (only temporarily) upending the “establishment.” General Social Survey (GSS) data show that from 1972 to 2016 those Americans with “hardly any” confidence in Congress rose from 15 to 52 percent (NORC 2017). Today, an overwhelming 93 percent of Americans believe that big-money donors have more influence on elected officials than do regular voters (Hensel 2016).

Fortunately, the US Supreme Court tells us exactly how to drain the Washington swamp (*Nevada Commission on Ethics v. Carrigan* 2011). This unanimous decision, penned by conservative icon Antonin Scalia, clears the path for Congress to enact a thoroughly constitutional way to end the pervasive corruption of the American political process.

By law or rule, Congress can require members to recuse themselves from voting on any measure in which they have a perceivable conflict of interest. Such conflicts include campaign contributions, independent election expenditures, and personal, business, or family-member financial interests affected by the vote. With an enforceable recusal requirement in place, a large donor wanting to buy a politician would find that politician unable to vote on matters pertaining to the donor’s interest.

Sounding like a left winger, Justice Scalia wrote in the Court’s decision that a recusal requirement is constitutionally permissible because the First Amendment “has no application when what is restricted is not protected speech. . . . The legislative power thus committed [to the elected official] is not personal to the legislator but belongs to the people” (*Nevada Commission on Ethics v. Carrigan* 2011).

The Supreme Court found that legislative recusal rules have been common in the states and Congress almost since our nation’s founding. A 1789 House rule read: “No member shall vote on any question, in the event of which he is immediately and particularly interested.” An 1801 Senate rule written by then–Senate President Thomas Jefferson read: “Where the private interests of a member are concerned in a bill or question, he is to withdraw.”

A recusal requirement will help, but on its own may not sufficiently drain the swamp so that members of Congress vote consistently for long-range social prosperity. So, I add public elections funding to my recipe for fundamental cure. Every registered voter is given a \$100 tax rebate voucher each two years. Voters may contribute all or part of their rebate voucher to any federal candidate voluntarily refusing to accept campaign contributions above \$200 from any source. Eligible candidates must first

establish credibility by having raised a required minimum number of small dollar contributions from persons eligible to vote for the participating candidate.

Many conservatives object to their taxes being used to fund candidates they would otherwise oppose. But the cost to taxpayers of this tax rebate system would be at least an order of magnitude less than the present pay-to-play system, where political money is traded for taxpayer-financed tax loopholes, pork, and regulatory and diplomatic favors. The Sunlight Foundation examined fourteen million records over the period 2007–2012 covering campaign contributions, lobbying spending, federal grants, loans, contracts and bailouts for the top two hundred politically active companies representing 26 percent of all campaign and lobby spending in Washington. The bottom line: in total, these companies received a jackpot \$770 in return for every dollar spent on political influence, among the highest returns on any legal activity imaginable (Allison and Harkins 2014).

Although Congress has the power by rule to require recusal and Congress and the president can enact public elections funding, endemic corruption and incumbent self-interest make it unlikely that the American political system will self-heal. Fortunately, America's constitutional framers were endowed with remarkable foresight and properly feared a corrupt, unaccountable Congress unable to reform itself. During the final two days of the 1787 constitutional convention, Virginia delegate George Mason proposed that the constitution be amendable via two routes, one with amendment language proposed by Congress and ratified by the states, the second with amendments both proposed and ratified by the states. All twenty-seven amendments ratified to date were proposed by Congress, with the state-led amending process in Article V never yet used. However, the threat of a state-led Article V amending process has forced Congress into action, most notably in 1789 when Congress proposed the Bill of Rights amendments and in 1912 when Congress proposed what became the Seventeenth Amendment providing for direct election of senators.

I do not believe that Congress will restrict its members sufficiently enough to end endemic political corruption. I therefore encourage individuals to engage in my root cause solution number two. Become vigorously active in one of the several Article V state-led amending movements which were launched in their current forms over the past few years. If you want to end political corruption, consider joining WolfPAC. Relative to federal debt and term limits, consider Convention of States or the Balanced Budget Amendment Task Force.

Root cause solution number three starts with my rant about media bias, but not for the reasons you would expect from a Yankee conservative. In my 2016 Senate run, my establishment-backed opponents were massively floated on a combined \$120 million of out-of-state interest group campaign money. Please reflect on this: \$120 million spent in a small state for one

US Senate seat. Because I was so underfinanced compared with my rivals and because I am a policy nerd by nature, my Senate campaigns amounted to field tests of the quintessential “campaign of ideas” that editorial writers moon about. My campaign was a deep dive into detail and policy on the big issues. I hired an experienced communications director who did nothing but work media contacts all day, every day with my white papers, expert panels, and policy contrast with my two opponents. Media, even avowedly high-minded public radio, were almost entirely uninterested in covering substantially different approaches to combating terrorism, treating opioid addiction, stimulating job growth, reducing healthcare costs, balancing the budget, or curbing global warming.

