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Capitalism, the Doomsday Machine (or, How to Repurpose Growth Capital)

David Fleming, the late British economist, contributed many [blazing insights](#); one that's captivated my attention recently has to do with capital. Fleming counted six kinds of capital (natural, human, social, scientific/cultural, material, and financial), and noted that all six can be used in either of two ways: as foundational capital (for the ongoing maintenance of society) or as growth capital (for the expansion of population and consumption). Here's the crux of his insight: a healthy society preserves its foundational capital, but periodically destroys or depletes capital that might be used for growth.

To modern minds, this seems insane—like burning piles of paper money. Why would a society do this? Simply because a healthy society recognizes that unrestrained growth is suicidal. When population size and consumption rates exceed environmental carrying capacity, famine (or disease or war) will intervene to prune society back. If the overshoot is large, the pruning will be intense enough to be called “collapse.” And that is something to be avoided.

How do healthy societies destroy their growth capital? Sometimes, just by throwing a big party. Small societies with only semi-permanent settlements that subsisted by horticulture typically hosted annual feasts in which surplus food was eaten, and clothing and other possessions given away or burned. The “Big Man,” the most prestigious member of the society, maintained his position by giving away or destroying virtually everything he had. The potlatch feasts of the Native American peoples of the Pacific Northwest were an example of this cultural feature. More complex pre-industrial societies devoted immense amounts of capital to the building of pyramids or cathedrals and to the fashioning of useless ornaments, as well as to intensive preparations for lengthy carnivals. All these activities served, among other things, to burn off excess energy among young men, who are most often the troublemakers in any society.

In small societies with simple social structure and rudimentary technology, growth is self-limiting over the shorter term, so these kinds of societies more reliably tend to destroy their growth capital. In big societies with complex social structures and technologies, the self-defeating results of growth take longer to show up, because resources can be imported from further away—so it's easier for people in these societies to ignore eventual peril and push the

accelerator pedal to the floor for the giddy immediate thrill that growth delivers.

Modern industrial society does just the opposite of what a healthy one does: it consumes its most important foundational capital (especially natural resources—forests, fisheries, and minerals), and exploits all six forms of capital for purposes of sustained growth.

Capitalism can be defined as the deliberate and systematic societal encouragement of the accumulation of growth capital through the use of money and debt, the enforcement of private ownership rights (especially of land and natural resources), and the proliferation of incentives and protections for investors. Once set in motion, this dynamic set of arrangements tends to be self-reinforcing, for reasons I'll unpack in a moment. A rudimentary growth machine was invented roughly 5,000 years ago with the emergence of state societies with money, writing, and slavery. A supercharged capitalist version has gotten going at least twice in history: in China in the eleventh century (though it was quickly halted by traditional authorities who saw it as a threat to their power), and in Europe starting in the sixteenth century (where the rising mercantile class eventually triumphed over ecclesiastical and aristocratic opponents).

If a society is geographically bounded, the systematic encouragement of the accumulation of growth capital just results in localized overshoot or collapse. Once it gets into gear, the eventual outcome is certain. But now the growth mechanisms of society have become global in many important respects, and the impacts of its growth are also global (see climate change). The networked economy has become a kind of a [superorganism](#) with a collective metabolism and an inherent imperative toward expansion at all cost. That means collapse will also be global—indeed a kind of doomsday, after which the continuation of the human experiment may be very difficult. There will likely be survivors—human and non-human—but they may be few and miserable, and unable to mount a meaningful ecological or social recovery, perhaps for many centuries if ever.

Doomsday machines were a fixture of 1950s science fiction and futuristic war planning (for example, the classic 1964 Stanley Kubrick film *Dr. Strangelove* featured a doomsday machine in its plot). In essence, a doomsday machine is a theoretical device that's powerful enough to destroy all life on Earth. In many fictional scenarios, once the machine's timer is triggered to start its countdown, any effort to disarm the device will simply result in its immediate detonation.

Industrial capitalism resembles this latter kind of doomsday machine. If left to continue its "countdown" to the bitter end, it will consume nearly all of Earth's resources and natural habitat while filling waste sinks to overflowing. That is an outcome no one would wish for. But we have all become dependent on the machine for our livelihoods, and stopping it in its tracks will result in economic collapse, throwing billions of people into a state of misery and famine. So, everybody wants the economy to grow—and thus for the machine to continue toward its inevitable destruction. But the longer growth continues, the bigger the eventual collapse. Our entire society *is* the machine, and we are cogs in its gears.

