Social Collapse Best Practices

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Good evening, ladies and gentlemen. Thank you for showing up. It's certainly nice to travel all the way across the North American continent and have a few people come to see you, even if the occasion isn't a happy one. You are here to listen to me talk about social collapse and the various ways we can avoid screwing that up along with everything else that's gone wrong. I know it's a lot to ask of you, because why wouldn't you instead want to go and eat, drink, and be merry? Well, perhaps there will still be time left for that after my talk.

I would like to thank the Long Now Foundation for inviting me, and I feel very honored to appear in the same venue as many serious, professional people, such as Michael Pollan, who will be here in May, or some of the previous speakers, such as Nassim Taleb, or Brian Eno – some of my favorite people, really. I am just a tourist. I flew over here to give this talk and to take in the sights, and then I'll fly back to Boston and go back to my day job. Well, I am also a blogger. And I also wrote a book. But then everyone has a book, or so it would seem.

You might ask yourself, then, Why on earth did he get invited to speak here tonight? It seems that I am enjoying my moment in the limelight, because I am one of the very few people who several years ago unequivocally predicted the demise of the United States as a global superpower. The idea that the USA will go the way of the USSR seemed preposterous at the time. It doesn't seem so preposterous any more. I take it some of you are still hedging your bets. How is that hedge fund doing, by the way?

I think I prefer remaining just a tourist, because I have learned from experience – luckily, from other people's experience – that being a superpower collapse predictor is not a good career choice. I learned that by observing what happened to the people who successfully predicted the collapse of the USSR. Do you know who Andrei Amalrik is? See, my point exactly. He successfully predicted the collapse of the USSR. He was off by just half a decade. That was another valuable lesson for me, which is why I will not give you an exact date when USA will turn into FUSA ("F" is for "Former"). But even if someone could choreograph the whole event, it still wouldn't make for much of a career, because once it all starts falling apart, people have far more important things to attend to than marveling at the wonderful predictive abilities of some Cassandra-like person.

I hope that I have made it clear that I am not here in any sort of professional capacity. I consider what I am doing a kind of community service. So, if you don't like my talk, don't worry about me. There are plenty of other things I can do. But I would like my insights to be of help during these difficult and confusing times, for altruistic reasons, mostly, although not entirely. This is because when times get really bad, as they did when the Soviet Union collapsed, lots of people just completely lose it. Men, especially. Successful, middle-aged men, breadwinners, bastions of society, turn out to be especially vulnerable. And when they just completely lose it, they become very tedious company. My hope is that some amount of preparation, psychological and otherwise, can make them a lot less fragile, and a bit more useful, and generally less of a burden.

Women seem much more able to cope. Perhaps it is because they have less of their ego invested in the whole dubious enterprise, or perhaps their sense of personal responsibility is tied to those around them and not some nebulous grand enterprise. In any case, the women always seem far more able to just put on their gardening gloves and go do something useful, while the men tend to sit around groaning about the Empire, or the Republic, or whatever it is that they lost. And when they do that, they become very tedious company. And so, without a bit of mental preparation, the men are all liable to end up very lonely and very drunk. So that's my little intervention.

If there is one thing that I would like to claim as my own, it is the comparative theory of superpower collapse. For now, it

remains just a theory, although it is currently being quite thoroughly tested. The theory states that the United States and the Soviet Union will have collapsed for the same reasons, namely: a severe and chronic shortfall in the production of crude oil (that magic addictive elixir of industrial economies), a severe and worsening foreign trade deficit, a runaway military budget, and ballooning foreign debt. I call this particular list of ingredients "The Superpower Collapse Soup." Other factors, such as the inability to provide an acceptable quality of life for its citizens, or a systemically corrupt political system incapable of reform, are certainly not helpful, but they do not automatically lead to collapse, because they do not put the country on a collision course with reality. Please don't be too concerned, though, because, as I mentioned, this is just a theory. My theory.

I've been working on this theory since about 1995, when it occurred to me that the US is retracing the same trajectory as the USSR. As so often is the case, having this realization was largely a matter of being in the right place at the right time. The two most important methods of solving problems are: 1. by knowing the solution ahead of time, and 2. by guessing it correctly. I learned this in engineering school – from a certain professor. I am not that good at guesswork, but I do sometimes know the answer ahead of time.

I was very well positioned to have this realization because I grew up straddling the two worlds – the USSR and the US. I grew up in Russia, and moved to the US when I was twelve, and so I am fluent in Russian, and I understand Russian history and Russian culture the way only a native Russian can. But I went through high school and university in the US .I had careers in several industries here, I traveled widely around the country, and so I also have a very good understanding of the US with all of its quirks and idiosyncrasies. I traveled back to Russia in 1989, when things there still seemed more or less in line with the Soviet norm, and again in 1990, when the economy was at a standstill, and big changes were clearly on the way. I went back there 3 more times in the 1990s, and observed the various stages of Soviet collapse first-hand.

By the mid-1990s I started to see Soviet/American Superpowerdom as a sort of disease that strives for world dominance but in effect eviscerates its host country, eventually leaving behind an empty shell: an impoverished population, an economy in ruins, a legacy of social problems, and a tremendous burden of debt. The symmetries between the two global superpowers were then already too numerous to mention, and they have been growing more obvious ever since.