The media bias here is not liberal or conservative. The bias filter sugars down to who has money and who said something inflammatory. When issues do hit media’s radar, coverage is inch-deep, mosquito-like in attention span, often without context or follow-up. Media bias confines and constricts the breath of public debate, suppresses free inquiry, and embeds political sclerosis. These views are not mine alone. Between 1972 and 2016, Americans with “hardly any confidence” in the news media spiked from 14 to a stunning 50 percent of us (NORC 2017). Media has contributed to a deeply factionalized and dumbed-down American politics. American media must voluntarily downgrade titillation and ambulance chasing, stop the hand-wringing at Aspen conferences, and put national political health on its main menu.

Root cause solution number four is . . . us. We are failing as citizens. Last year at Republican Party events featuring, not just me for Senate, but all New Hampshire primary candidates for the top offices of Congress and Governor, turnout was consistently low, probing questions painfully few. Sanders and Trump rallies were not citizenship; they were mass pleas for a savior from the corrupt, unresponsive political establishment. There will be no savior from our collective dereliction. America’s founders repeatedly warned that the system of liberty and self-government they had fashioned depends on a moral and ethical people who remain vigilant in their individual duty to hold government accountable.

And solution five is a change in thinking habits for all of us, citizens, politicians, and media. We celebrate the contributions of technology and business innovators. We need to do the same for innovators in politics and public policy. Loosen up our thinking, not compromising and splitting differences (surely sometimes called for), but breaking out of our ideological corners, actively cultivating and weighing new ideas and rewarding risk-taking. Each of us should take risk in our own social groups and professional lives. Break with comfortable dogma and constructively and respectfully champion controversial or unorthodox viewpoints and solutions. Go big and bold behind breakthroughs that can leapfrog gridlock and bridge hyper-partisanship.

STRENGTHENING TRANSCENDENTAL VALUES

However, even system change will not restore America as beacon and exemplar of human progress and goodness. The wicked problem of climate change is actually the more wicked and fundamental problem of our waning social compact and the weakened role of transcendental values in shaping modern culture.

Transcendental values motivate us informally by encouraging our simple humanitarian instinct to reach beyond self in our endeavors and more formally under guidance from the humanist and spiritual philosophies to the extensively articulated and institutionalized religions. Higher order cross-cultural examples of these values are good, truth, and beauty (Graves 2009). We might add justice and love or compassion. Matthew Fox highlights goodness, beauty, and creativity. Whether helping a neighbor facing hard times or, on a macro scale, Pope Francis calling on Christians to reject narcissism and to care for God's gift of fertile Earth, the pull of transcendental values can be equally intense and fully valid (Fox 2018). The big problem, however, is that human cultures vary enormously. Why do only some societies fully nourish our human tendency to sharing, purpose, and meaning? What forces perpetuate a culture fostering these transcendental values?

Little mystery here: healthy culture is inherited from the institutions and behavioral norms given by our forebears and then protected and expanded (or contracted) by the sum of our individual influences, large and small. Looking at the smallest influences, Kees Keizer and his coworkers (Keizer et al. 2008, 2013) have for years studied the subtle effects of norms adherence cues on pro-social behavior in public spaces. Even a dropped cigarette butt is linked to more serious transgressions of the social order, from littering to theft. Small social disorder cues signal lack of general respect for all social norms. Preserving conformance with order and charity norms requires both self-restraint and peer pressure, including by strangers against small violations.

Experiments show that such small individual influences can have very large effects. For example, when two garbage bags were placed in view, random passersby were only half as likely to pick up an addressed letter left on the sidewalk and then deposit it into a nearby post box. Passersby were about 75 percent *more* likely to put a fallen bicycle into a nearby bike rack if they saw a stranger dropping and picking up a soda can. This differential in pro-social, bike-racking behavior increased more than five times when, in the control condition, two garbage bags were placed in view. When seeing another stranger dropping and picking up a soda can, twice as many passersby helped a stranger pick up a bag of dropped oranges (Keizer et al. 2008, 2013).

