Exponential Money in a Finite World (Part 1)

Chris Martenson

The greatest shortcoming of the human race is our inability to understand the exponential function.

~Dr. Albert Bartlett

Within the next 20 years the most profound changes in all of economic history will sweep the globe. The economic chaos and turbulence we are now experiencing are merely the opening salvos in what will prove to be a long, disruptive period of adjustment. Our choices are to either evolve a new economic model that is compatible with limited physical resources or risk a catastrophic failure of our monetary system—and with it, the basis for civilization as we know it today.

In order to understand why, we must start at the beginning.

While it was operating well, our monetary system was a great system, one that fostered incredible technological innovation and advances in standards of living, two characteristics I fervently wish to continue. But every system has its pros and its cons, and our monetary system has a doozy of a flaw.

It is this: our monetary system must continually expand, forever.

The U.S./world monetary system was designed and implemented at a time when the earth’s resources seemed limitless, and so few gave much critical thought to the implications that every single dollar in circulation was to be loaned into existence by a bank with interest. In fact most thought it a terribly “modern” concept, and most probably still do.

Anything that is continually expanding by some percentage amount, no matter how minuscule, is said to be growing geometrically, or exponentially. Geometric growth can be seen in this sequence of numbers (1, 2, 4, 8, 16, 32, 64) while an arithmetic growth sequence is (1, 2, 3, 4, 5, 6, 7). In 1798 Thomas Malthus postulated that human population’s geometric growth would, at some point, exceed the arithmetic returns of the earth, principally in the arena of food. To paraphrase, he recognized that the exponential growth of human numbers would meet with the constraints imposed by a finite world.

As seen in the following chart, human population is growing exponentially and is on track to reach 9.5 billion by 2050. To put this in perspective,

In parallel with exponential population growth, our monetary system is also exhibiting exponential behavior. Consider this evidence:

1) Money supply growth (see first chart, page 6). It took us from 1620 until 1973 to create the first $1 trillion of U.S money stock (measured by adding up every bank account, CD, money market fund, etc). The sum of all the roads, factories, bridges, schools, and houses built, together with every war fought and every other economic transaction that ever took place over those first 350 years, resulted in the creation of $1 trillion in money stock [1]. The most recent

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FALL ON THE WEB

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• Why I Will Not Vote for a U.S. President in 2008 (Analysis by Carolyn Baker)
• Free Vermont Radio on WDEV – download weekly podcasts (Radio / Podcast)
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Editorial

On Becoming Sovereign – Not ‘More’ Sovereign

My wife and I have lived in Vermont for 26 years, the last 14 in a locally timbered octagon in South Stafford on 20 acres along the border of Sharon. Robin McDermott’s “LocalVore” column and The Greenneck’s musings while splitting firewood, found in this issue, speak to our own experience of growing and storing much of our own food (all while depending on CSAs, local farmers markets and food co-ops, as well as – I confess – getting olive oil and wine from distant lands), splitting and stacking the five cords we must have or freeze (no other source for “back-up”). I know that what my Vermont forebears did – live self-reliant lives – can be done again, and maybe just as well or better by us. (In a small plastic-covered 2x4-framed greenhouse I’ve harvested salad crops in December, and if I can do that, others can do it better.)

In the past I’d dreamed of going all the way – growing and putting up all our food for a full year’s cycle, relying on the 600-year-old state-of-the-art technology of a masonry stove (invented by Europeans to stave off resource shortages brought on by the pressures of a burgeoning continental population at the dawn of the Little Ice Age) to heat our entire home using an easy one-to-two cords. But now such dreams are dross for me.

Why dross? In a word: community. The spirit, the zeitgeist of our times belongs to small, face-to-face collectives, communities where we live the dreams bereft of human kindness, dreams that hold us hostage and aimless in their thrall, where we Americans, now almost completely shorn of the fumes dreamt of free press, day-in-day-out are manipulated by a greedy and war-obsessed elite shamelessly contemptuous of who we are.

I live my life exclusively here in one small state, Vermont. Far from Wall Street and the Beltway. No one cares what my views are. The politicians in this country (Duke), is the director of the Middlebury Institute. Human Domination.

This journal has explicitly recognized that functional independence and sovereignty are indissoluble.

Contributors

Erik Andrus farms and bakes bread for the Good Companion Bakery in Ferrisburgh with his wife Erica, young boys Julian and Robin, and his three solar-powered tractors (horses), Bobby, Molly, and Star.

Ian Baldwin is cofounder of Chelsea Green Publishing and is publisher of Vermont Commons.

‘The Greenneck’ lives and writes in the rusted-out shell of a one-ton Chevy pickup somewhere in Cabot.

George Listi is a naturalist and teacher at Wisdom of the Herbs School in Woodbury, Vermont.

Chris Martenson, PhD MBA, lives in Massachusetts and has been writing and lecturing on the economy for the past five years, combing a scientist’s attention to detail, a businessman’s affinity for numbers, and a father’s concern for the future. His training in both neurotoxicology and finance provides a unique perspective for commenting upon economic pathology.

Tim Matson is a writer and pond designer living in Strafford. Contact him at earthponds.com.

Robin McDermott is a co-founder of the Mad River Valley Localvore Project. She and her husband, Ray, operate their business, Quality TrainingPortal, from their home in Waitsfield, where they also grow much of their own food.

Ron Miller is on the editorial board of Vermont Commons. He has written several books on progressive and alternative education, and is currently editor of Education Revolution magazine. He has taught at Goddard, St. Michael’s and Champlain colleges, and established the Bellwether School in Williston.

Thomas Naylor, economist, businessman, and author, is co-founder of the Second Vermont Republic.

Kirkpatrick Sale, editor-at-large and author of a dozen books, including After Eden: The Evolution of Human Domination (Duke), is the director of the Middlebury Institute.

John Williams is a professional photographer living in Vermont’s Mad River Valley.

I believe there is a second reason why we Vermonters lag behind the rest of the country in our
A LONG HISTORY OF AGGRESSION

Editor, Vermont Commons:

I have read a few (issues) of your Vermont Commons with much interest. I wish you well with your attempt to gain independence from the central government of the United States. But in order to understand the reasons for the uncontrolled power of the present government and improve on any replacement government, I believe one has to debunk some of the American myths and beliefs.

Most of these myths and beliefs arose out of what we often call the American Civil War (more accurately described as the war of Northern aggression; see below). As Shelby Foote said in Ken Burns’ Civil War documentary, “(T)he Civil War made us what we are today.” Probably the best analysis of the political issues at the heart of the Civil War is contained in Jefferson Davis’ “The Rise and Fall of the Confederate States of America.”

