MuseLetter

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Holiday greetings to you, valued reader. May your Solstice be a time of stepping back, finding new meaning in your life, and enjoying the beauty of nature. Your support makes my work, and that of my colleagues, possible. If you find my essays interesting, please share them with friends. With continued best wishes,
Richard

Something Wicked This Way Comes*

We all like simple problems, because they exercise our mental and physical abilities. A life of pure leisure is boring. So, people who have to endure too much leisure often go out of their way to tackle trivial problems to keep themselves busy; currently popular ones include Sudoku puzzles and video games. Alternatively, they can approach problems voyeuristically by, for example, binge-watching TV police procedurals, in which a murder is committed and a brilliant detective ferrets out the stealthy killer, all in 60 minutes.

However, nobody likes "wicked problems"—a term introduced in 1973 [another link to the paper] by design theorists Horst Rittel and Melvin Webber to underscore the complexities of planning and policy. While mathematics and chess offer more-or-less "tame" problems with solutions that everyone agrees on, wicked problems lack clarity and are subject to real-world constraints that prevent risk-free resolution.

Rittel and Webber noted that wicked problems have ten important characteristics:

1. They can't be formulated definitively.
2. They don't have a "stopping rule," or an inherent logic that signals when they are solved.
3. Their solutions are not true or false, only good or bad.
4. There is no way to test their solutions.
5. They cannot be studied through trial and error. Their solutions are irreversible so, as Rittel and Webber put it, "every trial counts."
6. There is no end to the number of solutions or approaches to a wicked problem.
7. Each wicked problem is unique.
8. Wicked problems can always be described as symptoms of other problems.

9. The way a wicked problem is described determines its possible solutions.
10. Planners who work on wicked problems "are liable for the consequences of the solutions they generate; the effects can matter a great deal to the people who are touched by those actions." In other words, there are consequences both for those who take up the challenge of solving a wicked problem, and for those impacted by its solutions.

Climate change is a wicked problem: it checks all ten boxes. Crucially, there is no way to solve it without sacrificing something that society currently holds dear, and without thereby generating more problems. For example, shrinking the economy would reduce carbon emissions, but it would throw a lot of people out of work (in effect, we did trial runs during the financial crash of 2008 and the COVID pandemic of 2020; both times, carbon emissions plunged, yet everyone was eager to "get back to normal"). Building vast amounts of low-carbon energy-producing and energy-using infrastructure would also reduce emissions, but that would require tens of trillions of dollars of investment as well as enormous quantities of depleting, non-renewable minerals—the mining of which would generate pollution and destroy wildlife habitat.

There's no easy answer to global warming, and the wickedness heading our way doesn't stop with climate change.

Only One Extinction-Level Crisis at a Time, Please

All societies have to face several problems at any given time. After all, life—even in a hunter-gatherer band—is complicated. But it is decidedly unusual for any society to confront multiple crises that are each capable of killing nearly everybody. Nevertheless, that is humanity's current dilemma, and it is why pundits have minted the new buzzword, "polycrisis."

In addition to climate change, our global existential risks include: resource depletion, the disappearance of wild nature, persistent toxic chemicals capable of disrupting reproduction in humans and other complex organisms, and weapons of mass destruction such as nuclear bombs and missiles (a more lengthy discussion of these risks is available here). The list is growing: in recent years we've added the possibility that artificial intelligence (AI) could get so much smarter than people that it concludes that humans and other species are inefficient and expendable.

Then there are wicked problems that are not extinction-level, but that make it much harder to deal with problems that are indeed make-or-break. In this category, two items rise to the top of the heap: soaring economic inequality, which leads to political polarization and infighting; and the buildup of enormous amounts of unrepayable household, business, and government debt, which makes economies act like giant pyramid schemes and introduces the likelihood of global deflationary financial collapse. In order to manage the risk of climate change, we need social solidarity and economic stability. Worsening inequality and ballooning debt bubbles couldn't come at a worse time.

Facing several wicked problems at once is challenging because crises interact in ways that make it increasingly difficult to address each one in isolation.

For example, the best solution to the disappearance of wildlife would be to increase natural habitat (which industrial society has been destroying relentlessly) by leaving half of Earth free from human settlement and resource extraction, so that nature can recover. But that's hard to do when climate change is forcing increasing numbers of people to move to safer areas, and when the energy transition (our answer to climate change) requires more land for solar panels, wind turbines, and mining operations.

