MuseLetter

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While the mainstream media has been focused on the immediate crisis of the US government shutdown the bigger issues behind the current economic crisis are still largely ignored. This month's Museletter explores what is really going on in two essays.

Fingers in the dike

The 19th century novel *Hans Brinker, or The Silver Skates* by American author Mary Mapes Dodge features a brief story-within-the-story that has become better known in popular culture than the book itself. It's the tale of a Dutch boy (in the novel he's called simply "The Hero of Haarlem") who saves his community by jamming his finger into a leaking levee. The boy stays all night, despite the cold, until village adults find him and repair the leak. His courageous action in holding back potential floodwaters has become celebrated in children's literature and art, to the point where it serves as a convenient metaphor.

Here in early 21st century there are three dams about to break, and in each case a calamity is being postponed—though not, in these cases, by the heroic digits of fictitious Dutch children.

A grasp of the status of these three delayed disasters, and what's putting them off, can be helpful in navigating waters that now rise slowly, though soon perhaps in torrents.

1. Unconventional fuels and production methods

I've written so much on the subject of peak oil, and some of it so recently, that it would be redundant to go into much detail here on that score. Suffice it to say that world conventional crude oil production has been flat-to-declining for eight years now. Declines of the world's supergiant oilfields will steepen in the years ahead. Petroleum is essential to the world economy and there is no ready and sufficient substitute. The potential consequences of peak oil include prolonged economic crisis and resource wars.

Producers of unconventional liquid fuels—tar sands, tight oil, and deepwater oil—are playing the role of Dutch boy in the energy world, though their motives may not be quite so altruistic. With unconventional sources included in the total, world petroleum

production has grown somewhat in recent years, but oil prices are hovering at near-record levels (that's because unconventionals are expensive to produce). The oil industry has successfully used this meager success as a public relations tool, arguing that it can continue pulling rabbits out of hats for as long as needed and that policy makers therefore need do nothing to prepare society for a peak-oil future. In fact, world oil markets are depending almost entirely on continued increasing production from the US—all of which must come from fracked, horizontally drilled wells that decline rapidly—to keep supplies steady.

Even the US Energy Information Administration recognizes that the US tight oil boom will be history by the end of the current decade—though the official forecast shows production levels gently drifting thereafter when in all likelihood they will plummet, given the spectacular per-well decline rates of the Bakken and Eagle Ford formations. Is there another Dutch boy waiting, finger ready? Tight oil deposits in other countries will take longer to develop and will present more technical challenges. Other unconventionals, like extra-heavy oil in Venezuela and kerogen deposits in the American West, will be even slower and more expensive to produce—if they're ever tapped to any significant extent (Shell just abandoned its kerogen research operations without any prospect of eventual profitability).

Bottom line: the recent, ongoing "new normal" of high but stable oil prices may last another few years; after that, oil supplies will become much more problematic, and prices are anybody's guess. The dam is weakening. Have your hip boots and waders ready.

2. Quantitative easing

The crash of 2008, bad as it was, should really be thought of as merely a symptom of a more pervasive, profound, and ongoing shift in the entire global economy. Our growth-based, fossil-fueled economic system is colliding with foreseeable energy and debt limits. We constructed our existing financial system during a historic period of anomalous rapid growth; without further growth in manufacturing, transport, and trade, the pyramid of credit and leverage built by investors during recent decades is likely to implode. We got just a taste of what might be in store with the Lehman and AIG failures.

Some who understood the system's vulnerability early on, and who warned that a crash was imminent, forecast a rapid collapse of the entire economy. Each year from 2008 up to the present, these commentators have insisted that in a matter of months we'll see bread lines, shuttered banks, and riots in the streets. Riots and bank failures have indeed shown up in Greece, but here in the US (and Britain, Germany, China, Canada, Australia . . . the list continues) economic life goes on. In the US, pre-crash norms in employment, household income, and house values have not returned, but neither has the sky fallen. Most economists say the nation is in the midst of a "fragile recovery."