The primary myth is that we have a Constitutional government. The central government pays attention to the Constitution when it serves its interest. This policy was started by our presumptive best president, Abraham Lincoln. For example, Mr. Lincoln, usurping the power of the Congress, unconstitutionally declared war on the Confederate States after Fort Sumter when he called for 70,000 volunteers to suppress the Southern states. Mr. Lincoln unlawfully arrested members of Maryland’s legislature because he feared they would vote for secession. Mr. Lincoln suspended habeas corpus for political prisoners who opposed his war. The list goes on and on, and yet we honor Mr. Lincoln as the best president we have ever had.

Many succeeding presidents have, at least by action, tried to emulate Mr. Lincoln so that they, too, could be a “great war president.” Mr. Lincoln provoked the Confederates to fire on Fort Sumter by secretly sending reinforcements after promising to remove the federal garrison at Fort Sumter. Franklin Roosevelt provoked the Japanese to attack Pearl Harbor by demanding they withdraw from China. And my generation can never forget how Lyndon Johnson provoked and exaggerated the attack in the Bay of Tonkin in order to draw us into a disastrous war in Vietnam. Now George W. Bush has extended this policy to its logical conclusion: an unprovoked attack on the sovereign nation of Iraq. And just as Mr. Lincoln changed the reason for the Civil War from “saving the Union” to “freeing the slaves,” George W. Bush has changed the reason for the Iraq war from “eliminating weapons of mass destruction” to “bringing democracy.”

Our country has a long history of aggression. Shortly before the Civil War, the United States conducted a shameful war of aggression on a weaker neighbor, Mexico. So it was only natural that the central government conducted a war of aggression on the Southern states when they threatened to derail “Manifest Destiny” by forming their own country. We have never given up on Manifest Destiny and our belief that we know how the world should live.

But if we really want to know what is driving our policies, we need to “follow the money.” Just as the money and power moved north as a result of the Civil War, we need to stop economically exploiting other nations for our advantage. When we forego the temptation to extract economic advantage by applying military pressure on other countries, our standard of living will probably decrease. But even if we have to sacrifice some of our luxuries, we will be richer because we will regain our freedoms.

ERIC STEWART
Virginia Beach, Virginia

Letters to the Editor
The first gubernatorial debate of the 2008 campaign season was held on Sunday, July 20, from 5:30 p.m. to 7:15 p.m. at The Inn at Lareau Farm in Waitsfield. It was sponsored jointly by the Vermont Natural Resources Council, the Vermont Localvores, and American Flatbread Company. The moderator was Rutland Herald Editorial Page Editor David Moats. In the following text we present highlights from that debate. Readers can find the entire transcript, or listen to a podcast of the debate, online at www.vtcommons.org.

Editor’s Note: Readers of Vermont Commons know that in our previous two issues we published interviews with Democratic gubernatorial candidate Gaye Symington and independent gubernatorial candidate Anthony Pollina. Our intent was to publish interviews with all three candidates, but despite dozens of inquiries over several months, Vermont Commons was not able to get Gov. James Douglas to agree to an interview with us for the September 2008 issue. We therefore suggest that readers call his office directly (toll-free at 1-800-649-6825) with their questions, or go to his website (http://governor.vermont.gov/) and use the “Contact the Governor” function for written questions.

Question: What is your vision for the future of Act 250 and farmland protection?

Gaye Symington: Act 250 is a gem for Vermont. Act 250 represents a structure that puts in place our community values and our environmental ethic. As governor, I would continue to make sure that we do leave our working landscape open for agricultural development and for retaining our prime agricultural land, and focus development in village centers and downtowns.

Anthony Pollina: Act 250 is obviously a very important part of Vermont and something that we all need not only to appreciate, but to cherish… If we really want to keep our agricultural soils in agricultural use, if we want to keep our farmland in farming, we need to have policy that puts money in farmer’s pockets. As a state, we need to invest more in value-added processing, in cheese plants, meat plants, and dairy plants, as well as a real Buy Local program, so the state can begin to develop those markets for Vermonters.

Gov. James Douglas: My goal has been to maintain our traditional settlement patterns – of helping our village centers, our downtowns stay vibrant and grow and create pedestrian-friendly communities so people don’t have to get into their cars so much, while preserving the natural space, the open space of our working landscape that defines who we are as Vermonters. On the farmland – what I’d like to see is fuel crops. We’ve got one hundred thousand acres of unused farmland in our state; let’s plant some switchgrass, some canola seed, something that can add value to a farming operation and also provide an alternative to fossil fuels.

How do we clean up Lake Champlain?

Gov. James Douglas: Lake Champlain is a treasure for Vermont… We have the Environmental Protection Agency coming down on us and telling us we’re not making the lake cleaner, and we don’t know how best to spend each dollar that we’re spending… The Legislature has initiated legislation calling for accountability in how we’re spending money in lakes and streams of our state. It’s going to take some time, it’s not an easy task; but we’re getting the job done.

Anthony Pollina: Lake Champlain is a treasure for Vermont… We can do what I mentioned earlier – grow an extra row. Contribute financial resources, as Dorothy and I do, to local food shelves. Buy local – use the processing facilities that are going to be coming online very quickly. We have to be sure that our neighbors in need get the support Vermonters can give.

Gaye Symington: As Vtormonters have for generations – by talking about them, by reasoning with one another, by finding ways that we can accommodate each other’s needs.

What is the state’s role in relieving hunger and creating food security for all Vermonters?

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Anthony Pollina: There are people who feel very strongly on one side of that debate, and there are people who feel equally strongly on the other side. And I don’t want to see farmer pitted against farmer. I don’t want to see neighbor pitted against neighbor. I want to make sure that we solve these problems as Vermonters have for generations – by talking about them, by reasoning with one another, by finding ways that we can accommodate each other’s needs.

What is your position on GMO seeds and the genetic integrity of Vermont’s organic crops?

Gaye Symington: People should know whether their seeds were genetically modified, and they should know whether crops used genetically modified seeds. The Legislature passed, to the tremendous resistance of the Douglas Administration, food-labeling restrictions several years ago, and then passed a farmer protection act.

AP: What is your vision for the future of Act 250 and farmland protection?

Jd: If you look at the latest report of the Lake Champlain Basin program, you’ll find that most of the areas of the lake are at or below their phosphorus target levels, and there’s a graph on page 9 that shows that our sewage treatment plant contributions to the phosphorus in the lake have plummeted over the last five or six years. So we’re doing a great job. There are a lot of efforts, a lot of thousands of people in watershed associations working all across Vermont to ensure the quality of the lakes and streams of our state. It’s going to take some time, it’s not an easy task; but we’re getting the job done.

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d and bridges, and building affordable homes for Vermonters, and retrofitting buildings to make them more energy-efficient. We need to fix the bridges, we need jobs, we need affordable homes, we need jobs.

What is your vision for the future of Vermont Yankee?

