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DISCUSSIONS ABOUT ENERGY AND OUR FUTURE

Australia, The Place To Be: Part 3a

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Introduction

In Part 1 & Part 2 I discussed the possibility that a downturn may occur in the 5+ year timeframe and a serious dislocation to our way of life may occur in the 13+ year timeframe. I am certainly not suggesting that it is certain, or even probable, but as someone who deals in risk management every day this is a risk that I feel needs serious management.

My goal in Part 3 was to examine what, on a personal level, can be done to prepare for these possible risks and guarantee a future for my son. Unfortunately, the answer ran to almost 10,000 words! I am sure that you have better things to do than read 10,000 words, so I have divided it into 3 a and 3b and I have ruthlessly cut the word count.

Part 3a will concentrate mainly on a worst case. Part 3b will try to draw it all together, then look at a best case.

The three most worrying risks that I identified in Part 2 were interactions between Peak Oil and:
- Climate Change
- Massive Economic Downturn
- Pandemic

The inclusion of pandemic was a surprise as it does not get much press in the peak oil world, but the number computed was high enough to justify a rating in the top 3. On reflection, this should not come as a surprise. Throughout history disease has ridden beside the other horsemen of the Apocalypse. In recent years we have forgotten about disease - as medical science pushed back this threat. But now we are living cheek-to-jowl, in conditions that are just begging for a global pandemic.

The only thing that has stopped a pandemic in recent years has been our willingness to take drastic action. A chicken just needs to sneeze in Hong Kong and we slaughter the whole flock, burn the corpses and disinfect the area. If resources became constrained, this type of response might not be so common. At that point, the horseman returns.

In planning a strategy I need to cater for the range of scenarios described in Part 2. The scenarios range from Best Case to Worst Case:
1. Best case. Some problems will be encountered, and they need to be overcome. A significant amount of infrastructure building will be required. Some demolition and salvaging of material may also be required. There will be some degree of dislocation, as society remodels itself to meet the challenges, however the dislocation will not be severe and there will be significant employment opportunities, in particular for construction workers and Engineers.

2. Worst case. One or more additional factors impact on an already stressed situation to cause a more severe dislocation or breakdown. Normal societal processes are degraded, supporting infrastructure and utilities are degraded or even lost for a period of time. The task of recovery is massively set back and complicated.

The "No Regrets" Test

In planning, I want to implement a "No Regrets" test. The test works like this. I must be able to answer "no" to both questions:
1. If everything goes really well, and Australia comes through the next 13 years with only minimal problems, have I undertaken any preparation that I regret? (e.g. Have I spent silly amounts of money on an underground bunker?)
2. If everything goes really badly, and Australia comes to grief over the next 13 years, have I undertaken any preparation that I regret? (e.g. Have I spent silly amounts of money on a mansion that sits on a postage stamp of land in an unsustainable area?)

Surprisingly, this test can be passed quite easily - always do things that are worth it for their own sake. This allows you to do things that work in both best and worst cases. For example:
1. Growing my own fruit and vegetables guarantees me fresh, pesticide-free food.
2. Learning useful skills such as brewing and preserving provides me with interesting hobbies.

You can learn fun things like how to espalier your fruit trees, fitting them into almost no space, but getting plenty of fruit from them.

These fruit trees fit in the few inches between my vegetable garden and the fence. They are very young, but already bearing fruit.

Don't go out and max out all your credit cards buying guns and tinned food. This might work out for you, but it might also complicate your problems by reducing your available resources at some time in the future when resources are what you need, not guns.

Supposing some smart Engineer finds a fast, cheap, easy way to convert shale oil into regular oil, then capture the CO_2 and use it to produce algae bio-diesel as a bonus? Peak Oil would suddenly be no more than a minor problem in Australia.

On the other hand, I am not suggesting a do-nothing approach. Supposing that some smart Engineer doesn't find a way to convert shale oil?

Sensible preparations should leave you with the ability to respond in a flexible way regardless of how things pan out. Don't just prepare for one vision of the future – because it ain't gunna happen that way. Prepare for a range of futures.