The superpower symmetries may be of interest to policy wonks and history buffs and various skeptics, but they tell us nothing that would be useful in our daily lives. It is the asymmetries, the differences between the two superpowers, that I believe to be most instructive. When the Soviet system went away, many people lost their jobs, everyone lost their savings, wages and pensions were held back for months, their value was wiped out by hyperinflation, there shortages of food, gasoline, medicine, consumer goods, there was a large increase in crime and violence, and yet Russian society did not collapse. Somehow, the Russians found ways to muddle through. How was that possible? It turns out that many aspects of the Soviet system were paradoxically resilient in the face of system-wide collapse, many institutions continued to function, and the living arrangement was such that people did not lose access to food, shelter or transportation, and could survive even without an income. The Soviet economic system failed to thrive, and the Communist experiment at constructing a worker's paradise on earth was, in the end, a failure. But as a side effect it inadvertently achieved a high level of collapse-preparedness. In comparison, the American system could produce significantly better results, for time, but at the cost of creating and perpetuating a living arrangement that is very fragile, and not at all capable of holding together through the inevitable crash. Even after the Soviet economy evaporated and the government largely shut down, Russians still had plenty left for them to work with. And so there is a wealth of useful information and insight that we can extract from the Russian experience, which we can then turn around and put to good use in helping us improvise a new living arrangement here in the United States – one that is more likely to be survivable.

The mid-1990s did not seem to me as the right time to voice such ideas. The United States was celebrating its so-called Cold War victory, getting over its Vietnam syndrome by bombing Iraq back to the Stone Age, and the foreign policy wonks coined the term "hyperpower" and were jabbering on about full-spectrum dominance. All sorts of silly things were happening. Professor Fukuyama told us that history had ended, and so we were building a brave new world where the Chinese made things out of plastic for us, the Indians provided customer support when these Chinese-made things broke, and we paid for it all just by flipping houses, pretending that they were worth a lot of money whereas they are really just useless bits of ticky-tacky. Alan Greenspan chided us about "irrational exuberance" while consistently low-balling interest rates. It was the "Goldilocks economy" – not to hot, not too cold. Remember that? And now it turns out that it was actually more of a "Tinker-bell" economy, because the last five or so years of economic growth was more or less a

hallucination, based on various debt pyramids, the "whole house of cards" as President Bush once referred to it during one of his lucid moments. And now we can look back on all of that with a funny, queasy feeling, or we can look forward and feel nothing but vertigo.

While all of these silly things were going on, I thought it best to keep my comparative theory of superpower collapse to myself. During that time, I was watching the action in the oil industry, because I understood that oil imports are the Achilles' heel of the US economy. In the mid-1990s the all-time peak in global oil production was scheduled for the turn of the century. But then a lot of things happened that delayed it by at least half a decade. Perhaps you've noticed this too, there is a sort of refrain here: people who try to predict big historical shifts always turn to be off by about half a decade. Unsuccessful predictions, on the other hand are always spot on as far as timing: the world as we know it failed to end precisely at midnight on January 1, 2000. Perhaps there is a physical principal involved: information spreads at the speed of light, while ignorance is instantaneous at all points in the known universe. So please make a mental note: whenever it seems to you that I am making a specific prediction as to when I think something is likely to happen, just silently add "plus or minus half a decade."

In any case, about half a decade ago, I finally thought that the time was ripe, and, as it has turned out, I wasn't too far off. In June of 2005 I published an article on the subject, titled "Post-Soviet Lessons for a Post-American Century," which was quite popular, even to the extent that I got paid for it. It is available at various places on the Internet. A little while later I formalized my thinking somewhat into the "Collapse Gap" concept, which I presented at a conference in Manhattan in April of 2006. The slide show from that presentation, titled "Closing the Collapse Gap," was posted on the Internet and has been downloaded a few million times since then. Then, in January of 2008, when it became apparent to me that financial collapse was well underway, and that other stages of collapse were to follow, I published a short article titled "The Five Stages of Collapse," which I later expanded into a talk I gave at a conference in Michigan in October of 2008. Finally, at the end of 2008, I announced on my blog that I am getting out of the prognosticating business. I have made enough predictions, they all seem very well on track (give or take half a decade, please remember that), collapse is well underway, and now I am just an observer.

But this talk is about something else, something other than making dire predictions and then acting all smug when they come true. You see, there is nothing more useless than predictions, once they have come true. It's like looking at last year's amazingly successful stock picks: what are you going to do about them this year? What we need are examples of things that have been shown to work in the strange, unfamiliar, post-collapse environment that we are all likely to have to confront. Stuart Brand proposed the title for the talk – "Social Collapse Best Practices" – and I thought that it was an excellent idea. Although the term "best practices" has been diluted over time to sometimes mean little more than "good ideas," initially it stood for the process of abstracting useful techniques from examples of what has worked in the past and applying them to new situations, in order to control risk and to increase the chances of securing a positive outcome. It's a way of skipping a lot of trial and error and deliberation and experimentation, and to just go with what works.

In organizations, especially large organizations, "best practices" also offer a good way to avoid painful episodes of watching colleagues trying to "think outside the box" whenever they are confronted with a new problem. If your colleagues were any good at thinking outside the box, they probably wouldn't feel so compelled to spend their whole working lives sitting in a box keeping an office chair warm. If they were any good at thinking outside the box, they would have by now thought of a way to escape from that box. So perhaps what would make them feel happy and productive again is if someone came along and gave them a different box inside of which to think – a box better suited to the post-collapse environment.