SYMINGTON: Vermont Yankee is, to me, one of the most obvious failures of the current administration. We are not looking beyond Vermont Yankee. One, we need to make sure that Vermonters are not going to get stuck with the bill for cleaning up after Entergy when it leaves town. Two, we need to make sure that that plant is safe and reliable, and we have established an independent audit for that purpose. If it is not, we need to close it down. Three, if it is, we need to, over the next five to ten years, transition in a measured and aggressive way, away from our reliance on that power, by investing more in energy efficiency.

AP: Vermont Yankee should not be re-licensed. And unfortunately, we don’t have an energy plan. We don’t know how we’re going to replace it yet. The best, the cheapest, the safest, the cleanest energy is energy we do not use. We should be investing more in energy efficiency, we should be investing in hydro, we should be investing in solar, and frankly there’s a lot more we can do to generate power off of our farms, as well.

JD: Well, we’re going to see through the comprehensive vertical assessment, through the independent safety assessment of Vermont Yankee. Whether it is appropriate to re-license it. I believe that safety is job one; we have to be sure that plant is safe if it is going to continue to operate. In the meantime, though, we have to look at alternatives. We have to find a way to preserve our emission-free, cost-effective portfolio for the future.

What is your long-term vision — say for the next 20-30 years — for Vermont foods and agriculture?

AP: I want Vermont milk in every school. Vermont cheese in every school, and I want to have Vermont hamburgers in every school. I want us to really work with farmers to extend their season so that they can produce more and supply more of our food. I want us to have a Vermont Fair Trade Brand Certification process, so we would know that when we were buying products that they were in fact from Vermont, but that also the producers were paid a fair price for them.

JD: I often say that farmers are the first and best stewards of our land, because they’re the ones who maintain the working landscape, the open spaces that are so attractive to the thirteen or fourteen million visitors who come to Vermont every year. But we have to make sure they are sustainable, and that means several things: First of all, adding value to the basic dairy product — we are 80- or 90-percent milk, although we’re diversifying increasingly, and so we need to continue to encourage the artisan cheese manufacturers, the yogurt plants, ice cream operations, to add value to the basic fluid milk. Secondly, we have to break down the cost of doing business in our state — for everybody, but especially, for our farmers.

AP: And we need to have policy that puts money in farmer’s pockets.

JD: I believe that safety is job one; we have to be sure that plant is safe if it is going to continue to operate. In the meantime, though, we have to look at alternatives. We have to find a way to preserve our emission-free, cost-effective portfolio for the future.

What do you think is the single most pressing environmental challenge facing Vermont, and how would you solve it?

JD: I really believe that the work we are beginning to do in climate change and reducing greenhouse gas emissions and providing leadership beyond the borders of the Green Mountain State is a critical contribution to the future of this planet. If we all work together, on a regional, on a worldwide basis, to reduce the amount of emissions into the atmosphere, I think we can use the tremendous brand of Vermont to make a real difference.

AP: How are we going to fix our environment and how are we going to have a better energy future? Let’s start talking about what we can do, and let’s start talking about how we are going to make it happen. I remember, as many of you do, when Vermont was the leader on these issues. •

SYMINGTON: We need to, over the next five to ten years, transition in a measured and aggressive way, away from our reliance on Vermont Yankee by investing more in energy efficiency. Read an in-depth interview with Democratic gubernatorial candidate Gaye Symington online at www.vtcommons.org. JOHN WILLIAMS

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Republican incumbent James Douglas would not agree to an interview with Vermont Commons. JOHN WILLIAMS
$1 trillion? That has been created in only 4.5 months. The dotted line in the chart is an idealized exponential curve, while the solid line is actual monetary data. The fit is nearly perfect (with a correlation of 0.98 for those interested). *Data from the Federal Reserve.*

2) Household debt has doubled in only seven years, growing from $7 trillion to $14 trillion. It is a stunning turn of events. Have household incomes also doubled in seven years? No, not even close; they have grown less than half as much, calling into question how these loans will be repaid, let alone doubled again. *Data from the Federal Reserve.*

3) Total credit market debt (that’s all debt) had finally exceeded $5 trillion by 1975, but has recently increased by $5 trillion in just the past two years, and now stands at nearly $50 trillion. In order for the next 20 years to resemble the last 20 years, debt would have to expand by another three to four times, to $130 trillion to $280 trillion. How likely do you think this is? *Data from the Federal Reserve.*

How do we make sense of money numbers this large and growing this fast? Why is this happening? Could it be that the U.S. economy is so robust that it requires monetary and credit growth to double every six to seven years? Are U.S. households expecting a huge surge in wages to be able to pay off all that debt? If not, then what’s going on?

The key to understanding all three of the money and debt charts above was snuck in a several paragraphs ago: every single dollar in circulation is loaned into existence by a bank, with interest. That little statement contains the entire mystery. As improbable as it may sound that all money is backed by debt, it is precisely correct, and while many of you may struggle with the concept, you’ll be in good company. John Kenneth Galbraith, the world famous Harvard economist said, “The process by which banks create money is so simple that the mind is repelled.” [2]

Here’s how money (and debt) creation works. Suppose we wipe the entire system clean and start over so that we can more easily understand the process. Say you enter the first (and only) bank and receive the very first loan for $1,000. At this point the bank has an asset (your loan) on the books, and you have $1,000 in cash and a $1,000 liability owed to the bank. After a month passes and the first interest accrues, we peek into the system and observe that the $1,000 in money still exists but that your debt has grown by the size of the interest (let’s call that $10). Now your total debt to the bank is $1,010 plus the $10 interest – or $1,010 in total.

Since there’s only $1,000 floating around – and that’s all there is – clearly there’s not enough money to settle the whole debt. So where will the required $10 come from? In our system it must be loaned into existence, taking the form of $10 of new money plus $10 of new debt that must also be paid back with interest.

*Time runs out in a hurry toward the end of any exponential growth system, forcing hurried decisions and limited options.*

But if our system requires new and larger loans to enable the repayment of old loans, aren’t we actually just compounding the total amount of debt (and resulting money) with every passing year? Yes, that is precisely what is happening and the three charts supplied above all provide confirmation of that dynamic.

In other words, our monetary system, and by extension our entire economy, are textbook examples of exponential systems. Yeast in a vat of sugar water, predator-free lemming populations, and algal blooms are natural examples of exponential growth. Plotted on graph paper the lines tracking these populations start out slowly, begin to rise more quickly and then, suddenly, shoot almost straight up, yielding a shape that resembles a hockey stick.

The key feature of exponential functions that our species desperately needs to understand is illustrated in this next example. [3]

Suppose I had a magic eyedropper that could dispense a drop of water with a most unusual trait – it will double in size every minute – and I place a drop of water in your hand. At first you’d just have a lonely drop of water sitting in your hand, but after one minute it would double in size, and after six minutes you’d have a blob of water that could fill a thimble. Now follow me to Fenway Park, where I am going to place a drop from my magic eye dropper on the pitcher’s mound at 12 p.m. on January 1st of 2008. To make this more interesting, let’s assume that the park is water tight and that I’ve handcuffed you to the highest row of bleacher seats. Way down there, on the mound, I bend over and plop a magic drop of water so small you could not possibly see it from where you are sitting, and it begins to double. My question to you is, at what date and at what time would the park be completely filled? That is, how long do you have to escape from your handcuffs? Days? Weeks? Months? Years?