It's no accident that the doomsday machine of global industrial capitalism has been constructed largely at the expense not just of nature's ability to continue functioning, but also the labor of the poorer segments of humanity, who will also be most immediately impacted by the machine's destruction. As Jason Hickel points out in a brief and searing [interview](#), "the Global South contributes about 80 percent of the labor and resources that go into the global economy, and yet the people who render that labor and those resources receive about five percent of the income that the global economy generates each year."

Ironically, the doomsday machine in which we live was constructed with what seemed at times to be the best of intentions. Consumerism, the system in which advertising and consumer credit stoke ever-increasing demand for manufactured products, was invented by business and government elites starting in the 1930s as a solution to the very real problems of overproduction and underemployment—which were side effects of earlier growth (as newsman Eric Sevareid once said, "The chief cause of problems is solutions"). Now "green" growth is being sold as the solution to the problems resulting from our use of fossil fuels, which were themselves solutions for all sorts of problems, including stagnating agricultural production due to the need for more sources of nitrogen.

Nearly everyone wants more economic growth so as to patch our problems in the short run, even if it will make matters much worse in the long run. But nobody wants to be around when the timer reaches zero.

Is There Any Way Out of This Thing?

Not many people understand that they're in a doomsday machine. But those who do naturally feel a responsibility to extricate themselves and others in a way that minimizes overall damage and destruction. Remember: the sooner the machine stops, the fewer the total casualties; however, stopping the machine suddenly now would result in casualties sooner rather than later. What strategy makes the most sense?

1. *Redesign and reform the machine.* Theoretically, it might be possible gradually to take the machine apart from the inside, and redesign and replace each of its components with one that at least simulates the way a healthy culture functions—all while the machine is still operating. After a time, everything would have changed without anyone being seriously inconvenienced. How might this work? In industry after industry, the current linear economic model (mining to manufacture to waste disposal) could be made more circular (reuse and recycle; repeat endlessly). We could replace fossil fuels with low-carbon energy sources. We could undo the global economic arrangements that systematically and intentionally funnel wealth to some countries while intensifying poverty in others. Meanwhile, we could replace economic indicators (notably GDP) that promote growth in resource consumption with alternative indicators (such as Gross National Happiness) that promote quality of life. This strategy has been advocated most explicitly by ecological economists, but also by women's reproductive rights advocates and campaigners for a wide range of environmental regulations.
2. *Build alternatives.* Some people have pursued the strategy of building

communities that abide more by the principles of a healthy culture. Their hope is that, as the machine increasingly shows signs of imminent failure, people will abandon it in favor of the alternatives. The machine will still self-destruct, but there will be more survivors, who will already have developed some of the skills needed in a post-collapse situation. The folks who have advocated for this course of action include leaders of the ecovillage, permaculture, Transition, and economic localization movements.

3. *Preserve cultural and natural foundational capital.* Indigenous societies could survive and adapt, as long as they somehow keep from being swallowed up by global capitalism or the breakdown of the ecological systems on which they depend. Therefore, it makes sense to defend such peoples from capitalist onslaught, not just in order to safeguard their human rights but to promote human survival. At the same time, some ecosystems are still wild; they need to be protected from capitalist exploitation if they are to continue providing habitat for non-human species and indigenous humans. Conservationists and indigenous rights groups have been pursuing these strategies for decades.
4. *Sabotage.* The logic is simple: if total casualties will be worse the longer collapse is postponed, then bring it on—the sooner the better! The idea of deliberately initiating societal collapse has been circulating quietly for some time, but for obvious reasons almost no one has talked about it openly (the [Unabomber manifesto](#) was a notable exception). Now that’s changing. “[Accelerationists](#)” on the political left and right (mostly the latter) acknowledge that industrial capitalism is unsustainable and are looking for ways to bring it to an untimely end. One serious drawback to these schemes—from the standpoint of those who aren’t in on them—is that accelerationists of various stripes bring their own social agendas to the table; so, depending on who is engineering the collapse, survival might be achieved on terms that are terrible for most people (think warlords and serfs; think genocide). Further, if collapse is already in its initial stages, then speeding it up might bring little benefit to anyone, now or in the future. Whoever triggered collapse would likely have blood on their hands. Most ways of doing it would be highly illegal, and it runs the risk of leaving a huge number of unintended casualties.

Preparing for What’s Next

Altogether, these four strategies have made limited headway so far. I say that not to denigrate the folks doing the good work of redesign, protection, and conservation; just to acknowledge that there haven’t been enough of them, and the forces they are pushing against are formidable.