Here is the key insight: you might think that when collapse happens, nothing works. That's just not the case. The old ways of doing things don't work any more, the old assumptions are all invalidated, conventional goals and measures of success become irrelevant. But a different set of goals, techniques, and measures of success can be brought to bear immediately, and the sooner the better. But enough generalities, let's go through some specifics. We'll start with some generalities, and, as you will see, it will all become very, very specific rather quickly.

Here is another key insight: there are very few things that are positives or negatives per se. Just about everything is a matter of context. Now, it just so happens that most things that are positives prior to collapse turn out to be negatives

once collapse occurs, and vice versa. For instance, prior to collapse having high inventory in a business is bad, because the businesses have to store it and finance it, so they try to have just-in-time inventory. After collapse, high inventory turns out to be very useful, because they can barter it for the things they need, and they can't easily get more because they don't have any credit. Prior to collapse, it's good for a business to have the right level of staffing and an efficient organization. After collapse, what you want is a gigantic, sluggish bureaucracy that can't unwind operations or lay people off fast enough through sheer bureaucratic foot-dragging. Prior to collapse, what you want is an effective retail segment and good customer service. After collapse, you regret not having an unreliable retail segment, with shortages and long bread lines, because then people would have been forced to learn to shift for themselves instead of standing around waiting for somebody to come and feed them.

If you notice, none of these things that I mentioned have any bearing on what is commonly understood as "economic health." Prior to collapse, the overall macroeconomic positive is an expanding economy. After collapse, economic contraction is a given, and the overall macroeconomic positive becomes something of an imponderable, so we are forced to listen to a lot of nonsense. The situation is either slightly better than expected or slightly worse than expected. We are always either months or years away from economic recovery. Business as usual will resume sooner or later, because some television bobble-head said so.

But let's take it apart. Starting from the very general, what are the current macroeconomic objectives, if you listen to the hot air coming out of Washington at the moment? First: growth, of course! Getting the economy going. We learned nothing from the last huge spike in commodity prices, so let's just try it again. That calls for economic stimulus, a.k.a. printing money. Let's see how high the prices go up this time. Maybe this time around we will achieve hyperinflation. Second: Stabilizing financial institutions: getting banks lending – that's important too. You see, we are just not in enough debt yet, that's our problem. We need more debt, and quickly! Third: jobs! We need to create jobs. Low-wage jobs, of course, to replace all the high-wage manufacturing jobs we've been shedding for decades now, and replacing them with low-wage service sector jobs, mainly ones without any job security or benefits. Right now, a lot of people could slow down the rate at which they are sinking further into debt if they quit their jobs. That is, their job is a net loss for them as individuals as well as for the economy as a whole. But, of course, we need much more of that, and quickly!

So that's what we have now. The ship is on the rocks, water is rising, and the captain is shouting "Full steam ahead! We are sailing to Afghanistan!" Do you listen to Ahab up on the bridge, or do you desert your post in the engine room and go help deploy the lifeboats? If you thought that the previous episode of uncontrolled debt expansion, globalized Ponzi schemes, and economic hollowing-out was silly, then I predict that you will find this next episode of feckless grasping at macroeconomic straws even sillier. Except that it won't be funny: what is crashing now is our life support system: all the systems and institutions that are keeping us alive. And so I don't recommend passively standing around and watching the show – unless you happen to have a death wish.

Right now the Washington economic stimulus team is putting on their Scuba gear and diving down to the engine room to try to invent a way to get a diesel engine to run on seawater. They spoke of change, but in reality they are terrified of change and want to cling with all their might to the status quo. But this game will soon be over, and they don't have any idea what to do next.

So, what is there for them to do? Forget "growth," forget "jobs," forget "financial stability." What should their realistic new objectives be? Well, here they are: food, shelter, transportation, and security. Their task is to find a way to provide all of these necessities on an emergency basis, in absence of a functioning economy, with commerce at a standstill, with little or no access to imports, and to make them available to a population that is largely penniless. If successful, society will remain largely intact, and will be able to begin a slow and painful process of cultural transition, and eventually develop a new economy, a gradually de-industrializing economy, at a much lower level of resource expenditure, characterized by a quite a lot of austerity and even poverty, but in conditions that are safe, decent, and dignified. If unsuccessful, society will be gradually destroyed in a series of convulsions that will leave a defunct nation composed of many wretched little fiefdoms. Given its largely depleted resource base, a dysfunctional, collapsing infrastructure, and its history of unresolved social conflicts, the territory of the Former United States will undergo a process of steady degeneration punctuated by natural and man-made cataclysms.

Food. Shelter. Transportation. Security. When it comes to supplying these survival necessities, the Soviet example offers many valuable lessons. As I already mentioned, in a collapse many economic negatives become positives, and vice versa. Let us consider each one of these in turn.

The Soviet agricultural sector was plagued by consistent underperformance. In many ways, this was the legacy of the disastrous collectivization experiment carried out in the 1930s, which destroyed many of the more prosperous farming households and herded people into collective farms. Collectivization undermined the ancient village-based agricultural traditions that had made pre-revolutionary Russia a well-fed place that was also the breadbasket of Western Europe. A great deal of further damage was caused by the introduction of industrial agriculture. The heavy farm machinery alternately compacted and tore up the topsoil while dosing it with chemicals, depleting it and killing the biota. Eventually, the Soviet government had to turn to importing grain from countries hostile to its interests – United States and Canada – and eventually expanded this to include other foodstuffs. The USSR experienced a permanent shortage of meat and other high-protein foods, and much of the imported grain was used to raise livestock to try to address this problem.