Why no collapse? Governments and central banks have inserted fingers in financial levees. Most notably, the Federal Reserve keeps

crisis at bay by purchasing $85 billion in US Treasury bonds each month, using money created out of thin air at the moment of purchase. This enables the Federal government to borrow at low interest rates, and also props up the American financial industry. Virtually all of the Fed's money stays within financial circles—mostly the "shadow banking system"; that's a big reason why the richest Americans have gotten much richer in the past few years, while most regular folks are treading water at best.

Quantitative easing is poorly understood by the general public and provokes strong reactions from many economists. Some think QE must lead to hyperinflation (it hasn't so far, and it's been going on for nearly five years). Others think that, in principle, it could be used (if differently organized and applied) to solve all our debt problems.

Be that as it may, what has the too-big-to-fail, too-greedy-not-to shadow banking system done with the Fed's trillions in free money? Blown another asset bubble and piled up more leveraged bets. No one knows when the latest bubble will pop, but when it does the ensuing crisis will likely be worse than that of 2008. Will central banks then be able to jam more fingers into the leaky levee? Will they have enough fingers?

3. Global warming "pause"

The threat of climate change needs no introduction—it's the mother of all impending environmental crises. And we are already seeing serious impacts, including superstorms, droughts, and the melting of the north polar ice cap. Nevertheless, it's all not as bad as it might be, were it not for the fact that the warming of Earth's surface air temperatures has slowed since 1998 (which was an anomalously hot year).

Climate change deniers have seized upon evidence of this "pause" to argue that global warming has essentially stopped. After all, if the greenhouse-gas-laden atmosphere were in fact trapping more heat, where could all that heat be hiding?

Turns out, very little of Earth's trapped heat warms the atmosphere and land surface; most of it (over 90 percent) is absorbed by the oceans. Part of the explanation for the slowdown in surface warming lies in the heating of deep ocean waters. Global warming hasn't really "paused"; it's just gone to the depths. At the same time, there has been a downswing in the Pacific Ocean's natural temperature cycle, which has also correlated with a cluster of La Nina years (usually associated with a cooling of ocean surface waters). This temperature cycle masks the underlying warming trend. So it appears that, for now at least, Mother Earth herself is playing "The Hero of Haarlem."

There's no way to know how long this current cool cycle will last, though the previous Pacific cool phase, which started in the 1940s, continued for about 30 years. If the present cycle is of the same duration, then in about 15 years much of the heat currently being dumped in deep oceans may begin instead to remain in the atmosphere. At that point we will likely see unprecedented rates of

climate warming, and far worse episodes of extreme weather.

The fact that climate change is complex and non-linear makes it hard to communicate the urgency of the problem even to scientifically literate audiences. Prof. Arthur Petersen, chief scientist at the Netherlands Environmental Assessment Agency and part of the Dutch delegation that reviewed the latest IPCC report was quoted by BBC as saying: "It is a major feat that we have been able to produce such a document which is such an adequate assessment of the science. That being said, it is virtually unreadable!"

Making the most of borrowed time

In the story of the Dutch boy, adults in the village eventually find the brave child and make necessary repairs to the dike. But for the three leaky systems discussed above, necessary repairs aren't being made. Most governments aren't rapidly developing renewable energy and public transport infrastructure; instead, they're spending their money on building more roads. The shadow banking system is not being downsized and regulated; it's being propped up and inflated. Fossil fuel use is not being discouraged with meaningful carbon taxes (except in a very few countries); instead, oil and gas industries are subsidized.

The folks in charge will probably continue to buy as much time as they can, for as long as they can, even if doing so makes the situation worse in the long run. Nature is less predictable: humans cannot control the duration of the global warming "pause."

The phrase "living on borrowed time" inevitably comes to mind, with its implication of impending doom. Yet we simply don't know how serious the impacts of these delayed crises will be within a humanly meaningful timeframe—say, the next ten or twenty years. Doom is possible, but it may be that nature, central banks, and crafty drillers conspire to maintain the appearance of normalcy in the eyes of at least a substantial portion of the population even as the waters rise around our ankles. No collapse here, folks; just keep shopping.