In the preparations that I describe below, I always consider the "No Regrets" test.

What Does a Breakdown Look Like?

Before we examine strategies, it might be instructive to consider what a worst case looks like, and try to draw some lessons.

Breakdowns have occurred recently in Russia (after the fall of Communism), Argentina (after the Argentinean Economic Collapse) and Cuba (when the collapse of Communism led to a collapse of Cuban imports and exports). A more severe breakdown occurred in Rwanda, but was driven by massive overpopulation. I will not be considering it for analysis because I am not convinced that there are many possible parallels between Rwanda's situation (overpopulation) and Australia's (possible dislocations and infrastructure pressures). Considering the breakdowns in Russia, Argentina and Cuba may help us visualize a worst case in Australia....(My "Doomer" friends disagree of course. "Worst Case" is when your neighbors loot your food and then eat you. Historically, this has happened - so I won't dismiss it, but I would argue that any preparation that is carried out based on the scenarios below would also give you an advantage in the more extreme scenarios.)

The breakdowns under consideration were characterized by a general failure of the interconnecting dependencies between people. This was typically followed by:
- widespread unemployment
- failures of utilities and services
- failures of food production and/or distribution, with malnutrition as a result
- Numerous surprising and unpredictable consequences. For example, there is a commonly quoted story of a near-meltdown in a nuclear reactor aboard a Russian submarine. The story claims that the Russian navy had failed to pay their utility bill in a town that was used by submarines. As a result, power was cut off to a nuclear submarine. Unfortunately the submarine was carrying out maintenance at the time, and was completely dependant on external power to keep the nuclear reactor cooled. The commander of the submarine sent armed sailors in to the town to ensure that the power was reconnected immediately. The sailors succeeded with minutes to spare, thus averting a nuclear catastrophe. I have no idea if this story is true, but it certainly illustrates how small failures of interdependencies can escalate into bigger failures.

From a planning perspective, each of these breakdowns had four very relevant features:
1. A breakdown of supply chains, followed by the emergence of local markets, local bartering and/or "Grey Markets". These markets were needed to meet people's immediate needs, and quickly grew into a more complex system of interdependent supply and servicing systems.
2. A loss of Law and Order. This failure occurred to a varying degree, from partial to complete, depending on the time and place. There were times in rural Argentina and Russia when law simply had no relevance, but Cuba claims to have experienced little loss of law and order.
3. As time passed, new systems and new entrepreneurs emerged. These systems and entrepreneurs were often built on abandoned infrastructure (despite the fact that the entrepreneurs rarely owned that infrastructure), and frequently worked in legal "grey areas". They depended on the fact that law and order had broken down, and concepts of ownership were no longer clear.
4. Location was important. People moved. If the local area didn't support 100% of the population, then the required percentage moved, sometimes with no clear idea of where they were moving to. This greatly contributed to the breakdown of law and order, as people searched for new options in new locations.

Dmitry Orlov was a witness of the Russian collapse, and wrote an analysis, which is available at: http://energybulletin.net/23259.html

Lessons Learned

So, in a worst-case scenario (comparable with the three events above), I need to plan for a number of problems. Here is a list of some of the problems that might be encountered:

1. A loss of reliability of utilities and services. Utilities may only run for a few hours per day (or less).
2. Possible food scarcity.
3. The emergence of a bartering or trading system that either supplements existing systems, or completely supplants them.
4. Loss of Law and Order
5. The emergence of new systems and new entrepreneurs.
6. A bad location could force a move with no clear destination. Location defines your problems, your opportunities, your risks and your strategies.

Preparing a Location: City or Country?

Several years ago I started thinking about the option of a "lifeboat" as a risk-mitigation strategy. The "lifeboat" concept is frequently used by survivalists to describe a subsistence farm that can be used as a refuge if required. There are a few ethical questions about this approach – if everybody "bugs out" then society fails and we all lose. Philosophically, I don't consider myself to be a "survivalist", but I did seriously consider building a retreat for my family out in the country.