Although it was generally possible to survive on the foods available at the government stores, the resulting diet would have been rather poor, and so people tried to supplement it with food they gathered, raised, or caught, or purchased at farmers' markets. Kitchen gardens were always common, and, once the economy collapsed, a lot of families took to growing food in earnest. The kitchen gardens, by themselves, were never sufficient, but they made a huge difference.

The year 1990 was particularly tough when it came to trying to score something edible. I remember one particular joke from that period. Black humor has always been one of Russia's main psychological coping mechanisms. A man walks into a food store, goes to the meat counter, and he sees that it is completely empty. So he asks the butcher: "Don't you have any fish?" And the butcher answers: "No, here is where we don't have any meat. Fish is what they don't have over at the seafood counter."

Poor though it was, the Soviet food distribution system never collapsed completely. In particular, the deliveries of bread continued even during the worst of times, partly because has always been such an important part of the Russian diet, and partly because access to bread symbolized the pact between the people and the Communist government, enshrined in oft-repeated revolutionary slogans. Also, it is important to remember that in Russia most people have lived within walking distance of food shops, and used public transportation to get out to their kitchen gardens, which were often located in the countryside immediately surrounding the relatively dense, compact cities. This combination of factors made for some lean times, but very little malnutrition and no starvation.

In the United States, the agricultural system is heavily industrialized, and relies on inputs such as diesel, chemical fertilizers and pesticides, and, perhaps most importantly, financing. In the current financial climate, the farmers' access to financing is not at all assured. This agricultural system is efficient, but only if you regard fossil fuel energy as free. In fact, it is a way to transform fossil fuel energy into food with a bit of help from sunlight, to the tune of 10 calories of fossil fuel energy being embodied in each calorie that is consumed as food. The food distribution system makes heavy use of refrigerated diesel trucks, transforming food over hundreds of miles to resupply supermarkets. The food pipeline is long and thin, and it takes only a couple of days of interruptions for supermarket shelves to be stripped bare. Many people live in places that are not within walking distance of stores, not served by public transportation, and will be cut off from food sources once they are no longer able to drive.

Besides the supermarket chains, much of the nation's nutrition needs are being met by an assortment of fast food joints and convenience stores. In fact, in many of the less fashionable parts of cities and towns, fast food and convenience store food is all that is available. In the near future, this trend is likely to extend to the more prosperous parts of town and the suburbs.

Fast food outfits such as McDonalds have more ways to cut costs, and so may prove a bit more resilient in the face of economic collapse than supermarket chains, but they are no substitute for food security, because they too depend industrial agribusiness. Their food inputs, such as high-fructose corn syrup, genetically modified potatoes, various soy-

based fillers, factory-farmed beef, pork and chicken, and so forth, are derived from oil, two-thirds of which is imported, as well as fertilizer made from natural gas. They may be able to stay in business longer, supplying food-that-isn't-really-food, but eventually they will run out of inputs along with the rest of the supply chain. Before they do, they may for a time sell burgers that aren't really burgers, like the bread that wasn't really bread that the Soviet government distributed in Leningrad during the Nazi blockade. It was mostly sawdust, with a bit of rye flour added for flavor.

Can we think of any ways to avoid this dismal scenario? The Russian example may give us a clue. Many Russian families could gauge how fast the economy was crashing, and, based on that, decide how many rows of potatoes to plant. Could we perhaps do something similar? There is already a healthy gardening movement in the United States; can it be scaled up? The trick is to make small patches of farmland available for non-mechanical cultivation by individuals and families, in increments as small as 1000 square feet. The ideal spots would be fertile bits of land with access to rivers and streams for irrigation. Provisions would have to be made for campsites and for transportation, allowing people to undertake seasonal migrations out to the land to grow food during the growing season, and haul the produce back to the population centers after taking in the harvest.

An even simpler approach has been successfully used in Cuba: converting urban parking lots and other empty bits of land to raised-bed agriculture. Instead of continually trucking in vegetables and other food, it is much easier to truck in soil, compost, and mulch just once a season. Raised highways can be closed to traffic (since there is unlikely to be much traffic in any case) and used to catch rainwater for irrigation. Rooftops and balconies can be used for hothouses, henhouses, and a variety of other agricultural uses.

How difficult would this be to organize? Well, Cubans were actually helped by their government, but the Russians managed to do it in more or less in spite of the Soviet bureaucrats, and so we might be able to do it in spite of the American ones. The government could theoretically head up such an effort, purely hypothetically speaking, of course, because I see no evidence that such an effort is being considered. For our fearless national leaders, such initiatives are too low-level: if they stimulate the economy and get the banks lending again, the potatoes will simply grow themselves. All they need to do is print some more money, right?

Moving on to shelter. Again, let's look at how the Russians managed to muddle through. In the Soviet Union, people did not own their place of residence. Everyone was assigned a place to live, which was recorded in a person's internal passport. People could not be dislodged from their place of residence for as long as they drew oxygen. Since most people in Russia live in cities, the place of residence was usually an apartment, or a room in a communal apartment, with shared bathroom and kitchen. There was a permanent housing shortage, and so people often doubled up, with three generations living together. The apartments were often crowded, sometimes bordering on squalid. If people wanted to move, they had to find somebody else who wanted to move, who would want to exchange rooms or apartments with them. There were always long waiting lists for apartments, and children often grew up, got married, and had children before receiving a place of their own.

