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*Dear MuseLetter subscriber,*

*This month's issue consists of two essays. The first, "Avalanche," is an update on the US response to the coronavirus pandemic; the second, "Doom or Denial: Is There Another Path?" is a comment on a dispute that has broken out between members of Extinction Rebellion and Deep Adaptation.*

*Stay safe and sane,*

*Richard*

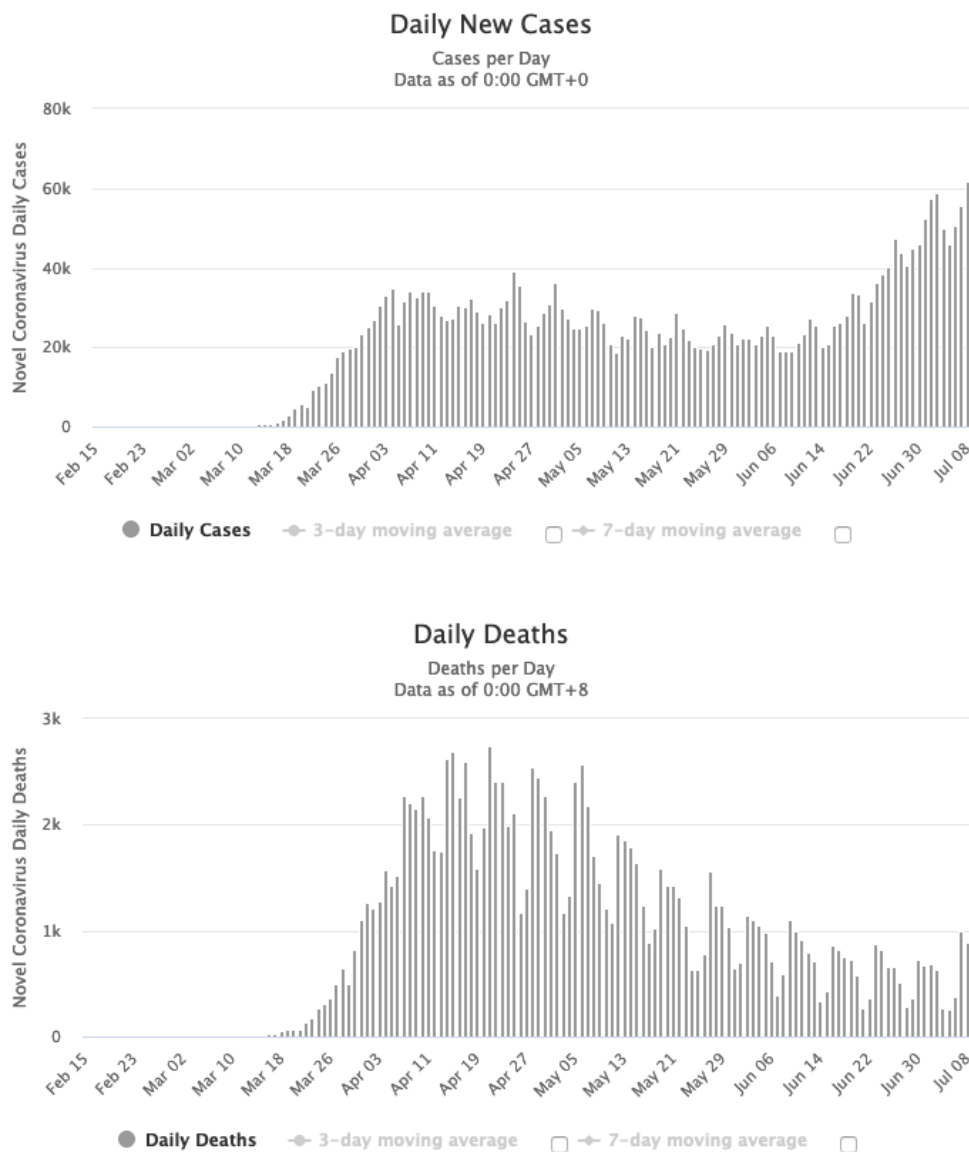
## **Avalanche**

How bad could it get? For the United States, it seems there is no bottom.

Back in March, I [wrote](#) that the nation's response to the coronavirus pandemic would likely shape its economic, political, and geopolitical fortunes for years or decades to come. Four months later, it's time for a check-in. How's that pandemic response going?

Not so well, it seems. The US has the world's highest number of cases and deaths overall. And of the world's 25 worst hotspots for transmission, in terms of new cases per day per million of population, 15 are US states.