The answer is this: you have until 12:49 p.m. on that same day, before the park is completely filled. You have only 49 minutes to escape your handcuffs. And at what time do you suppose that the park is still 97-percent empty space (and how many of you will appreciate the seriousness of your predicament)? The answer is that at 12:45 p.m. the park is still 97 percent unfilled. The first 45 minutes filled just 3 percent of the park, while the last four minutes filled the remaining 97 percent.

All of history to reach three billion humans; only 42 years to add another three billion. That’s why we need to appreciate exponential functions. For quite a while everything seems just fine, and a few minutes later your park is overflowing. *Time runs out in a hurry toward the end of any exponential growth system, forcing hurried decisions and limited options.*

**The constraint: finite resources**

So how does this pertain to our economic problems, and why should you care? The truth is there’s nothing inherently wrong with exponential growth as long as you have unlimited room and resources. However, there are clear signs that several key resources on our planet are in their final minutes, to use our Fenway Park example.

None of these are more important than crude oil. “Peak oil” is the global extension of the observation that individual oil fields, without exception, produce slightly more oil each year up to a point (“the peak”), after which they produce incrementally less and less oil each year until their economies force abandonment. It is a fact that the U.S. hit its peak of oil production in 1970 at approximately continued on following page
Letters, continued from page 3

aerial deployment of depleted uranium since the onset of the first Gulf War.
And then there are the birth defects on account of the latter: Iraqi and Afghani infants born with deformed limbs. The pictures make you tremble with disgust, anger, and despair.

The rapacious effects of uranium mining have been felt worldwide from Saskatchewan, Canada, all the way to Rum Jungle (perhaps the world’s worst case of negligent mining) in Australia. Uranium mining is culpable for radiological contamination of the environment and impacting groundwater systems. Environmental-protection measures have yet to be effectively administered throughout the world’s mining locales.

The regional land surrounding Yucca Mountain (a proposed waste repository and current weapons testing site) legally is not U.S. territory but is Shoshone Nation “sovereignty” (aside from U.S. gold-mining in the area – which is also massively amniabiliative to the land and people). This can be backed lawfully by the Earthing Act and the Ruby Valley Treaty.

In Canada, 10 lakes in the Lake Huron region are now radioactive waste sites from uranium mining. Uranium mined from Elliot Lake in Ontario was used for U.S. nuclear weapons, and the area is now infested and emits dangerous levels of radiation [affecting] the Northern Ojibwa people – all of this is, strangely, like genocidal procedure, considering the current conditions of indigenous peoples and lands as an effect of an alarming history of violence.

As for the green-facade the NEI bulwarks itself with, this is fallacious to a high degree. Uranium mining is one of the most intensive CO2-emitting industrial operations; for every kilowatt of power generated, 34-60 grams of CO2 are emitted from the mining, fuel enrichment, and plant construction – and emissions levels will only increase with demand. It should be known that in order to replace the entire world’s fossil fuels, more than 2,000 new nuclear facilities would have to be built. (See http://www.greenpeace.or.jp/campaign/climate/lovelock/Open_Letter_to_Lovelock.pdf)

Proliferation of nuclear energy is untenable and ultimately violent as it assaults the ecology of the planet and its peoples.

For Vermonters to sign on for another 20 years with Yankee is a Faustian endeavor that will undermine the morale of a Vermont republic – engaging surreptitiously (with intent or not) with the U.S. foreign/domestic policies that reflect ignominiously upon the citizens not directly involved in the Establishment’s politick-protocol, and the laggard environmental policies that allow corporations to continue to trash the planet while citizens are urged to step up to paltry efforts such as the Ten Percent Challenge.

Here is an estimable challenge: Question Douglas’s veto of the decommissioning bill, and say no to another contract with Vermont Yankee.

FRANK SMECKER
Richmond

VC: SECESSION AND SUBSTANCE

Editor, Vermont Commons:
Thank you for a most excellent and intriguing read! And also for the quick send-delivery time, for me to receive my sample copies of Vermont Commons. Thanks for the bumper sticker, too.

To be honest, I find only two separatist movements appealing – the Vermont Second Republic, continued on page 10
Even though 77 percent of the eligible voters in Vermont believe the U.S. government has lost its moral authority and 49 percent think the United States has become unsustainable politically, economically, militarily, and environmentally, only 11.5 percent are in favor of Vermont seceding from the Union and becoming an independent republic.

Secession is one of the few subjects about which liberals and conservatives agree. It is an anathema. So ill informed are most Vermonters about secession that many of them neither know how to pronounce the word nor how to spell it. Why?

The Myth of Lincoln (Honest Abe Freed the Slaves, Didn’t He?)

Abraham Lincoln really did a number on us a century and a half ago. Most Americans believe he was our greatest president because he freed the slaves. They also believe that he proved once and for all that secession is illegal, immoral, and unconstitutional. Nothing could be further from the truth.

**Civil War Redux (Them Southerners Got What Was Coming To Them…)**

The knee-jerk reaction of most Americans to secession is, “We’ve been there, done that, and it didn’t work out very well.” Secession immediately brings to mind images of the Civil War, slavery, racism, violence, and preservation of the Southern way of life. Secession is often equated with Southern, redneck, Christian-fundamentalist racism. Anyone who is a secessionist must also be a racist.

Many Vermonters and other Northerners view the Civil War through rose-colored glasses remembering their beloved ancestors who fought to free the slaves, forgetting that secession as a regional movement in the United States began in 19th century New England.

**Unconstitutionality (Secession? Doesn’t the Constitution Outlaw It?)**

The case for secession could not have been made more clearly than it was by Thomas Jefferson in the Declaration of Independence when he said, “Whenever any form of government becomes destructive . . . it is the right of the people to alter or to abolish it, and to institute new government, laying its foundations on such principles and organizing its powers in such form, as to them shall seem most likely to effect their safety and happiness.”

Ultimately, as was the case in the American revolution, whether or not a state is allowed to secede is neither a legal question nor a constitutional question, but rather a matter of political will.

As I point out in more detail in chapter three of my book Secession (Feral House, 2008), the Tenth Amendment to the U.S. Constitution, the history of nullification, and the contingencies under which Virginia, New York, and Rhode Island acceded to the Union all support the proposition that it is indeed legal for a state to leave the Union.

Few Americans are aware that Lincoln once said, “If I could save the Union without freeing any slave I would do it, and if I could save the Union by freeing some and leaving others alone I would also do that. What I do about slaves, and the colored race, I do because I believe it helps save the Union.” The Civil War was fought primarily to preserve the Union, not to free the slaves.