These all seem like negatives, but consider the flip side of all this: the high population density made this living arrangement quite affordable. With several generations living together, families were on hand to help each other. Grandparents provided day care, freeing up their children's time to do other things. The apartment buildings were always built near public transportation, so they did not have to rely on private cars to get around. Apartment buildings are relatively cheap to heat, and municipal services easy to provide and maintain because of the short runs of pipe and cable. Perhaps most importantly, after the economy collapsed, people lost their savings, many people lost their jobs, even those that still had jobs often did not get paid for months, and when they were the value of their wages was destroyed by hyperinflation, but there were no foreclosures, no evictions, municipal services such as heat, water, and sometimes even hot water continued to be provided, and everyone had their families close by. Also, because it was so difficult to relocate, people generally stayed in one place for generations, and so they tended to know all the people around them. After the economic collapse, there was a large spike in the crime rate, which made it very helpful to be surrounded by people who weren't strangers, and who could keep an eye on things. Lastly, in an interesting twist, the Soviet housing arrangement delivered an amazing final windfall: in the 1990s all of these apartments were privatized, and the people who lived in them suddenly became owners of some very valuable real estate, free and clear.

Switching back to the situation in the US: in recent months, many people here have reconciled themselves to the idea that their house is not an ATM machine, nor is it a nest egg. They already know that they will not be able to comfortably retire by selling it, or get rich by fixing it up and flipping it, and quite a few people have acquiesced to the fact that real estate prices are going to continue heading lower. The question is, How much lower? A lot of people still think that there must be a lower limit, a “realistic” price. This thought is connected to the notion that housing is a necessity. After all, everybody needs a place to live.

Well, it is certainly true that some sort of shelter is a necessity, be it an apartment, or a dorm room, a bunk in a barrack, a boat, a camper, or a tent, a teepee, a wigwam, a shipping container... The list is virtually endless. But there is no reason at all to think that a suburban single-family house is in any sense a requirement. It is little more than a cultural preference, and a very shortsighted one at that. Most suburban houses are expensive to heat and cool, inaccessible by public transportation, expensive to hook up to public utilities because of the long runs of pipe and cable, and require a great deal of additional public expenditure on road, bridge and highway maintenance, school buses, traffic enforcement, and other nonsense. They often take up what was once valuable agricultural land. They promote a car-centric culture that is destructive of urban environments, causing a proliferation of dead downtowns. Many families that live in suburban houses can no longer afford to live in them, and expect others to bail them out.

As this living arrangement becomes unaffordable for all concerned, it will also become unlivable. Municipalities and public utilities will not have the funds to lavish on sewer, water, electricity, road and bridge repair, and police. Without cheap and plentiful gasoline, natural gas, and heating oil, many suburban dwellings will become both inaccessible and unlivable. The inevitable result will be a mass migration of suburban refugees toward the more survivable, more densely settled towns and cities. The luckier ones will find friends or family to stay with; for the rest, it would be very helpful to improvise some solution.

One obvious answer is to repurpose the ever-plentiful vacant office buildings for residential use. Converting offices to dormitories is quite straightforward. Many of them already have kitchens and bathrooms, plenty of partitions and other furniture, and all they are really missing is beds. Putting in beds is just not that difficult. The new, subsistence economy is unlikely to generate the large surpluses that are necessary for sustaining the current large population of office plankton. The businesses that once occupied these offices are not coming back, so we might as well find new and better uses for them.

Another category of real estate that is likely to go unused and that can be repurposed for new communities is college campuses. The American 4-year college is an institution of dubious merit. It exists because American public schools fail to teach in 12 years what Russian public schools manage to teach in 8. As fewer and fewer people become able to afford college, which is likely to happen, because meager career prospects after graduation will make them bad risks for student loans, perhaps this will provide the impetus to do something about the public education system. One idea would be to scrap it, then start small, but eventually build something a bit more on par with world standards.

College campuses make perfect community centers: there are dormitories for newcomers, fraternities and sororities for the more settled residents, and plenty of grand public buildings that can be put to a variety of uses. A college campus normally contains the usual wasteland of mowed turf that can be repurposed to grow food, or, at the very least, hay, and to graze cattle. Perhaps some enlightened administrators, trustees and faculty members will fall upon this idea once they see admissions flat-lining and endowments dropping to zero, without any need for government involvement. So here we have a ray of hope, don’t we.

Moving on to transportation. Here, we need to make sure that people don’t get stranded in places that are not survivable. Then we have to provide for seasonal migrations to places where people can grow, catch, or gather their own food, and then back to places where they can survive the winter without freezing to death or going stir-crazy from cabin fever. Lastly, some amount of freight will have to be moved, to transport food to population centers, as well as enough coal and firewood to keep the pipes from freezing in the remaining habitable dwellings.

All of this is going to be a bit of a challenge, because it all hinges on the availability of transportation fuels, and it seems very probable that transportation fuels will be both too expensive and in short supply before too long. From about 2005 and until the middle of 2008 the global oil has been holding steady, unable to grow materially beyond a level that has been characterized as a “bumpy plateau.” An all-time record was set in 2005, and then, after a period of record-high oil prices, again only in 2008. Then, as the financial collapse gathered speed, oil and other commodity prices crashed, along with oil production. More recently, the oil markets have come to rest on an altogether different “bumpy plateau”: the oil prices are bumping along at around $40 a barrel and can’t seem to go any lower. It would appear that oil production costs have risen to a point where it does not make economic sense to sell oil at below this price.