Paradoxically, each of humanity's current existential risks emerged as a consequence of efforts to solve prior problems. Climate change is the result of using fossil fuels for the economic and material betterment of humanity. Nuclear weapons were the solution to the problem of defeating aggressive fascist regimes during World War II. The destruction of wildlife results from human population growth and people seeking new living space, food, and natural resources. Now there is talk of using AI to solve climate change. Maybe it could think of a fix that mere humans would miss. Or perhaps its massive energy usage would more than offset any climate benefit. One thing we've learned from the past introductions of major new technologies: expect the unexpected.

Here's the Answer!

When people are introduced to the concept of the polycrisis and evidence of its reality and severity, they naturally feel uncomfortable. Their discomfort grows as they realize that virtually everything they do in their daily lives is contributing to a tangle of worsening existential problems. This discomfort is itself a problem, which government, media, and environmental advocacy organizations try to solve.

While environmental scientists have the job of measuring and understanding trends like global warming and the disappearance of species, environmental advocacy orgs have the goal of actually changing those trends. For these organizations, as well as for politicians who formulate environmental policies, it is vital to keep constituents from descending into defeatist apathy. Therefore, most environmental orgs and sympathetic politicians tend to foster an attitude that's been dubbed "solutionism," which holds that all environmental and social problems have benign solutions that involve the application of technology.

Solutionism offers a way out of the discomfort of contemplating the polycrisis. But it leads large numbers of people to treat the wicked problem of climate change as if it were a math problem with a simple answer. Further, climate solutionists tend to ignore other problems (such as resource depletion and the toxics plague), and the feedbacks between problems, because contemplating these makes them more aware of the trade-offs that their solutions will impose.

Moreover, solutionism often doesn't actually banish apathy. When people hear that an enormous, complex problem such as climate change has an "affordable" solution, they tend not just to stop worrying, but also to cease thinking. The need to engage mentally with the wickedness of the problem has been removed, so all that is required is to cheer the team advocating its "solution."

Solutionism can thereby fuel social division. Let's say I am convinced that climate change can be solved with a simple set of policies; then I will naturally tend to feel righteous if I'm supporting those policies. If the problem persists despite the clear presence of a solution, that must be because "bad" people are blocking that solution. So, saving the world becomes a project of defeating and humiliating a portion of humanity that appears to be blocking the solution, but, to its own way of thinking, is merely following the dictates of self-preservation within the current set of social norms and economic arrangements.

In reality, among the array of options and actions that are currently deemed politically acceptable, there is no solution to climate change and other wicked existential problems. What *would actually work* to halt and reverse global warming, environmental toxification, and wildlife destruction would be to downscale the whole human enterprise. Technology, in the form of solar panels and batteries, might aid society in its descent, but it could not overcome the need for a significant reduction in ongoing usage of resources and production of waste.

However, degrowth is anathema to the world's managerial classes. Any organization that promotes it becomes a voice crying in the wilderness, ignored or pilloried by the business-friendly mainstream.

The Limits of Agency, the Agency of Limits

So, the incentive for most advocacy orgs is to promise too much. Their message is typically, "We can solve this! We can create a better future—more abundant, fairer, and more sustainable, without any significant sacrifice—just by choosing a better technology or policy." Meanwhile, humanity's overall trajectory is set by the architecture of social systems now in place. We can alter those systems somewhat through policy, but incremental reform won't be enough to stave off collapse. The systems themselves—especially our industrial and financial systems—are unsustainable by design, and are defended by incentives and penalties whose purpose is to discourage significant, rapid change.

Should we therefore succumb to indifference and depression? Is waiting and watching, as society and nature crumble, our only option?

Actually, there is an astonishing array of things we *can* do that would make a difference for ourselves and future generations. We can seek to better understand social and ecological systems so as to navigate the period of rapid change ahead. We can minimize injury to people and planet by building personal, household, community, and ecosystem resilience. We can imagine and experiment with social systems that could succeed the ones that we currently live within—systems that would enable us to live well within Earth's limits over the long term. We can protect nature and preserve the best of human culture. We can care for casualties around us. We can learn from Indigenous peoples how they have lived for millennia in harmony with nature and how they survived collapse.

This list of actions is hard to capture in a single term or slogan. And even if we somehow managed to do it all, it's not enough to keep worry at bay. But any one of these action items offers plenty of good work to engage our

problem-loving brains and muscles. And it might actually mean something to fellow humans and other creatures.

Wickedness is baked into our current global predicament. Extinction, maybe not.

**With a tip of the hat to Ray Bradbury*