According to Thomas DiLorenzo in his provocateur book, The Real Lincoln, President Lincoln invaded the Confederate States without the consent of Congress, suspended habeas corpus, imprisoned thousands of American citizens without a trial for opposing his policies, censored all telegraph communications, imprisoned dozens of opposition newspaper publishers, nationalized the railroads, used federal troops to interfere with elections, confiscated firearms, and deported an opposition member of Congress. All in the name of freedom and democracy.

First and foremost, Lincoln was an empire builder and a world-class manipulator.

**Economic Unfeasibility (Vermont Go It Alone? Don’t Be Silly…)**

One of the questions asked most often about Vermont independence is whether a tiny state like Vermont with a population of only 625,000 could possibly survive economically as an independent republic? We believe that the answer is decidedly yes. Not only would Vermont survive, it would thrive.

With a gross state product of around $25 billion, Vermont has the smallest economy of any of the 50 states. Its per capita income of approximately $35,000 places it right in the middle of the American states. Only Wyoming has a smaller population.

Vermont’s size does not itself pose an economic problem. Few people realize that of the 200 or so countries in the world, nearly 50 have populations that are smaller than Vermont’s.

**Political Impossibility (No, But Know Your Audience)**

Because secession has been viewed as a political impossibility by most Americans since the Civil War, no mechanism exists in our government to deal with this subject. Constitutional though it may be for a state to take leave of the Union, there are no guidelines to facilitate negotiations between separating states and the federal government with regard to government property, relocation costs, federal debt, and net worth. The unofficial policy of the U.S. government concerning secession is complete denial.

Thus, in order to achieve its objective of breaking away from the United States, the Second Vermont Republic would need to invent its own rules for secession, giving attention to four different constituencies: (1) the people of Vermont, (2) the U.S. government, (3) people in other American states, and (4) global public opinion.

With these constituencies in mind, the Second Vermont Republic conceives of the act of secession itself involving three very important steps:

1. Approval of articles of secession by a state-wide convention by a two-thirds vote.
2. Recognition by the U.S. government and other states.
3. Diplomatic recognition abroad.

Next issue: Part II of Thomas Naylor’s exploration of why secession is a “tough sell” in Vermont will examine subjects such as complacency and denial, and the question whether Vermont’s secession – like the secession during Lincoln’s time – would be met with violence from the U.S. government.

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The Vermont Sustainable Heating Initiative

Ron Miller

The young people of Vermont are showing us the way to a sustainable future.

During the past two years, a committed team of high school students has been investigating the scientific, economic, and political possibilities of creating a locally based biofuel industry in Vermont. Through compelling presentations to other students, the media, and policymakers, and effective use of the internet, their network now includes more than 200 students from 26 schools around the state, and they stand a real chance of making their ambitious vision a reality.

They call their plan the Vermont Sustainable Heating Initiative, a program that would convert thousands of acres of unused or underutilized Vermont farmland into vibrant fields of prairie grasses, which, as their research convincingly shows, could provide enough fully renewable biomass energy to heat thousands of homes around the state. They have laid out in detail a plan for producing and distributing grass-derived pellets and providing low-income Vermonters access to the pellet-burning stoves that would efficiently use such fuel.

The VSHI plan is audacious, elegant, and eminently practical. It addresses multiple issues facing Vermont and would constitute a major step toward the vital goal of localization and self-reliance.

These young people see that global warming and energy independence are critical issues for the future, but are not being addressed on a national political level, even in the presidential campaign. At their website, http://biomassvt.pbwiki.com/, they proclaim that “the quality of our lives and the world in which we live is being dictated by older generations who have irresponsibly depleted the earth’s natural resources and destroyed the environment in the process. . . . Therefore, it is up to us, (the ones who have the most to lose from these irresponsible practices) to instigate the actions and the change that previous generations have been unwilling to.”

Earlier this year, I met with students Galen Helms, Jessie-Ruth Corkins, Thomas Dickerson, Courtney Devoid, Jordan Cromis, and Yuki Davis at Mt. Abraham High School in Bristol. They explained the origins of the project and their vision of a sustainable future.

Jessie had been interested in renewable energy for a long time, and was instrumental in getting a wood furnace installed at Mt. Abe. When she attended the summer Governor’s Institute for engineering in 2006, she became involved in a project to study how grass mowed on state highways was disposed of. This research convinced her that here was a potential source of clean energy. Tom Tailer, a physics teacher at the school, became a valuable mentor to Jessie and the other students, and has supported their project from the get-go. “He has a passion for saving the world,” explained Courtney. “He amazes me, pretty much every time I talk with him.”

At a follow-up Governor’s Institute the following winter, which brought together students from the various Institute projects to focus on global climate change, more students got to know each other and hatched their ideas about a sustainable energy project. They have held weekly meetings and have stayed in constant contact through a wiki (interactive website) and Facebook.

“The quality of our lives and the world in which we live is being dictated by older generations who have irresponsibly depleted the earth’s natural resources and destroyed the environment in the process.” —Vermont Sustainable Heating Initiative

Here is how their plan would work: Vermont farmers would use underutilized land (of which there are estimated to be 100,000 acres) to grow enough biomass crops such as switchgrass and similar prairie grasses to meet the state’s heating needs. The students plan to work with farmers who have expressed interest in growing energy-yielding crops.

“This could be a huge supplemental income for the farmers,” said Courtney. “Why wouldn’t they want to do it?”

The students even propose a “futures market”—a pre-buying program that guarantees farmers a demand for each season (similar to a CSA—community supported agriculture) project.

The process is designed to be sustainable at every stage: Prairie grasses represent a diverse ecosystem and thrive in Vermont’s climate. Grasses would be cut and left on the ground to dry, while nutrients leach back into the soil. In contrast to using fossil fuels, which release carbon into the atmosphere that was stored underground for millions of years, burning grasses releases carbon that was in the atmosphere the previous season and will be reabsorbed by next year’s grass crop. Consumers could recycle the ash for the farmers to return even more of the nutrients to the soil.

The production process is environmentally friendly as well: the grass material would be combined with waste paper into pellets. The VSHI program calls for 12 to 14 pelletizing factories to be built around the state, in locations they have selected to optimize accessibility to both growers and consumers, starting with Addison County, which has the most underutilized land, and Chittenden County, which has the most potential consumers.

continued on page 10
Pellets would be burned in stoves specifically designed for that purpose. As Courtney puts it, “It’s a really big transition, because these furnaces need to get into people’s homes but people don’t want to put them in because there’s nowhere to buy pellets, and they already have something that works right now. We’re doing this project to help ease the transition.”

Thomas adds that “it’s simply a matter of raising awareness and getting them into people’s homes. For families that can’t afford them, we’re trying to get to LIHEAP (Low Income Home Energy Assistance Program) to get these stoves into people’s houses and reduce their dependence on oil.”