Finding a location turns out to be a lot harder than you might think. Why? Because the key to such a lifeboat is that it needs to be secluded. You don't want people wandering through, eating all your produce. That should be easy, right? After all, Australia has a lot of bush!

True, but not relevant. Our "lifeboat" needs to be in an area that offers reliable water and good soil but is:
1. Close enough to commute to on weekends (lifeboats need maintenance and they need to look "lived in").
2. Far enough away to ensure that it is not overrun by refugees when/if a significant number of city-dwellers decide to wander out into the country to find a better place to live.

It turns out that these two requirements are mutually incompatible. Here are the assumptions needed to prove that assertion.
1. To support maintenance, your "lifeboat" must be within 150 km of your city, and to support agriculture it must be at least 1 hectare in size.
2. You will only move to your lifeboat if life in the city becomes unpleasant or impossible.
3. If life in the city becomes unpleasant or impossible, then obviously 10% (or more) of the city population will feel the same way. They will move out of the city and look for a place to live.

What is the likelihood that they will find your lifeboat?

Assuming that it is 150 km from the city and then allowing for the fact that most cities in Australia are situated near the ocean and beside a river, then your lifeboat is located within a semi-circle with a circumference about 470 km long. The surface area that people are likely to wander through is around 30,000 sq km (after you eliminate ocean and heavily urbanized areas). Assuming that 10% of a city of 2.5 million walk out of the city, and they distribute themselves evenly, then it doesn't take any great mathematics to conclude that your lifeboat is going to be overrun.

Depending on how far people wander, the number of people who will walk through your lifeboat is likely to be in the hundreds. It is fair to assume that at least some will attempt to take up residence within your lifeboat - because they will be actively looking for exactly the same features

that you were when you chose it.

Are you willing to shoot squatters? No? Me neither. So that particular option doesn't really work out well.

The other major problem with the lifeboat concept is that you are isolated. In the years to come you are likely to need a dentist, a welder, an electrician, a plumber, a policeman, a friend. You can't do it all on your own. Getting access to skilled people means being part of a community.

I haven't given up hope of establishing a lifeboat, but I think the concept needs a bit of a re-think. The "lifeboat" that survivalists frequently discuss, in the form of a small subsistence farm, may not be the best option. I may write about better options in a future article.

For now, let us just say that the conventional "lifeboat" concept will only work if you move to a very remote area. This implies that you probably have to live there permanently, as commuting long distances is just too hard – particularly if fuel becomes scarce or expensive. The option of moving away from my friends and family to live on a subsistence farm hundreds of kilometres from civilization is not attractive to me, so I am not pursuing that option. I'm sure there are people suited to this choice, but it is not for me.

A frequently-discussed alternative to the loner-style lifeboat is to be part of a rural community, or part of a purposefully designed peak-aware community. Both of these options seem viable and probably superior options. You have access to human resources, but you are away from the big-city problems and close to food production areas.

As time passes, this option will probably get better, as a trend towards re-localisation emerges. Our centralised lifestyle depends on cheap transport. As cheap transport becomes less available, you can expect every successful town to have its own doctor, electrician, "fix-it man", baker, etc. The insanity of shipping wheat to the city, then shipping bread back to the wheat area is likely to end.

Some rural communities are likely to enjoy increased vigour as a variety of local tradesmen and businesses emerge to fill niches that are left empty by the decline of cheap transport.

This is probably the best option available; however it is not for me. My life is inextricably bound with the city. All of my friends are here, and all of my wife's family are here. If I move, then I lose my job and probably my wife! Losing my wife would fail the "no regrets" test, so like many of the readers of this discussion, I am going to try to make the best of a city location. If things go well, then a city is probably a good choice. If things go badly, then a strategy is needed.

Below I will attempt to define a strategy that applies mainly to those who, like me, are going to stick it out in the city.

Will The Government Help or Hinder?