Now, $40 a barrel is a good price for US consumers at the moment, but there is hyperinflation on the horizon, thanks to the money-printing extravaganza currently underway in Washington, and $40 could easily become $400 and then $4000 a barrel, swiftly pricing US consumers out of the international oil market. On top of that, exporting countries would balk at the idea of trading their oil for an increasingly worthless currency, and would start insisting on payment in kind – in some sort of tangible export commodity, which the US, in its current economic state, would be hard-pressed to provide in any great quantity. Domestic oil production is in permanent decline, and can provide only about a third of current needs. This is still quite a lot of oil, but it will be very difficult to avoid the knock-on effects of widespread oil shortages. There will be widespread hoarding, quite a lot of gasoline will simply evaporate into the atmosphere, vented from various jerricans and improvised storage containers, the rest will disappear into the black market, and much fuel will be wasted driving around looking for someone willing to part with a bit of gas that’s needed for some small but critical mission.

I am quite familiar with this scenario, because I happened to be in Russia during a time of gasoline shortages. On one occasion, I found out by word of mouth that a certain gas station was open and distributing 10 liters apiece. I brought along my uncle’s wife, who at the time was 8 months pregnant, and we tried use her huge belly to convince the gas station attendant to give us an extra 10 liters with which to drive her to the hospital when the time came. No dice. The pat answer was: “Everybody is 8 months pregnant!” How can you argue with that logic? So 10 liters was it for us too, belly or no belly.

So, what can we do to get our little critical missions accomplished in spite of chronic fuel shortages? The most obvious idea, of course, is to not use any fuel. Bicycles, and cargo bikes in particular, are an excellent adaptation. Sailboats are a good idea too: not only do they hold large amounts of cargo, but they can cover huge distances, all without the use of fossil fuels. Of course, they are restricted to the coastlines and the navigable waterways. They will be hampered by the lack of dredging due to the inevitable budget shortfalls, and by bridges that refuse to open, again, due to lack of maintenance funds, but here ancient maritime techniques and improvisations can be brought to bear to solve such problems, all very low-tech and reasonably priced.

Of course, cars and trucks will not disappear entirely. Here, again, some reasonable adaptations can be brought to bear. In my book, I advocated banning the sale of new cars, as was done in the US during World War II. The benefits are numerous. First, older cars are overall more energy-efficient than new cars, because the massive amount of energy that went into manufacturing them is more highly amortized. Second, large energy savings accrue from the shutdown of an entire industry devoted to designing, building, marketing, and financing new cars. Third, older cars require more maintenance, reinvigorating the local economy at the expense of mainly foreign car manufacturers, and helping reduce the trade deficit. Fourth, this will create a shortage of cars, translating automatically into fewer, shorter car trips, higher passenger occupancy per trip, and more bicycling and use of public transportation, saving even more energy. Lastly, this would allow the car to be made obsolete on the about the same time scale as the oil industry that made it possible. We will run out of cars just as we run out of gas.

Here we are, only a year or so later, and I am most heartened to see that the US auto industry has taken my advice and is in the process of shutting down. On the other hand, the government’s actions continue to disappoint. Instead of trying to solve problems, they would rather continue to create boondoggles. The latest one is the idea of subsidizing the sales of new cars. The idea of making cars more efficient by making more efficient cars is sheer folly. I can take any pick-up truck and increase its fuel efficiency one or two thousand percent just by breaking a few laws. First, you pack about a dozen people into the bed, standing shoulder to shoulder like sardines. Second, you drive about 25 mph, down the highway, because going any faster would waste fuel and wouldn’t be safe with so many people in the back. And there you are, per passenger fuel efficiency increased by a factor of 20 or so. I believe the Mexicans have done extensive research in this area, with excellent results.

Another excellent idea pioneered in Cuba is making it illegal not to pick up hitchhikers. Cars with vacant seats are flagged down and matched up with people who need a lift. Yet another idea: since passenger rail service is in such a sad shape, and since it is unlikely that funds will be found to improve it, why not bring back the venerable institution of riding the rails by requiring rail freight companies to provide a few empty box cars for the hobos. The energy cost of the additional weight is negligible, the hobos don't require stops because they can jump on and off, and only a couple of cars per train would ever be needed, because hobos are almost infinitely compressible, and can even ride on the roof if needed. One final transportation idea: start breeding donkeys. Horses are finicky and expensive, but donkeys can be very cost-effective and make good pack animals. My grandfather had a donkey while he was living in Tashkent in Central Asia during World War II. There was nothing much for the donkey to eat, but, as a member of the Communist Party, my grandfather had a subscription to Pravda, the Communist Party newspaper, and so that's what the donkey ate. Apparently, donkeys can digest any kind of cellulose, even when it's loaded with communist propaganda. If I had a donkey, I would feed it the Wall Street Journal.

And so we come to the subject of security. Post-collapse Russia suffered from a serious crime wave. Ethnic mafias ran rampant, veterans who served in Afghanistan went into business for themselves, there were numerous contract killings, muggings, murders went unsolved left and right, and, in general, the place just wasn't safe. Russians living in the US would hear that I am heading back there for a visit, and would give me a wide-eyed stare: how could I think of doing such a thing. I came through unscathed, somehow. I made a lot of interesting observations along the way.