The state would issue a $100,000 grant to buy stoves at a wholesale price and distribute them to low-income householders at little or no cost. In other words, tax-supported programs that currently support people buying expensive, imported fuel year after year (to the tune of $300 per month) could be directed toward dramatically reducing energy costs in the long run. The students estimate that the investment would pay itself off within a year.

In the near future, most Vermonters will be unable to afford heating their homes with fossil fuels. An average family is now spending around $1,800 annually on heat. Investing in a pellet stove would cost between $1,000 and $2,000, but the price of fuel would then drop to below $800 per year.

Pellet-burning stoves are easier to use than conventional wood stoves because the pellets can be delivered into a tank and automatically fed into the burner. The stoves also get more proportionately more heat out of the fuel, burning at 85-percent efficiency. The biomass content of these grasses is five times greater than a forested parcel of equivalent size. The grasses, when pelletized, contain 7 percent to 14 percent moisture content, compared to roughly 50 percent for wood. In any case, there simply isn’t enough wood available. According to Jessie, “The forests are a great resource, but as our population grows, we don’t have enough wood in the state to sustainably heat all our homes.”

Pellet stoves are simple to install because they do not require long chimneys; they can be vented out the wall, similarly to gas furnaces. In addition, Courtney points out, pellet stoves are safer in the home because they’re low in heat. “Little kids won’t burn themselves on them, and there’s no risk of chimney fires.”

At a meeting with technical experts in May, the students learned that current stove technology may not be adequate for handling the more corrosive effects of burning grass pellets, so in the short term — until the stoves are perfected — the VSII project will try to get wood pellet stoves into LIHEAP-supported homes. State Representative Courtney points out, pellet stoves are safer in the way. •

Pellet pilot

The students have taken their project to Vermont policymakers. They met with the governor and lieutenant governor, with the House and Senate agriculture committees, and the Senate Natural Resources Committee. Many of these legislators expressed interest, and the project organizers have been working with their local representatives who they say are excited by these ideas.

“They told us to bring back more students,” said Courtney. “We find adults really like when students have a voice.”

One hundred and twenty students each e-mailed 15 or 20 legislators to express support for the program, and followed up with phone calls. They found most of them receptive. Galen observes that focusing on the economic benefits “has a nonpartisan appeal.” Even the governor is excited about the economic effects. Bristol’s Rep. Sharpe said, “I am very hopeful, but it’s an extraordinary tight budget year.” The idea is definitely gaining momentum, he said, but the proposed project did not come before the Legislature until the budget had been largely established.

A LIHEAP pilot project may be initiated this winter in the five-town community of Bristol, Monkton, Lincoln, Starksboro, and New Haven. The Bristol Energy Commission and Selectboard, along with Rep. Sharpe, are collaborating with the students to put their ideas to work. Meanwhile, the students have been busy raising funds and generating new ideas, such as the community energy co-op that is trying to get residents of the five-town area involved in many forms of energy conservation. They have been reaching out to citizens with an information table at farmers’ markets, activities at teen gatherings, and discussions with Middlebury College and other major players in the state.

These young activists hope that the idea will spread to other states, though they point out that each region has its own farmland characteristics and energy needs and that the program they’ve devised is unique to Vermont. Jessie believes that “Vermont could be a model, and a leader, in this type of transition.”

With young people like these in our community, there is no doubt that Vermont will indeed lead the way. •
Kneading Independence: The Case for Local Wheat and Bread in Vermont

Erik Andrus

April 18, 1775, Dijon, France
An angry mob gathered outside the shop of a wealthy miller suspected of mixing bean flour with wheat flour to cut costs. The miller was assaulted and his house and mill plundered for flour, then burned to the ground. In the weeks that followed, similar scenes followed at bakeries and mills throughout France. Everywhere, people were angry about the same things: flour was too expensive, often of poor quality, and bread, priced at 14 sous nationwide, was unaffordable to many.

In our future there will simply be less fuel, less travel, less energy. Our challenge will be to create a society capable of functioning under these constraints.

At dawn on the 2nd of May an angry mob arrived at the gates of Versailles, demanding action. Surprised and outnumbered, the commander of the palace guard managed to disperse the crowd with assurances that the king would lower the price of bread. Louis XVI, however, was of another mind; he followed the counsel of Controller-General of Finance Turgot, who was adamantly against any government interference in the wheat commodity market.

Instead, soldiers and police were posted at every wheat market, mill, and bakery to quell the theft and pillaging that were becoming rampant. Those who could not afford bread at 14 sous would have to do without. The king’s men clashed with the hungry and desperate during this ugly, decade-long prologue to the revolution known as the Guerre des Farines, or the “Flour Wars.”

The anger that led to the storming of the Bastille in 1789 was, therefore, a long time in the making. The Bastille itself was of no significance except that it was a symbol of a monarchy unable to ensure a stable food supply. Without bread on the table, there would be no governance.

Present-day Flour Wars?
Historically, predictable supplies of staple crops have been critical to all civilizations. When the crop is in trouble, so too is the state. In France, transportation issues and the brutality of the free market combined to precipitate a crisis. It’s troubling that our present-day food supply system leaves us vulnerable on these same two counts.

For my bakery in Ferrisburgh I buy some flour from a local mill that has increased its prices for organic flour from 40 cents to 80 cents per pound in the past six months. The increase is credited to rising fuel costs, the diversion of former wheat lands to subsidized ethanol production, and rising demand for grain in China and India. Prices are expected to continue to rise, and I have noticed that most bakeries nearby have already increased their prices substantially.

When it comes to wheat, we now are at the low point of a trend centuries in the making. Western growers have more favorable growing conditions (at least as long as their aquifers hold out) and cheap transport has made competition with them very difficult. In fact, since the completion of the Erie Canal, Vermont wheat has been losing ground.

Yet I believe that we are poised for a real renaissance of the culture of wheat and other small grains in Vermont, and that such a rebirth has greater promise than liquid coal, biofuels, hydrogen cells, nuclear energy, wind towers, and the many other proposed solutions to peak oil.

A staff of life for Vermont
Most remedies to declining fossil fuel availability seem to assume that we will more or less live as we have been living, consume as we’ve been continued on page 12
the mass-market system is not: small scale, diversified, vertically-integrated, and local in scope.

Small grains, small scale
Ten acres are used annually for grain production, chiefly winter wheat. At an average yield of one ton per acre, this makes for 20,000 pounds of wheat berries. If some bran is removed during milling, we may have 15,000 or so pounds of flour in total. To buy an equal amount of flour from our local mill would cost $12,000 at today’s prices.

While 10 acres is not a lot of wheat, especially by Western standards, it is a lot to us. Those 15,000 pounds of flour represent a potential 15,000 loaves, which retail for about $3.50 each. So that’s a potential $52,000 worth of income for the farm. I say potential because we have not realized this yet; miscalculation and inexperience lead to waste here and there, but we usually are able to clean up our mistakes and profit, however slightly, by them because we are...