I suspect that the current Australian Government's ideology of letting markets take care of things would not survive an oil shortage crisis. The market did not care for things. Now the government may have to take a hand.

In addition to tackling at least some of the infrastructure projects, the government will need to ensure basic welfare, and deal with a possible economic refugee crisis.

Several interesting possibilities emerge when looking at the refugee issue. The first possibility is that some of the refugees will be European.

Looking at Nations that may have a shortage of oil in the near future, Europe comes up as a

possibility. Russia may supply a little, but Vladimir Putin is increasingly indicating that much of the Russian oil will be locked in. The US has secured an ability to "lock in" Iraq's oil, and may move on Iran next. China is a thousand pound gorilla that already has some indigenous oil and might secure much of what remains in the rest of the world. This leaves parts of Asia and Europe out in the cold.

Our government has shown a willingness to let refugee boats sink when they come from Asian nations. Will we show equal resolve if economic refugees start coming in from Europe? An unlikely possibility I admit, but an interesting thought.

Expect the government to enact laws about building in flood areas. Areas with poor prospect for transport may also be discouraged by legislation.

The government will also have to address the areas of:
- Welfare
- Health
- Defence
- Internal Security

Defence will probably get first priority. Expect health to come in last. I am certainly planning on that basis.

Preparing For a Worst Case: Planning Your Strategy in Detail.

The 6 lessons learned from recent "worst case" collapses were:
1. A loss of reliability of utilities and services. Utilities may only run for a few hours per day (or less).
2. Possible food scarcity.
3. The emergence of a bartering or trading system that either supplements existing systems, or completely supplants them.
4. Loss of Law and Order.
5. The emergence of new systems and new entrepreneurs.
6. Location is important.

So we need to have strategies to address each of these problems.

1. Loss of reliable utilities.

Part of the solution is to change your behavior. My grandparents got up with the sun, and went to bed with the sun. I'm not ready to live entirely without hot water and reading lights just yet, so the second part of the solution is to have systems that can cope with anything from a temporary outage through to a prolonged period without utilities. This may require some level of redundancy, but I have always tried to choose systems that are justified for their own sake, so the redundant system has some independent use.

Water.
Living without water on tap is hard. Rainwater tanks might be a good investment. For a lower cost option, if there is a stream in your area, then consider purchasing some water filters. Filtration may not be enough - ensure that you have a way to boil the water for sterilization. To prepare water for drinking, first strain the course material out using a cloth, then boil the water, and finally run the cooled water through a water filter in order to remove unwanted chemicals.

Lighting.
Kerosene lanterns can be quite decorative, but you will need a good supply of kerosene if you want to use them. Candles in candelabra can also be decorative but I should note that I am

nervous about candles. Naked candles sitting on candelabra are often at the same height as hair, particularly the kind of long, teased hair that young women favor. I have seen this go wrong. Naked flames should be treated with caution.

Hand cranked LED torches, and/or battery-powered LED torches (including head lamps), along with rechargeable batteries, solar re-chargers, and re-chargers that plug into a wall socket (after power is restored) are all worth considering in an emergency lighting scenario.

Cooking.
Ideally, in the kitchen you will have a gas stove but electric oven - so if only one utility is down, you are covered. If both utilities are down....Well, where would we be without the great Aussie BBQ? Most gas BBQs have a tray that would (in theory) allow you to use wood or charcoal as a fuel if the gas ran out. Most camping stores will supply you with a number of alternatives for cooking – which includes a spirit stove that can use almost any imaginable fuel. I have one, and 3 litres of fuel – enough for a few months of sparing use, but I will eventually run out of fuel. Plans for various improvised solar cookers can be found on the Web.

Heating.
We don't need much home heating in most parts of Australia. A warm quilt for winter pretty much covers it. In line with my passion for redundancy of essential items, we probably have enough warm clothes, blankets and quilts for 3 or 4 families.

Warm water is a bit of a sore point with me at the moment. When we built the house I made sure that our hot water system included a very large stainless steel tank. The stainless steel systems are expensive, but virtually indestructible, so I regarded this as a necessary expense.