One interesting observation is that once collapse occurs it becomes possible to rent a policeman, either for a special occasion, or generally just to follow someone around. It is even possible to hire a soldier or two, armed with AK-47s, to help you run various errands. Not only is it possible to do such things, it's often a very good idea, especially if you happen to have something valuable that you don't want to part with. If you can't afford their services, then you should try to be friends with them, and to be helpful to them in various ways. Although their demands might seem exorbitant at times, it is still a good idea to do all you can to keep them on your side. For instance, they might at some point insist that you and your family move out to the garage so that they can live in your house. This may be upsetting at first, but then is it really such a good idea for you to live in a big house all by yourselves, with so many armed men running around. It may make sense to station some of them right in your house, so that they have a base of operations from which to maintain a watch and patrol the neighborhood.

A couple of years ago I half-jokingly proposed a political solution to collapse mitigation, and formulated a platform for the so-called Collapse Party. I published it with the caveat that I didn't think there was much of a chance of my proposals becoming part of the national agenda. Much to my surprise, I turned out to be wrong. For instance, I proposed that we stop making new cars, and, lo and behold, the auto industry shuts down. I also proposed that we start granting amnesties to prisoners, because the US has the world's largest prison population, and will not be able to afford to keep so many people locked up. It is better to release prisoners gradually, over time, rather than in a single large general amnesty, the way Saddam Hussein did it right before the US invaded. And, lo and behold, many states are starting to implement my proposal. It looks like California in particular will be forced to release some 60 thousand of the 170 thousand people it keeps locked up. That is a good start. I also proposed that we dismantle all overseas military bases (there are over a thousand of them) and repatriate all the troops. And it looks like that is starting to happen as well, except for the currently planned little side-trip to Afghanistan. I also proposed a Biblical jubilee – forgiveness of all debts, public and private. Let's give that one… half a decade?

But if we look just at the changes that are already occurring, just the simple, predictable lack of funds, as the federal government and the state governments all go broke, will transform American society in rather predictable ways. As municipalities run out of money, police protection will evaporate. But the police still have to eat, and will find ways to use their skills to good use on a freelance basis. Similarly, as military bases around the world are shut down, soldiers will return to a country that will be unable to reintegrate them into civilian life. Paroled prisoners will find themselves in much the same predicament.

And so we will have former soldiers, former police, and former prisoners: a big happy family, with a few bad apples and some violent tendencies. The end result will be a country awash with various categories of armed men, most of them

unemployed, and many of them borderline psychotic. The police in the United States are a troubled group. Many of them lose all touch with people who are not "on the force" and most of them develop an us-versus-them mentality. The soldiers returning from a tour of duty often suffer from post-traumatic stress disorder. The paroled prisoners suffer from a variety of psychological ailments as well. All of them will sooner or later realize that their problems are not medical but rather political. This will make it impossible for society to continue to exercise control over them. All of them will be making good use of their weapons training and other professional skills to acquire whatever they need to survive. And the really important point to remember is that they will do these things whether or not anyone thinks it legal for them to do be doing them.

I said it before and I will say it again: very few things are good or bad per se; everything has to be considered within a context. And, in a post-collapse context, not having to worry whether or not something is legal may be a very good thing. In the midst of a collapse, we will not have time to deliberate, legislate, interpret, set precedents and so on. Having to worry about pleasing a complex and expensive legal system is the last thing we should have to worry about.

Some legal impediments are really small and trivial, but they can be quite annoying nevertheless. A homeowners' association might, say, want give you a ticket or seek a court order against you for not mowing your lawn, or for keeping livestock in your garage, or for that nice windmill you erected on a hill that you don't own, without first getting a building permit, or some municipal busy-body might try to get you arrested for demolishing a certain derelict bridge because it was interfering with boat traffic – you know, little things like that. Well, if the association is aware that you have a large number of well armed, mentally unstable friends, some of whom still wear military and police uniforms, for old time's sake, then they probably won't give you that ticket or seek that court order.

Or suppose you have a great new invention that you want to make and distribute, a new agricultural implement. It's a sort of flail studded with sharp blades. It has a hundred and one uses and is highly cost-effective, and reasonably safe provided you don't lose your head while using it, although people have taken to calling the "flying guillotine." You think that this is an acceptable risk, but you are concerned about the issues of consumer safety and liability insurance and possibly even criminal liability. Once again, it is very helpful to have a large number of influential, physically impressive, mildly psychotic friends who, whenever some legal matter comes up, can just can go and see the lawyers, have a friendly chat, demonstrate the proper use of the flying guillotine, and generally do whatever they have to do to settle the matter amicably, without any money changing hands, and without signing any legal documents.

Or, say, the government starts being difficult about moving things and people in and out of the country, or it wants to take too much of a cut from commercial transactions. Or perhaps your state or your town decides to conduct its own foreign policy, and the federal government sees it fit to interfere. Then it may turn out to be a good thing if someone else has the firepower to bring the government, or what remains of it, to its senses, and convince it to be reasonable and to play nice.

Or perhaps you want to start a community health clinic, so that you can provide some relief to people who wouldn't otherwise have any health care. You don't dare call yourself a doctor, because these people are suspicious of doctors, because doctors were always trying to rob them of their life's savings. But suppose you have some medical training that you got in, say, Cuba, and you are quite able to handle a Caesarean or an appendectomy, to suture wounds, to treat infections, to set bones and so on. You also want to be able to distribute opiates that your friends in Afghanistan periodically send you, to ease the pain of hard post-collapse life. Well, going through the various licensing boards and getting the certifications and the permits and the malpractice insurance is all completely unnecessary, provided you can surround yourself with a lot of well-armed, well-trained, mentally unstable friends.