The small-things, “broken windows” theory has been proven by urban policing and maintenance practices. We can increase social order by maintaining social order. But we can go beyond broken windows, setting examples intended for imitation by publicly correcting norm violations. We can powerfully encourage strangers to engage in voluntary, socially beneficial behaviors by enforcing order and charity norms during our routine daily lives. A key feature of this type of cooperation is our automatic propensity to help enforce society’s unwritten rules by informally punishing those who violate them, even if we get no personal benefit and are punished for doing so. Evolutionary biologists call this behavior “costly sanctioning.” When the cost of costly sanctioning becomes too great (for example, hostility from the violator or bystander neutrality) or is too frequently required, healthy social norms will deteriorate or collapse (Boyd et al. 2003; Fehr and Fischbacher 2004; Egas and Riedl 2008). Small pro-social actions and corrections can have large local impacts which, when replicated by others, protect and enhance society’s prevailing culture and the extent to which that culture fosters deeper transcendental values.

Charles Darwin ([1871] 2004) originated the still controversial group selection theory that social cohesion and morality are selective advantages operating at the group, rather than just the individual or family genetic, level.

It must not be forgotten that although a high standard of morality gives but a slight or no advantage to each individual man and his children over the other men of the same tribe, yet an increase in the number of well-endowed men and an advancement in the standard of morality will certainly give an immense advantage to one tribe over another. A tribe including many members who, from possessing in a high degree the spirit of patriotism, fidelity, obedience, courage, and sympathy, were always ready to aid one another, and to sacrifice themselves for the common good, would be victorious over most other tribes; and this would be natural selection (Darwin [1871], 2004 157).

Joseph Henrich, in his decades of groundbreaking work as an evolutionary biologist, has gathered a robust body of evidence supporting Darwin’s group selection theory. Henrich has shown that a shared culture of widespread cooperation—undergirded by prevailing practice of social rewards for good behavior and sanctions against norm violations—is humans’ most powerful evolutionary advantage. Cross-cultural studies show that extended cooperation is strengthened or weakened by varying cultural norms, which are the sum of individual behaviors, the imitation of those behaviors, and the social institutions that develop around normative behavior. The combination of population size and level of interconnectedness and cohesion in a society determine its rate of technical advance and prosperity. Moreover, as Henrich wisely speculates, our bodies and brains have evolved to the extent that we can no longer survive in a culturally

wild world without extended cooperation, an accepted social compact and (as I extrapolate) guiding transcendental values (Henrich 2015, 185–230, 213–14, 314–31).

Given Earth's unusually stable and benign climate over the past ten thousand years, human societies have become increasingly cooperative among people across space and time and through increasingly complex relationships and mediating institutions. This extended cooperation has enabled astounding progress in innovation and general well-being. This progress accelerated starting in early Renaissance Europe with the spread of literacy, science, religious faith, and transcendental values. But progress over the past few centuries has continued to vary enormously among societies. Today, we depend on an expectation that most of us will cooperate. If norm enforcement becomes too difficult, too great a burden on those doing it, too frequently necessary or ineffective, then extended cooperation will break down.

Human culture is a garden needing soil enrichment, weeding, trust among strangers, and confidence in institutions. As we learn more about complex and distant threats (an asteroid hit, synergistic toxics, or climate change) and become more dependent upon scale and complexity, we must continue to invent new forms of extended cooperation.

It is not unpatriotic to say that cultural progress in contemporary America has been backsliding. Each of us holding dear any form of transcendental cultural values has a duty to turn this around. There will be no benevolent king to save us while we hold out with canned food in our gated enclaves. Do not wait for leaders, fitted out with nose rings by the interest groups who bribe them with the trappings of power. Needed now is greater commitment to life beyond self-satisfaction and self-aggrandizement. Repairing the shared culture that has made humans Earth's dominant species must start with individual change. Formal institutions will follow.

Hold the door for a stranger. Build a ramp for a disabled vet. Teach physics in a struggling school. Be a whistleblower if your organization has grown corrupt. Work to understand the values of your political opponents. As to climate change, policy solutions in the United States must bubble up from the bottom. Solutions must accommodate the hardened view that government-imposed restrictions conceal a real motivation to impose alien values and to put remote elites in control of personal choices.

Over past millennia, our behavioral norms and institutions have fostered progressively larger and more complex societies in service of human well-being. My bullish view is that we can continue this directional progress because we are discovering that widely held transcendental values are necessary for shared prosperity. Our challenge is to endow shared culture with the capacity to accommodate longer term positive goals without the unifying pressure of war or natural disaster. Apparently, in the United

States, we will not solve the wicked problem of climate change until we learn how to do this. When we do, and we will, humans will have invented the new form culture we need that accommodates both personal autonomy and cooperation across distant time and space.

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