It's hard to know what attitude to adopt with regard to these things. Given that delays will likely make matters worse when the dam does break, and that repairs aren't being undertaken, should we therefore say, "Bring on the crisis, let's get it over with?" If that *is* our stance, then what might be done to accelerate events? Our oil-supply situation could be hastened slightly toward crisis by a decision against the Keystone XL pipeline, which would discourage further expansion of tar sands mining (there's no "bring-on-the-crisis" upside to a decision *in favor* of the pipeline—that would worsen the climate dilemma without doing anything to end the global warming "pause"). Maybe causing a US government default would usher in the next chapter of global financial Armageddon: that's entirely within the capabilities of at least a few people, and they seem to be doing a very good job of marching us toward the brink. Perhaps we'll all be over the edge in just a few weeks.

Or shall we simply enjoy our remaining days of "normal" life? Spend

time at the beach. Learn to play a musical instrument. See friends and family. Those are perfectly understandable and legitimate ways of whiling away borrowed time.

Here's a thought: How about using whatever interval we have—whether it turns out to be weeks or decades—to build community resilience? Get to know your neighbors. Plan next season's garden. Join efforts to create a community-run renewable energy utility company. Buy from local farmers. Put your savings in the local credit union. Take a Transition Launch! training course.

If we do these things now, then when fingers can no longer plug leaks the ensuing mess may be far less daunting. Meanwhile there may be some substantial psychological benefits from living in a way that's more localized and communitarian.

If that's your choice, you'd better get going. There's no telling how much time we have.

Shutdown and Default: The Worst-Case Scenario

I'm not saying the worst is *going* to happen. But if it does, matters could get depressingly bad, disturbingly fast.

How bad? Start with Treasury Secretary Jack Lew's estimate of the potential damage from a failure by Congress to increase the nation's borrowing limit. On Sunday morning's TV talk shows, he pointed out that credit markets could freeze, the value of the dollar could plummet, and US interest rates could skyrocket. Think 2008 all over again.

But it's actually much worse than that. Almost nobody in the commentariat mentions that the US economy is currently being held together by deficit spending and quantitative easing. Rapid economic growth as experienced during the mid-20th century is over and done with. However, our financial system is set up to *require* constant growth. This is a serious problem, and the only solution anybody has come up with so far is for the Federal government and the Federal Reserve to purchase a few more years of ersatz growth with borrowed money. Financial markets would crash without a constant injection of quantitative easing (QE), and Main Street would wither without monthly deficit-funded infusions from Washington. Absent ongoing stimulus (which is admittedly not a permanent solution), we would be hurtled back to the deflationary hell of five years ago. It's hard to see how a US government debt default could fail to get us there.

That's just the potential economic fallout from default. The possible political consequences are almost as unfathomable. According to Jonathan Chait, writing in *New York Magazine,* the current Democrat-Republican impasse is actually a foreseeable, if not inevitable, outgrowth of the American political system, with its division of power between a separately elected President and Congress. Chait cites the opinion of the late Spanish political scientist Juan Linz that "All such systems are based on dual democratic legitimacy: No democratic principle exists to resolve disputes between the executive and the

legislature about which of the two actually represents the will of the people." The current standoff, in which both sides believe they have an enormous amount to lose by compromising, could—again, in the worst instance—come to represent the most serious constitutional crisis since the Civil War.

There are also looming geopolitical repercussions. If the United States defaults, other nations may ditch the US dollar as reserve currency. That would have serious ongoing consequences for the American economy, but it would also reduce the nation's international political clout. Last week, President Obama had to cancel a key Asian trip to deal with the domestic shutdown crisis. Chinese leader Xi Jinping did show up as scheduled, looking confident and in charge. The US empire has been fraying for the past decade anyway; default could speed that process dramatically.

In the worst case, the United States could emerge from the current political crisis in a way that renders it, only months from now, economically and politically unrecognizable.

Again, none of this is inevitable. Cooler heads may prevail. But the worst-case scenario is hardly far-fetched. Look at the incentives.