Early success at "flattening the curve" of the graph of new cases reported daily was followed by a re-opening of the economy that was premature (i.e., before sufficient capacity for testing and contact tracing had been put in place), resulting in a surge of new cases.



Source: <https://www.worldometers.info/coronavirus/country/us/>

The only good news the Trump administration can point to is a fairly stable and low death rate as compared to the number of new cases. This “low” death rate (hundreds are still dying each day) is attributable to improving treatment methods for patients who have been infected, a lower average age of those infected, and an understandable lag between the infection trend and the deaths trend. If the last of these factors is significant, then the number of daily deaths will start climbing soon—as the last few days’ numbers already seem to indicate.

In addition, the United States is one of the countries hardest hit economically by the pandemic. Its latest unemployment rate stands at 11.1 percent (which doesn’t include discouraged workers), as compared to Germany’s 5.5 percent, Japan’s 2.6 percent, and the UK’s 4 percent.

As bad as they are, these statistics don’t fully capture the situation. If the US federal government had a long-range plan for weathering the pandemic, perhaps the death and suffering would be justifiable. But evidently there is no realistic plan.

With its initial aversion to lockdowns and the wearing of facemasks, the Trump administration appeared to be hoping—whether intentionally or unintentionally—for Americans to achieve “herd immunity,” thereby eventually ending the pandemic. However, a recent Spanish [study](#) suggests that herd immunity may be an unreachable goal. The study found no evidence of widespread immunity to the virus, which had ravaged the country in earlier months. Just 5 percent of Spaniards were found to have antibodies to the virus, and 14 percent of people who previously tested positive for antibodies tested negative just weeks later. This finding suggests that people who experience mild symptoms do not have long-lasting protection from the disease.

And that in turn means that unless the pandemic is brought under control through quarantines, targeted lockdowns, and contact tracing, it could go on for a long time. Mass vaccination is at least a year away—if a workable vaccine can be produced. Countries like New Zealand and Taiwan acted early and vigorously to contain infections, essentially eliminating the disease from their populations. But that may no longer be possible for the US.

Increasingly, the pandemic is interacting with other, long-festering US problems such as economic inequality, unequal access to medical insurance, and general political dysfunction. Each problem is worsening the others. People with no health insurance hesitate to get tested for the coronavirus, even if they show symptoms. The wearing of facemasks has become politically stigmatized among a swath of the populace. And outrage at racial injustice has compelled millions to take to the streets at a moment when pandemic prudence says “stay home.”

For systems thinkers, self-reinforcing feedbacks are always a sign of impending trouble. Nature is full of *balancing* feedbacks (like predator-prey relationships), which tend to keep complex systems within acceptable operating parameters. In contrast, *self-reinforcing* feedbacks are power imbalances that increase until part of a system, or the system as a whole, gives way. An avalanche is a useful example of self-reinforcing feedback. Once snow and rock far above you start rolling downhill, gathering more material as they go, your options are either to flee or risk getting buried alive.

America faces an avalanche of economic, political, social, and epidemiological problems—some of long standing, some recent—that have been dealt with poorly, if at all. Now, all seem to be coming to a head simultaneously.

For Donald Trump, a different kind of avalanche may be in store. America is currently a giant repository of frustration, anger, and resentment seeking an outlet—i.e., someone to blame. Many Americans who believe their country is exceptional are reluctant to compare it unfavorably with any other nation. However, the statistics are readily available and easy to understand: they clearly show that the United States federal government has utterly botched its response to the worst pandemic in a century, and that tens of thousands of Americans have died needlessly as a result (let that sink in for a moment—*tens of thousands*). While Trump is adept at deflecting responsibility and projecting blame at his enemies, in this case it’s all too obvious where the buck must eventually stop.

History is full of examples of nations turning against their leaders (think Jimmy Carter in 1980 or Winston Churchill in 1945). Authoritarian leaders, whose support depends on their perceived strength and invincibility, tend to fall especially hard when they finally do fall. Followers who formerly would have continued to support the Supreme One even if he shot someone on Fifth Avenue (to borrow Trump’s colorful illustration) cannot abide seeing their hero as weak and vulnerable. When he starts to look like a loser, many former worshipers may suddenly decide that “I never really liked him anyway.”

Should Trump lose, his downfall may not be a particularly happy occasion, even for his many detractors. The election this November is likely to be the most chaotic and contentious in decades. Once all the mail-in ballots are counted, there may be a few moments of *schadenfreude* among long-time Trump haters. Meanwhile, however, his relatively few lingering followers will be hopping mad and yearning to unleash their fury at any available target, at any opportunity. The likely result: continuing political mayhem.