Diversified
Occasional spoiled batches and overproduction are facts of the baker’s life. But on our farm we have the luxury of dumping our mistakes to the beasts. This is never as satisfying as selling every loaf, but it is better than paying to haul garbage to the landfill.

The animals’ main purpose is to maintain the pastures that will rotate back into grain production in time, and also to fill the barn with a lovely manure pack that will fertilize the plots under the most intensive cultivation. Sustained cropping arguably cannot exist without animals to aid in nutrient cycling.

Vertically-integrated
In the conventional supply chain, wheat is trucked at least four separate times—from the combine to the elevator, elevator to milling facility, then to a wholesaler, and finally to the baker. The average article of food is said to have traveled about 2,000 miles to your plate, but this is probably too low when it comes to conventional wheat and bread.

At our farm, from planting to baking, a kernel of wheat travels about a quarter mile. At no stage are we dependent on any input or process that our community hasn’t the potential to supply. This kind of start-to-finish control means real local self-reliance and security. It is what Jefferson had in mind for us.

Strictly local
Baking transforms wheat from one of the most durable foods to one of the most perishable, with a shorter shelf life than baby salad greens! Marketing to immediate neighbors not only means fresher bread but also fosters a stronger bond between grower and eater.

Initially, we intended to market our bread within a two-town radius. Perhaps even that is too broad, and we would cost us too much in gas, so our current focus is on our own town and those immediately adjacent. In time, as travel costs increase, operations such as ours with a strictly local focus may become increasingly competitive, providing they do not depend overmuch on inputs brought in from great distance.

Grain farmers and bakers in every town
Most Vermont towns have at least a little arable land here and there. If these fields were stewarded with care, and the resulting grain diverted to a nearby mill and bakery, the resulting thousands of daily loaves could provide Vermont with a major buffer from the remorseless national food commodity market. Just one 10-acre farm and bakery in each of our 251 towns could provide two loaves made from native flour each week, yard-round, to nearly 37,000 Vermonters, a major dent in our food needs. Even if a crisis never comes, if we succeed in reviving and reinventing our historic culture of grain and bread, we would be the richer for it.
I feel like I must be living under a rock. It wasn’t until the mainstream media started beating it into us late this spring that I realized food prices have been skyrocketing over the past couple of years. My ignorance is not due to financial irresponsibility. The simple fact is that the rising prices have not affected me all that much. As my husband and I have gradually moved to eating an all-local diet over the past three years, one unintended consequence is that we have largely insulated ourselves from rising prices at the grocery store.

When people ask us about eating a mostly local diet, we flippantly comment that all we buy at the grocery store is cat food and toilet paper, but the truth is, that comment is fairly accurate. Having sworn off factory-farm meat more than two years ago, I never look in the grocery store meat case so I haven’t noticed that the price of beef, chicken, pork, and lamb is getting closer to the price I am paying local farmers for their much-healthier products. Since January, the only produce that I have purchased in the grocery store is lemons, an occasional lime, local apples, and potatoes when our own crop of spuds ran out in April. Other items that we buy at the grocery store, including bread, butter, and milk, have all gotten more expensive in the past few months, but when you are only spending $20 a week at the grocery store, a 10-percent increase is only a couple more bucks. Increasing food prices simply are not affecting us the way they are affecting others across the country.

My husband and I are far from back-to-landers. While we do grow much of our own produce (that we eat fresh in the summer and put up for the winter), we also purchase food from local farmers through CSAs, at the farmers market, and direct from farms near our home. Yes, this lifestyle does take more time than a weekly trip to the grocery store. Throughout August there aren’t many days that go by that we aren’t canning or freezing something. By the end of August last year I almost came to resent our garden as it spewed forth an endless stream of vegetables that had to be processed before they rotted. But after reaping the benefits of that work throughout the past winter, it was all worth it. Not only did we go weeks without going to the grocery store, we also had a generous variety of ingredients ready for quick, hearty, winter meals that saved us time, money and reduced our carbon footprint.

My husband and I are far from back-to-landers. While we do grow much of our own produce we also purchase food through CSAs, at the farmers market, and direct from local farms.

I now have a much better appreciation for a comment made by Rupert Blair in a Vermont Folklife Center oral history. Blair, now deceased, was asked about the impact of the Great Depression on his hometown of Warren, Vermont. He said that he remembered hearing about the depression, but that it didn’t much affect people in his town because they produced most everything that they needed right here in the Mad River Valley. Their self-sufficiency had isolated them from economic factors that were beyond their control.

Isolating ourselves from the impact of outside economic factors is not a pipedream for our human-scale Green Mountain state. My hope is that all the citizens of the state will start growing some of their own food and purchasing more of their weekly groceries from our local farmers. As Bill McKibben suggests in a recent article in Seven Days, ultimately our food independence will require building a statewide infrastructure for growing, raising, and processing more food right here at home. Showing that there is a demand for more local food is the first step to laying this necessary foundation.
I first heard the term “Transition Town” spoken by peak oil activist Richard Heinberg at the end of his talk in Montpelier last April. The words “Transition Town” struck me powerfully. “Ah! The End of Cheap Oil need not mean sudden, dystopic collapse. Yes, our future lives will be local lives, and, if we embrace this change as opportunity NOW, we can transition our communities to a life that is energy-lean, time-rich, less stressful, healthier and happier.” Right here, among the hills of home.

An appealing idea. A compelling idea. What did “Transition Towns” have to say about how to go about this?

“Climate change says we should change, whereas peak oil says we will be forced to change.” Rob Hopkins

A quick visit with Mr. Google and a conversation with my friend Carl Etmin, and a few days later I was holding Carl’s copy of The Transition Handbook, from Oil Dependency to Local Resilience, written by Rob Hopkins, founder of the Transition Towns Movement, and based on the practical experience of the communities in the UK and elsewhere embracing this approach. I was immediately struck by the titles of the three major sections: “The Head,” “The Heart,” and “The Hands.” Much has been written for the Head, some about what to do with the Hands, (usually exhorting them to beat upon the heads of unresponsive politicians). Rarely has a book urging societal change recognized and addressed the motivating power and the processes of the heart that bind understanding and action together. Engaging all three, awakening “the genius of the community” to bring a positive vision of a post-carbon future into being is what the book is all about.

The Transition Town Movement grew out of the confluence of Rob Hopkins’ background as a Permaculture teacher and his personal awakening in 2004, to the reality of peak oil and its probable effects on our oil-dependent society. Subsequently he worked with his second year Permaculture students as they designed the first “Energy Desert Action Plan” in Kinsale, Ireland, (since adopted by the town council) and started the first “Transition Town” (Totnes, in Devon, UK) in 2005.