Then when I went to add a Solar Hot Water system to our hot water service, I discovered that solar systems normally have a roof-mounted tank, rendering your ground-level tank useless. Having paid a fortune for my ground-level stainless steel tank, I was reluctant to throw it away, so I looked at options. I can install a pump that would connect the solar collector on the roof to my ground-level stainless steel tank, but this pump requires electricity. I am still looking at options. I like warm water.

As a cheap standby option, a solar "bush shower" can be bought from many camping stores.

2. Possible food scarcity.

Drought and a reduction in the availability of fertilizer and other inputs could cut our grain production dramatically – and we would still have enough to feed our citizens. In Australia, if food scarcity occurs, the cause is likely to be the same as in Argentina's situation – a breakdown in the interconnections between people and systems leading to a failure of the marketing and distribution systems. Argentina is one of the world's biggest grain producers, yet for several years malnutrition in children was endemic.

Dmitry Orlov commented that the average Russian's habit of cultivating a little vegetable garden probably saved Russia from widespread famine in the years immediately after the collapse of the Soviet Union. Food security in Australia seems a crazy thing to worry about, but no crazier than food security in Argentina.

Scarcity is not the same as absence. Most of the collapses discussed were characterized by malnutrition, not starvation.

As an example - if a person needs 2,400 Calories per day but only receives 2,000 calories per day, then that person will lose weight at a modest rate. It would take about 6 months to lose around 9 kg.

Different people obviously respond in different ways. For me, a loss of 9 kg would return me to the weight I competed at as an athlete, but for a slender woman a 9 kg loss could be lethal.

A strategy should be capable of supplying a small number of calories per day for an extended period, or a larger number for a short period. The strategy should also be able to provide vitamins and minerals.

Most of the people reading this article probably tend to work full time. Throw in around 1-2 hours/day of commuting, and we don't have much time for cultivating food in a backyard garden. One solution is to select food plants that are less work-intensive – mostly perennials, but also any herb or vegetable that can thrive without attention. Ideas include fruit trees, strawberries, Jerusalem artichokes, globe artichokes, runner beans, rocket, garlic, chili, and most other herbs.

If you stick to relatively organic inputs and techniques, then the work required is minimal and the produce will be pesticide free. However your productivity will be dramatically less than the productivity that could be achieved by using more intensive techniques and fast-growing annuals in a rotated crop system.

I am willing to accept the reduced productivity. I never expect to produce all the food I need from a backyard garden, I am only aiming to produce high-nutrient food that also provides some calories.

Books have been written that claim to provide techniques for producing all the calories your family needs, in your backyard garden. The books are interesting and informative, but the techniques depend on things going right. Any Australian farmer will tell you that this doesn't always happen. The techniques are also dependant on a lot of invested time. I don't have that much time.

My garden is designed to only produce around 300 Calories per person each day, however it also provides a high proportion of the vitamins and minerals needed by each person in a day. This combination of some calories but lots of nutrients might be enough to cover the shortfall caused by scarcity.

Another common strategy is, of course, to stockpile food. My parents and grandparents had a rule that there always had to be a minimum of 3 weeks of food in the pantry. When we were cut off by the Brisbane Floods in 1974, my family did not miss a meal.

In addition to the extra large pantry, a small stockpile might be handy. Items such as sugar and white rice have very long shelf lives - almost indefinite in the case of white sugar. They are pure carbohydrate, supplying lots of calories, but few vitamins and minerals, so they would need to be considered in conjunction with your fresh-grown vegetables.

Sugar can also be used as a preservative, making jams and other types of preserves. This makes sugar a useful item, as food can be preserved for winter. Historically, winter was a hard time; anything that makes winter easier was considered a high-value item. Sugar can currently be bought from a supermarket for around 75c a kilogram. A kilogram of sugar will supply you with about 4000 Calories, so it does not take many kilograms to cover you for an extended period of food scarcity. I am obviously not suggesting that you eat sugar by the spoonful. Rather, I am suggesting making jams, or adding it to puddings, just to add a few hundred extra calories per day to your diet. It is cheap and has an indefinite shelf life, so you can put it in a sealed container and forget about it until you need it.