Moreover, even with a new government in charge, the pandemic will rage on. The damage from a disastrously poor initial response has already been done. Erosion of America’s political standing worldwide may slow, as other world leaders will no longer be tempted to make fun of the (new) US President behind his back, but the nation’s economy will likely continue to unravel as repercussions of the pandemic roil.

Further, the actions taken so far by the Federal Reserve and the federal government to shore up the US economy and its financial system have been dramatically skewed in favor of wealthy investors and folks who aren’t in immediate need of financial assistance—while millions of other households and small businesses are increasingly unable to make rent and debt payments. Before the pandemic, the nation was already drowning in levels of debt exceeding those leading up to the 2008 financial crisis. Now, as a result of the pandemic, much of that debt has become unrepayable. This poses an existential risk to the financial system (Nate Hagens has [suggestions](#) for how the worst could be averted).

Keep an eye on that snow-covered mountainside.

## **Doom or denial: Is there another path?**

I was recently asked to comment on a dustup between some members of Extinction Rebellion (see Thomas Nicholas, Galen Hall, and Colleen Schmidt, “[The Faulty Science, Doomism, and Flawed Conclusions of Deep Adaptation](#)”) and Jem Bendell, founder of Deep Adaptation (see his “[Letter to Deep Adaptation Advocate Volunteers about Misrepresentations of the Agenda and Movement](#)”). Since the issues raised in this controversy seem relevant to readers of Resilience.org, I thought it might be worthwhile to accept the invitation and weigh in.

For those not familiar, Jem Bendell’s Deep Adaptation (DA) takes as its starting point the judgment that, because of unfolding human-induced climate impacts, the near-term utter collapse of society is nearly inevitable. Extinction Rebellion (XR) is an activist movement that uses civil disobedience to compel government action to avoid climate tipping points

that would lock in trends leading ultimately to ecological and social collapse. In simplistic terms, you could say that Deep Adaptation is about accepting and coping with the reality of climate-driven collapse while Extinction Rebellion is about acting to prevent it.

The nub of the controversy is this: some folks involved in Extinction Rebellion think that Bendell is being too fatalistic, thereby discouraging his followers from taking actions that might still save civilization and global ecosystems. Bendell, in his response, accuses his critics of ignoring evidence and misrepresenting his views.

I don't propose to plunge into the weeds, adjudicating each point raised in each essay. Instead, I prefer to step back and offer my own interpretation of the evidence, and then discuss the subtext of the dispute.

My conclusion, after years of studying environmental research literature, is that some form of societal collapse is indeed highly probable this century, depending on how we define "collapse." Quite a few environmental scientists with whom I'm acquainted agree with this assessment. With regard to climate change, the problem is not that global warming has already proceeded too far to be reined in (on that point I am agnostic: I agree with the XR authors that the science is not yet settled, and they make some good points in this regard); rather, it's that the things we would have to do to minimize climate change would undermine industrial societies by other means. That last statement requires some substantiation.

The only realistic way to minimize climate change is to stop burning fossil fuels; and, in my judgment, there is no way to do that without shrinking energy usage and therefore economic activity (I've explained my reasoning on this point [elsewhere](#); repeating it here would make this essay over-long). Continuing to depend on fossil fuels likewise leads to economic contraction, because aside from the fact that they are destabilizing the climate, these are depleting, non-renewable resources that we have extracted using the low-hanging-fruit principle: what's left of them will be increasingly expensive to get, both in monetary and energetic terms. And energy is the ultimate driver of the economy; with less of it available, manufacturing and trade will necessarily contract. So, one way or another, we must accept economic degrowth. However, we don't know how to degrow our economy controllably, particularly in the context of a massive global debt bubble. Moreover, the structures of representative democracy which respond to the short-term concerns of the electorate, make planning for degrowth even harder. For decades, policy makers have promised only more growth, and economists have turned logical summersaults providing rationales for why growth in energy and materials usage can continue forever on a finite planet. Since we are unprepared for sustained economic contraction, we are unlikely to handle it well.