Congressional Republicans have boxed themselves into a corner. By taking the nation's government and economy hostage and making heavy demands, they incur high political risks. They stand to lose power and legitimacy unless they come away from the confrontation with some tangible gain they can trumpet to their base. (Indiana Republican Congressman Marlin Stutzman: "We have to get something out of this. And I don't know what that even is.") The higher the price the country pays for the standoff, the greater the Republicans' need for some reason to say it was all worthwhile.

Meanwhile Mr. Obama believes that if he gives in to Congress, a precedent will have been welded into place. Every time the debt ceiling needs to be raised, there will be opportunity for Congress to make further demands. Elections will cease to matter. Obama probably regrets his negotiations with Congress in a similar standoff in 2011, which resulted in the Sequester. The current dispute is not just about Obamacare. It is about maintaining the scope of presidential power in the face of a congressional effort to dramatically reduce it. Obama's historic legacy is at stake.

In a better-case scenario, and a more likely one, the standoff is resolved before the nation defaults. The Tea Party's big-business backers are already yanking its leash. President Obama has offered House Republicans the possibility of a short-term debt-cap increase and funding of the government to make time for negotiations; while House Speaker Boehner initially rejected this, it is probably the best face-saving measure available.

However, if both sides hold firm and the nation defaults, we're headed into uncharted territory. And only an understanding of ecology (as well as politics and economics) reveals the true dangers ahead.

Back in the early 1970s a famous computer-assisted study of the

physical systems that support economic growth (agriculture, natural resources, and the ability of the environment to absorb pollution) concluded that world industrial output would likely peak and decline in the early 21st century. That study, which has been validated by recent research,did not consider the roles of financial or political systems.

At first economists scoffed at the idea that economic growth might not continue forever. But today, one by one, economists are beginning to recognize that, as Stephen B. King, chief economist at HSBC wrote in a recent *New York Times* op-ed, "We are reaching end times for Western affluence."

In 2008 it became clear that, as limits to growth are encountered, the inherent instability of financial systems can precipitate a much faster crash than would otherwise be the case. It also became clear that governments and central banks will undertake extraordinary measures to avert a fast-crash scenario. The rapid expansion of household debt, which had kept the growth balloon inflated since 1980, effectively ceased with the advent of the Great Recession. The balance sheet of the Fed stretched dramatically, and the Federal Government's debt levels soared, as policy makers strove to keep the economy from imploding.

But government debt quickly became a political hot potato, and that helped lead us to the present impasse.

In 2013 we are learning that the US political system is rigged in such a way that backstops against a fast financial crash may fail.

Some aspects of our 21st century dilemma are inevitable: you can't run an ever-growing economy on non-renewable resources without eventually facing symptoms of depletion and scarcity (e.g., high oil prices). Some aspects are slowly cumulative, like the buildup of greenhouse gases in Earth's atmosphere and the consequences for ecosystems that support life on our planet. But we also face looming crises brought on by the design of our political institutions, and by the personalities and tactics of specific leaders. One would hope that these latter crises could be more easily averted than those tied to the very sinews of our industrial way of life.

We can't prevent some unfortunate results of processes that humanity set in motion decades ago: we're already committed to a certain amount of climate change, given past greenhouse gas emissions; we've already unleashed a mass extinction event and made a wasteland of the oceans. But we *can* avoid the worst-case scenario. Here's what to do: Release the hostages. Pass a new debt limit and re-open the government, no conditions attached. Then get to work designing a post-growth, post-fossil fuel economy that protects people and planet. Do it in that order. Simple. Go to it. Hello, Washington, anybody listening?

Update: October 16, 2013. Today (just 24 hours before the default deadline) it appears that a bipartisan deal has been reached by Senators that will also likely pass in the House and be signed by President Obama. The deal would reopen the government and raise

the debt ceiling enough to get the nation through the next three or four months. It is unlikely that the Tea Party Republicans in the House who set the stage for the crisis will pay much of a price in terms of support from their constituents even though they achieved almost none of their initial aims and (by most accounts) needlessly hurtled the nation toward economic ruin. Therefore more "government by crisis" seems nearly certain. Many commentators are drawing the conclusion that the US is simply becoming ungovernable. All the more reason to work on community resilience-building.