Food. Shelter. Transportation. Security. Security is very important. Maintaining order and public safety requires discipline, and maintaining discipline, for a lot of people, requires the threat of force. This means that people must be ready to come to each other's defense, take responsibility for each other, and do what's right. Right now, security is provided by a number of bloated, bureaucratic, ineffectual institutions, which inspire more anger and despondency than discipline, and dispense not so much violence as ill treatment. That is why we have the world's highest prison population. They are supposedly there to protect people from each other, but in reality their mission is not even to provide security; it is to safeguard property, and those who own it. Once these institutions run out of resources, there will be a period of upheaval, but in the end people will be forced to learn to deal with each other face to face, and Justice will once again

become a personal virtue rather than a federal department.

I've covered what I think are basics, based on what I saw work and what I think might work reasonably well here. I assume that a lot of you are thinking that this is all quite far into the future, if in fact it ever gets that bad. You should certainly feel free to think that way. The danger there is that you will miss the opportunity to adapt to the new reality ahead of time, and then you will get trapped. As I see it, there is a choice to be made: you can accept the failure of the system now and change your course accordingly, or you can decide that you must try to stay the course, and then you will probably have to accept your own individual failure later.

So how do you prepare? Lately, I've been hearing from a lot of high-powered, successful people about their various high-powered, successful associates. Usually, the story goes something like this: "My a. financial advisor, b. investment banker, or c. commanding officer has recently a. put all his money in gold, b. bought a log cabin up in the mountains, or c. built a bunker under his house stocked with six months of food and water. Is this normal?" And I tell them, yes, of course, that's perfectly harmless. He's just having a mid-collapse crisis. But that's not really preparation. That's just someone being colorful in an offbeat, countercultural sort of way.

So, how do you prepare, really? Let's go through a list of questions that people typically ask me, and I will try to briefly respond to each of them.

OK, first question: How about all these financial boondoggles? What on earth is going on? People are losing their jobs left and right, and if we calculate unemployment the same way it was done during the Great Depression, instead of looking at the cooked numbers the government is trying to feed us now, then we are heading toward 20% unemployment. And is there any reason to think it'll stop there? Do you happen to believe that prosperity is around the corner? Not only jobs and housing equity, but retirement savings are also evaporating. The federal government is broke, state governments are broke, some more than others, and the best they can do is print money, which will quickly lose value. So, how can we get the basics if we don't have any money? How is that done? Good question.

As I briefly mentioned, the basics are food, shelter, transportation, and security. Shelter poses a particularly interesting problem at the moment. It is still very much overpriced, with many people paying mortgages and rents that they can no longer afford while numerous properties stand vacant. The solution, of course, is to cut your losses and stop paying. But then you might soon have to relocate. That is OK, because, as I mentioned, there is no shortage of vacant properties around. Finding a good place to live will become less and less of a problem as people stop paying their rents and mortgages and get foreclosed or evicted, because the number of vacant properties will only increase. The best course of action is to become a property caretaker, legitimately occupying a vacant property rent-free, and keeping an eye on things for the owner. What if you can't find a position as a property caretaker? Well, then you might have to become a squatter, maintain a list of other vacant properties that you can go to next, and keep your camping gear handy just in case. If you do get tossed out, chances are, the people who tossed you out will then think about hiring a property caretaker, to keep the squatters out. And what do you do if you become property caretaker? Well, you take care of the property, but you also look out for all the squatters, because they are the reason you have a legitimate place to live. A squatter in hand is worth three absentee landlords in the bush. The absentee landlord might eventually cut his losses and go away, but your squatter friends will remain as your neighbors. Having some neighbors is so much better than living in a ghost town.

What if you still have a job? How do you prepare then? The obvious answer is, be prepared to quit or to be laid off or fired at any moment. It really doesn't matter which one of these it turns out to be; the point is to sustain zero psychological damage in the process. Get your burn rate to as close to zero as you can, by spending as little money as possible, so than when the job goes away, not much has to change. While at work, do as little as possible, because all this economic activity is just a terrible burden on the environment. Just gently ride it down to a stop and jump off.

If you still have a job, or if you still have some savings, what do you do with all the money? The obvious answer is, build up inventory. The money will be worthless, but a box of bronze nails will still be a box of bronze nails. Buy and stockpile

useful stuff, especially stuff that can be used to create various kinds of alternative systems for growing food, providing shelter, and providing transportation. If you don't own a patch of dirt free and clear where you can stockpile stuff, then you can rent a storage container, pay it a few years forward, and just sit on it until reality kicks in again and there is something useful for you to do with it. Some of you may be frightened by the future I just described, and rightly so. There is nothing any of us can do to change the path we are on: it is a huge system with tremendous inertia, and trying to change its path is like trying to change the path of a hurricane. What we can do is prepare ourselves, and each other, mostly by changing our expectations, our preferences, and scaling down our needs. It may mean that you will miss out on some last, uncertain bit of enjoyment. On the other hand, by refashioning yourself into someone who might stand a better chance of adapting to the new circumstances, you will be able to give to yourself, and to others, a great deal of hope that would otherwise not exist.

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