Moreover, global warming isn't our only sustainability crisis. Others include: resource depletion, worsening environmental pollution, a food system that ruins topsoil and destroys biodiversity, the overuse of debt as a way to transfer consumption from the future to the present, worsening economic inequality leading to political destabilization, and increasing overpopulation and overconsumption (especially by the rich), justified and encouraged by the flawed belief that the Earth will always be able to support more people

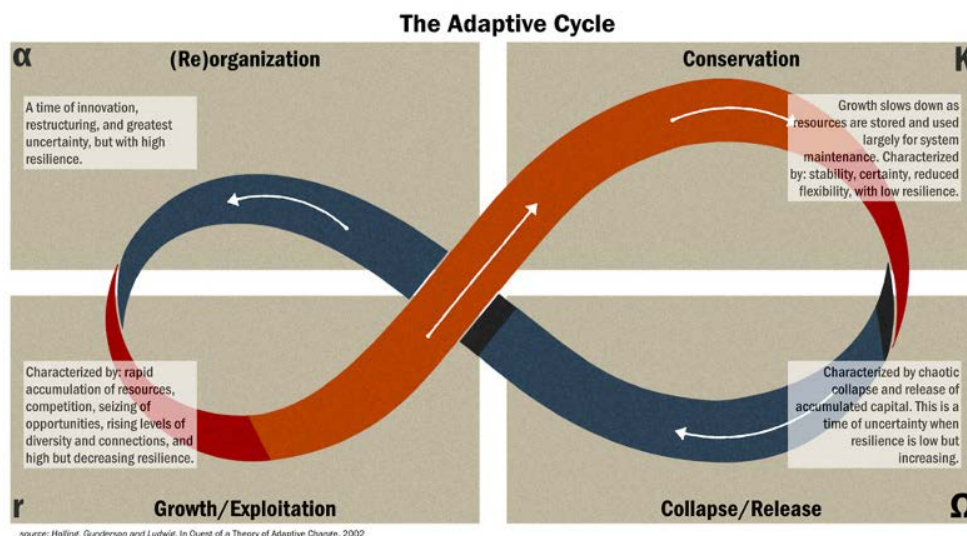
consuming more resources on a per capita basis.

Further, the complex interactions of known system stressors—let alone the unknown ones—make matters worse. Climate change worsens economic inequality, while social instability due to increasing inequality makes it harder for national leaders to focus their attention on climate change. Similarly, the growing crises of democracy around the world (with the rich and powerful feeling insulated from danger and blocking needed change) are a threat multiplier, making it harder for societies to deal with any of these problems.

In sum, we have created a fundamentally unsustainable way of living. In recent decades, as more problems have arisen, we have learned to rely on fossil-fueled economic growth to solve them, but now growth is just making those problems worse, and we have no other plan.

Pointing all of this out is not an effective way to win friends and influence people—and that leads us to the core of XR’s argument. Let’s suppose the totality of the evidence favors Bendell’s conclusion (and I believe that it does, with a few caveats). XR’s criticism is that, if the people who are most aware of the climate crisis, and thus likely to drive change, consciously accept the near-certainty of collapse, this will lead to inaction and cynicism on their part, which will only worsen the situation. That criticism must still be answered.

One way of responding is to redefine *collapse*. Past civilizations have collapsed, and usually the process took two or three centuries and eventually led to some sort of renaissance. We see similar cycles of buildup and release in ecosystems (resilience scientists describe this universal tendency in terms of the [adaptive cycle](#).)



Source: Hollings, *The Adaptive Cycle*. Holling, Gunderson, and Ludwig. “In Quest of a Theory of Adaptive Change.” 2002.

Collapse needn’t imply that nearly everybody dies at once, or that the survivors become wandering cannibals. Rather, it means our current institutions will fail to one degree or another and we will have to find alternative ways to meet basic human needs—ways that are slower, smaller in

scale, and more local. Even if we can't altogether avert the release phase of the adaptive cycle we're in, it may be within our power to modify how release and reorganization occur. Perhaps, if we think of *collapse* in these terms, accepting its near-inevitability won't be so debilitating.

But a happy version of collapse is likely to be realized only if we act. Past civilizations didn't have fossil fuels (hence climate change) or nuclear weapons. Without a great deal of luck and hard work, we might get a version of collapse that is indeed unsurvivable, or nearly so.

Can we mentally accept that the odds are stacked against us, yet still act sanely and vigorously? That's a question that has dogged me for some time. I believe clues leading to an answer may come from a realm of psychology known as *Terror Management Theory*—which Bendell discusses in *Deep Adaptation's* founding document, "[Deep Adaptation: A Map for Navigating Climate Tragedy.](#)"

Non-human organisms appear not to be aware of the inevitability of their own death, so they don't have to cope with that awareness. A few intelligent animals (including crows and elephants) take note of the deaths of their comrades and appear to mourn them, but we don't know if they are able to contemplate their own mortality. For us humans, though, usually beginning in late childhood, language and rational thought ensure that we inescapably know that everyone will die sooner or later, ourselves included. Knowledge of death creates a psychological conflict between our self-preservation instinct and our knowledge of our own eventual demise, and we as a species have gone to great lengths to overcome that conflict. This, according to *Terror Management Theory*, explains a wide array of cultural beliefs and institutions that explicitly or implicitly promise immortality—including, but not limited to, religious teachings and rituals.