Sugar can also be used in brewing alcohol, making it doubly welcome on a winter evening!

White rice has a long shelf life, but unlike sugar it is not indefinite. It can currently be bought from a supermarket for $1 a kilogram. Similar to sugar, in that it is a form of concentrated

carbohydrate, a kilogram of rice will supply you with about 4000 Calories. Note that brown rice has more nutrients than white rice, but a much shorter shelf life.

So we are looking at a fairly simple, 3 part strategy:
1. Keep 3 weeks of regular food in the pantry.
2. Grow healthy, organic fruit and vegetables.
3. Keep a small quantity of easily stockpiled sugar, and rice, as a back-up (note the shorter shelf-life of rice, and plan accordingly). This stockpile is potentially a dead cost (never used), so it risks failing the "No Regrets" test, but the cost of this stockpile is minimal (around $35 will buy you an airtight container, 20 kg of sugar and 10 kg of white rice), so I let it pass, under the banner of "cheap insurance".

3. The emergence of a bartering or trading system.

Develop skills and/or trade goods that might be of use to others. My wife enjoys quilting and embroidery. I enjoy brewing and a number of related activities. These are fun, but they are also useful skills, which might have some value in bartering.

I am growing fruit trees, with the intention of making jam and alcohol, should I ever need to. Hopefully, these products will be considered high-value. Sugar (as mentioned above) is a part of this strategy.

I also grow fish. I chose a species very high in Omega-3 oils. Aquaponics allows me to pack a lot of food production into a small space, as I am using the space twice. Nitrate from the fish grows plants on top of the tank (watercress in this case), as well as supplying my fruit trees. Sadly aquaponics requires some power. I am working on minimising that.

In addition to your trade-good efforts, it is also wise to maintain friendships. If there is a breakdown in the interdependent chain of systems that supplies us, then we need to build new ones. Suppose there is a breakdown. You have jam, but you want roast dinners - so you want to do a swap with the guy down the road for some of his chickens. He doesn't like jam. But you happen to notice that his generator has broken down. Your mate Bob is good at fixing diesel generators, and he likes jam. New interdependencies do not take long to emerge.

I'm not saying the fruit/jam/alcohol strategy is the only strategy, nor does it work for every region. Your region may have fruit orchards, but lack local Engineering capabilities. In addition to questions like "Is it well above sea-level", the vital questions to ask in any given region are these:
- Could the area survive somewhat autonomously in event of a significant downturn? (Is there a good quantity of locally produced goods and produce, or an easy way to transport them as imports?)

- Do you have something that they are lacking? Identify some things that are lacking locally. Can you supply any of them?

4. Loss of Law and Order.

Personal and family security was as an issue in both Russia and Argentina. Kidnapping for ransom emerged as an industry in both nations, with children a common target. Theft with violence was commonplace. Extortion emerged as a normal business practice in both nations. Reports from both nations describe almost universal corruption in the police force (as police officers were forced to supplement inadequate incomes), and reports also describe a merging of police and organized crime which is still creating problems in these countries today. No such reports have come to my attention from Cuba, but this may merely indicate that either I have not found such reports, or Cubans do not have as much freedom to report problems.

Some thoughts:

As new threats emerge, behaviors may have to change. New rules will apply. Be prepared to adapt to the new situation, rather than trying to make it work how it "ought to" work. Identify how you have to change, and do it. Children might only be allowed to play in supervised environments. If you go out after dark you might need to go out as part of a group.

It was necessary for businesses in Russia and Argentina to form security alliances with each other and frequently with "security consultants" who were only one step removed from "stand-over men". These alliances might be unthinkable today, but businesses that did not adapt in some way to the changed situation did not survive. Adapt.