The fact that the machine is still on its path to world annihilation suggests that we may need a fifth strategy. A phrase comes to mind: “brace for impact.”

For the past few years, my organization, Post Carbon Institute, has advocated [building community resilience](#) as a pathway toward survival and the widening of opportunities for recovery. Other organizations—including the [Rand Corporation](#), the world’s biggest think tank—have also adopted resilience thinking, though often with only a partial understanding of the

global threats that make resilience such a priority.

[Resilience](#)—the ability to withstand a shock and recover or adapt—can be cultivated as an individual psychological trait, a household goal, or a community project. As wildfires, droughts, and extreme weather events become more common and severe, towns and cities around the world are beginning to prepare. We at PCI advise a goal of “deep resilience,” in which communities make efforts to assess which practical services and cultural features are most essential, and initiate ways to fortify them through redundant support structures. Further, we advise redesigning economies and institutions so that they will continue to function in a post-carbon, post-growth future. The resilience assessment and planning processes should ideally include representatives from all major segments of the community and participants should be granted the resources to initiate projects on the scale that’s actually needed.

Resilience building begins with identifying vulnerabilities and opportunities. More attention is typically given to threats and vulnerabilities—for example, the likely impacts of floods, fires, and extreme weather on food and water systems. This is as it should be: there’s lots to prepare for, and most communities are woefully vulnerable (as we’ve just seen in Texas). The ongoing coronavirus pandemic has provided many communities with hard lessons about their vulnerabilities to “known unknown” risks, and the likelihood that a crisis in one system or area of the world (e.g., an epidemic originating in Wuhan, China) can trigger cascading failures in other systems in other places. [National risk assessments](#) in EU countries have sought to identify and rank potential threats, and to initiate ways of reducing vulnerability. Communities around the world could take similar measures, as we have advised in our [Think Resilience](#) video series, using assessment tools such as one developed by the [Stockholm Resilience Centre](#). Some cities, including Amsterdam, are adapting Kate Raworth’s “[doughnut economics](#)” to their resilience planning.

But if we take Fleming’s insight to heart, we should also envision ways to maximize our opportunities as the doomsday machine careens toward its inevitable ruin. Recall: capitalism prioritizes the accumulation of growth capital. At this point, after decades of accumulation, growth capital is stashed in enormous quantities in ways and places that make it deadly to ordinary people and ecosystems, but also inaccessible and useless for any reasonable humane purpose. The obvious example is the trillions of dollars held by just a few extremely wealthy individuals—far more money than such folks could conceivably spend in a hundred lifetimes. For people like these, increasing the number of their dollar holdings by one more order of magnitude is a goal in and of itself; it need have no practical point—other than to boost their investments so as to add *yet another* zero to the end of the bank balance. What good could all that money do if directed toward ecosystem restoration—or toward the building of truly beautiful and durable civic infrastructure, or the alleviation of misery among the burgeoning numbers of the world’s poor?

When the machine crashes, enormous amounts of financial capital will likely simply disappear. In a way, that will be a good thing: most of that capital was ultimately being used to extract more resources and produce more pollution. But the crash may also represent billions of missed opportunities—because institutions, machines, and money all geared for growth could instead be

repurposed as foundational capital for a modest, sustainable culture.

Just think of all the commercial real estate waiting to be inhabited by currently homeless people or turned into crafts workshops; or the airport runways waiting to be attacked with pick and shovel and planted as community gardens. What to do with all the tons of irregular concrete chunks from torn-up streets, runways, and ugly office buildings? Call them “[urbanite](#)” and use them to build paths and walls.

David Holmgren has [written extensively](#) about how lightly-inhabited suburbs could be repurposed as permaculture villages. Rob Hopkins encourages us to [use our imagination](#) to envision specific ways in which economic re-localization could make life more interesting and creative for everyone; imagination is also needed in order to get us thinking outside the capitalist box.

Why wait for collapse? Repurposing growth capital now could help unwind the doomsday machine sooner rather than later. It’s a subversive act (see strategy 4 above) as well as a regenerative one. Look around and start to catalog the forms and locations of growth capital begging to be used either for laying the foundation for sustainable culture—or for throwing one hell of a party. When we eventually come out of the pandemic, there will be innumerable opportunities not just to “[build back better](#),” but to completely rethink systems so that they reduce our vulnerabilities, rather than adding to them.

As the doomsday machine’s detonation looms closer and closer, it becomes easier to see how all five strategies can be pursued together in synergistic ways. Redesign, preserve, build alternatives, subvert, and brace for impact: for the remainder of this century, these should be our watchwords.