As a result, denial has become a deeply entrenched human capacity. In their book [Denial: Self-Deception, False Beliefs, and the Origin of the Human Mind](#), Ajit Varki and Danny Brower suggest that, as language evolved, our emerging expectation of personal extinction would have made us so depressed and cautious that we probably wouldn't have been able to compete successfully with other species, or other members of our own species who were not so burdened, if not for the appearance of a simultaneous adaptation—our ability to *deny* death. Denial thus served an evolutionary function as an essential tool of terror management. Over time, our denial muscle strengthened—and it has arguably done so especially in recent decades, as a great collective death via nuclear war or climate change has become a distinct possibility.

Denial can take several forms. One form stems from [cognitive dissonance](#), the motivational mechanism that underlies the reluctance to admit mistakes or accept scientific findings when they contradict our existing views (hence those disinclined to believe in climate change go out of their way to seize upon any evidence, however flimsy, to support their opinion). Another is [disavowal](#), a state in which we're aware of climate change and its effects, but "find ways to remain undisturbed" by its implications, rather than being stirred to action.

Denial of climate change (and the likelihood of societal collapse) is therefore

more than just a political tool for maintaining the corporate profits of the fossil fuel industry. It is a complex collective coping mechanism. We're *all* in denial, in varying ways and degrees.

The XR folks have a point: if we accept the inevitability of collapse, we could psychologically short-circuit our ability to make collapse survivable. However, if we indulge more in denial, we might blithely go our merry way, again doing nothing to improve our survival prospects. Is the solution to indulge in just the right amount of denial? What is that perfect quantity, and how should we go about monitoring everyone's dosage?

There may be a sliding scale for how much "doom" each of us can handle. In which case, the XR vs. DA quarrel could at least partly be about groups of people sorting themselves according to their levels of psychological tolerance, then walling themselves off from one another through cognitive dissonance.

However, that assessment somewhat trivializes the debate; there's more going on here. Just one additional angle: maybe collapse has already arrived, and it just isn't evenly distributed yet. Hundreds of millions, perhaps a couple of billion poor people around the globe are already experiencing many of the horrors that are likely to follow in the wake of the collapse of modern industrial societies (not to mention the billions who have not benefitted equally from, or have been victims of global, industrial capitalism and imperialism). These people, whose plight is likely to worsen, don't have the luxury of sitting back and philosophizing about the future; they spend each day doing what's necessary to survive, which sometimes means fighting back against the forces of capitalist exploitation, which usually coincide with the major causes of climate change. Perhaps DA followers are mostly privileged people whose bubble has been popped by awareness of climate change and who, for the moment at least, can afford to be somewhat immobilized by this sudden disorientation.

I would counsel folks more inclined toward the DA point of view not to waste effort trying to convince their XR critics that catastrophic collapse is indeed inevitable within the next few years. Resist the pitfall of certitude: none of us knows at this point whether near-term human extinction is inevitable, or whether concerted action could result in a relatively benign version of collapse. Instead, concentrate on areas of agreement, and join with XR critics in taking action—which, among other things, is an effective way of managing our terror. Reject the tendency toward navel-gazing stasis.

Meanwhile, here's a bit of advice to the XR critics of DA: go easy. Despite its questionable tendency toward worst-case fixation, DA nevertheless provides a support system within which people can undertake the inner work entailed in facing the reality of the great unraveling that is upon us. While that inner work shouldn't become an end in itself, thereby subverting effort toward minimizing harm to ecosystems and human communities, it is nevertheless a necessary stage in moving beyond denial.

Perhaps the great classic of ancient Hindu literature, the *Bhagavad Gita*, has wisdom to offer in this regard. The *Gita* is a dialogue between prince Arjuna and his guide and charioteer Krishna, which occurs beside a battlefield during a war between Arjuna's kinsmen and another tribe. Arjuna is overwhelmed



with moral dread about the violence and death—*the utter doom of it all!*—and that his actions may contribute to it, even though he believes his kinsmen are in the right, and he wonders if he should renounce his title and duty and devote himself to philosophizing. Krishna counsels Arjuna to fulfill his warrior obligation, but to act without thought of self or attachment to outcome.

Similarly, those of us with awareness of the crises ahead must understand that action will have largely unknowable consequences. We find ourselves drawn to a role simply by the fact of our awareness; however, our awareness is incomplete. Despite that limitation, it's up to us to play our role in the defense of nature and humanity as cleanly and selflessly—and as effectively—as possible.