Taking a self-defense class is good for your health, and might help - as long as you don't let it give you a false sense of security. The best way to get out of trouble is to not get into trouble in the first place. Don't go to dangerous places or hang out with dangerous people. Don't think that a black belt makes you invulnerable. I have held two black belts (one as a junior in Judo, the other in a Full-Contact form of Karate). Despite this, I had my nose broken when I was 19. It turned out that I was not invulnerable. A black belt does not give you eyes in the back of your head.

Guns are a contentious issue so I am going to devote a few words to them. Statistics suggest that having a gun in the home is more likely to hurt a loved one than it is to protect a loved one. Is that still true if the security risk escalates? Maybe not, but getting a gun license in Australia is hard, time consuming and expensive. Obtaining the license will take at least a month, cost you hundreds of dollars (you will need to join the SSA first, and that is not cheap), and may prove to be impossible because the background, reference and character checks are simply impossible for some people (if you don't have a close friend with a CPA, then don't bother trying). Even after you get the license, you will need another month and yet more money in order to get a permit to buy a gun. Then there is the sticker-shock when you see the price of a gun. Learning to shoot and maintaining that skill will cost you a further $500-$1,000 per year in ammunition and range fees.

If you enjoy shooting as a sport (as I do) and you are good at it, then it is probably worth the trouble and expense. I own a gun, but I train at least once a week and compete every fortnight. My gun does not form part of my security strategy – I never expect to use it in self defense. Why? Because my gun is locked in a safe. It wouldn't help me if my house was invaded, because it is locked away, unloaded, with the ammunition locked away at a separate location. This is not just because it keeps my gun away from my over-inquisitive toddler (though that is a sensible enough reason) - it is because putting your gun in a safe is a legal requirement here in Australia. Think about that before you rush out to get a gun license. Don't trust your security to a gun, because in a crisis it probably won't help you - it will be locked in a safe.

If you don't enjoy shooting as a sport, then there are much better ways to invest your time and money. Getting a gun license and buying a gun will cost you at least $1,000 – more like $2,000+.

For that much money you could improve your fences, buy a dog, plant a hedge, and have money left over for dog food. As a bonus, you don't have to keep your dog in a safe.

A small, sensible investment in security today might pay off regardless of scenarios. I am certainly not suggesting that you erect giant walls and isolate yourself from your neighbors. Instead, stay friendly with the neighbors; they may be part of your security strategy.

5. The emergence of new systems and new entrepreneurs.

In the scenarios that I looked at, these new systems were a necessary part of the recovery process, but they were frequently built on an ethically dubious base. It would be nice to be part of the recovery process, and yet base things on ethically sound actions.

Perhaps this is possible by extending the bartering process, and building supporting structures. The early bartering systems were frequently the first step towards building new, efficient systems.

This approach would imply ensuring that I have skills and/or materials that are valuable in a local barter situation. (To this end I am working on my brewing skills, growing fruit trees that lend themselves to alcohol production, and acquiring related equipment.)

When/if bartering is ever required, then other related services will also be required (providing venues for traders, transport, security, etc). There may be opportunities there for people who are astute enough to look.

6. Location.

Here are some questions to start with:

1. Transport. Could the area become isolated if road-based transport was significantly cut back? Is there a train line in the area? If not, is transport by water a possibility? If not, is the area sufficiently self sufficient to provide for most of its own needs?

2. What can the physical area offer you in a worst-case scenario? Fresh water? Perhaps fish, if you are near the ocean? Etc.

3. What can the people in the area offer you? Repair skills? Farm produce? Enhanced security?

4. What don't they have in this area? Can you supply it? Can you offer it to others as trade for what they have? For example, if they don't have repair skills, could you supply this?

5. What other liabilities does the area have? Security concerns? Water issues? What are you going to do in order to address these liabilities?

Conclusion.

Preparation does not need to completely change your life. Frequently it is possible to do things not because they prepare you for a possible crisis, but because they offer intrinsic rewards or benefits.

In part 3b we will look at drawing things together and discussing a best case.