The head

This section includes an excellent summary of peak oil and climate change, and why these “twin challenges” need to be addressed together. “Climate change says we should change, whereas peak oil says we will be forced to change.” Hopkins also surveys a spectrum of “possible ways forward,” details the necessity of rebuilding resilience, not just cutting emissions, and the inevitability and the opportunities of relocazining our lives.

Hopkins thoroughly explores the implications of the insight that peak oil, the point at which world oil production reaches its maximum and then goes into terminal decline, is the critical point for an oil-dependent society, rather than when the oil is all gone. As Patrick Whitehead observes in his review of the book in Permaculture magazine, “If you want to know what all the fuss is about or to explain it convincingly to others without having to trawl through long books and obscure websites, look no further.” This in itself makes the book extremely valuable in this age of information overload and busy lives.

Resiliency is the ability of a system, such as a community, to absorb shocks, such as the effects of peak oil and climate change, and continue to function. Our present condition of being dependent on long supply lines and liquid fuels may be understood as the antithesis of resiliency. Hopkins reminds us of the elements of resiliency that once gave our communities fundamental self-sufficiency in the necessities of life, and points to the many new understandings, such as Permaculture, that we may employ to build a new and richer resiliency in the present. Convincing arguments are advanced that with the advent of peak oil, the debate about local versus global economic strategies is effectively over. All the lines of our present situation converge in the need to rebuild our lives and our economies in our communities and our local region.

The heart

This is the heart of book in both senses. I believe it is the principles and practices here that will potentiate and give staying power to Transition Town communities as awareness and understanding flower into sustained community action. Here you will find a rich and convincing exploration of the logic, the psychology and the basic common sense of the energizing power of a positive vision in driving actions. The psychology of change and the way people respond when faced with a “challenging reality” such as peak oil are also well mapped. Numerous anecdotes relate these principles to their real-world verification in the self-sustaining energy of the Transition process in communities in the UK and elsewhere.

In one of the useful figures, this one comparing conventional environmentalism and the transition approach, one of the contrasting pairs is “fear, guilt and shock as drivers for action” and “hope, optimism and proactvity as drivers for action.” To mobilize to bring a positive vision of the future into being, we need to be able to attach images and feelings to that vision. Hopkins contributes to this in the chapter “A Vision for 2030: Looking Back Over the Transition,” consisting of newspaper articles from various times along the future continuum. These articles also make it is clear that this is a movement with a sense of humor and a sense of fun as well as mission. Richard Heinberg is famously quoted as

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saying that the Transition Movement looks “more like a party than a protest march.”

The Hands

This section explores the philosophical underpinnings of the Transition Movement and quickly moves to the nuts and bolts of how to start a Transition Initiative in your own community.

The experience of the Transition Towns proves that once this group spirit ignites, the initiators are no longer pushing the effort uphill but running in the community’s wake, trying to keep up with it!

Everything you need to know to get started is here, including the “7 Buts,” common beginning questions, and the Twelve Steps of Transition beginning with “forming an initiating committee” and ending with #12, writing an Energy Descent Action Plan, at which point the transition of the community truly begins. Inclusive public process such as “Open Space” is explored, as well as the fundamentals of launching “The Great Reskilling” – reviving and extending skill sets, preparing us for a more self-reliant and more hands-on world.

Transition in Vermont

Here in Vermont, we have the core of the skills and the land base we will need to build a resilient future. People and organizations are already rallying to meet the emergency of getting themselves and their neighbors through a winter with fuel oil over $5 a gallon. We need to recognize that this is not a temporary crisis to be followed by “business as usual”; the climate crisis is manifestly here, and medium-term and long-term prices will almost inevitably reflect energy’s increasing scarcity.

We have the opportunity to reinvent resilient, bountiful communities with less energy, or sit back and “watch the worst case scenarios unfold,” as Richard Heinberg put it during his April 2008 visit. Reinventing resilience will take more than individual actions or government actions. It will take group action at the level of neighborhoods and communities. The Transition model, now embraced by more than 80 communities worldwide, gives us the flexible road map to start our journey together. The experience of the Transition Towns so far proves that once this group spirit of “we can do this!” ignites, the initiating group is no longer pushing the effort uphill but running in the community’s wake, trying to keep up with it!

As of early August there were three Transition Initiatives in the U.S., and many more in the early stages. Several Vermont communities are in the early stages, and here in Montpelier we have formed an initiating committee to take the vision of Transition Town Montpelier to the community. Local readers should look for notice of community events and gatherings as the fall and winter progresses. There will also be a Transition Handbook study group forming.

Hopkins’ book is a brilliant, lively, engaging, and fun resource. Read it. Talk about the ideas with your neighbors, and let your own positive visions of our “energy lean, time rich” future take form.

I like to think about Hopkins’ memory of a moment from the early days of Transition Town Totnes, at a meeting entitled “Local Money, Local Skills, Local Power”. Each person attending had been given a Totnes Pound, a local currency that was exchangeable in local stores on par with the British Pound. At a certain point Hopkins asked everyone to wave them in the air:

“As I stood at the front of that hall, watching the room full of laughing, twinkling people, waving their Totnes Pounds, I felt very moved. There is a power here, I thought, which has remained largely untapped. Surely when we think about peak oil and climate change we should feel horrified, afraid, overwhelmed? Yet here was a room full of people who were positively elated, yet were also looking the twin challenges of peak oil and climate change square in the face.”

It is time for us to come together and awaken that power in our communities, as well.

Continued from previous page
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Ask about other VSSE publications
Ever since he was born to that old farmhouse in Enosburg, he’s been warmed by wood. Thirty-six winters, an average of perhaps five cords per. He has seen a lot of fire.

He puts up his firewood in August, bucking the trees he’d felled the summer before into 18-inch lengths, then splitting the lengths into manageable wedges. Some, he splits by hand. Some, particularly the beech and yellow birch, he rends on a gas-powered hydraulic splitter borrowed from a neighbor.

He values this work perhaps more than any other. It is gratifying both in its physicality and consequence. There is no backup heat source in his home; without firewood, his family would freeze. It is a matter of survival. In modern America, in 2008, few things are a matter of survival. He supposes this represents an improved quality of life, but he’s not always certain.

When he’s cutting firewood, his thoughts tend to be random and fleeting. He thinks about the winter to come, and the summer nearly passed. He thinks about the simple goodness of wielding saw and axe, and worries that someday he’ll surrender this goodness to age. He thinks about dinner, steaks and sliced tomatoes, about a bottle of beer sweating in his field-dirtied hand. He thinks about how essential it is to plan ahead in a state of such seasonal extremes. The simple truth is that a life sustained by the bounty of the land demands planning and a constant awareness of what the next months will bring.

He considers the ache of shoulder muscle as the splitting maul rises in an arc, the whump of tree canopy colliding into earth, the deep satisfaction of preparing wood to be burned three, four, five months hence – at once immersed in the moment and present to the urgency of the snow and wind to come.

And he mourns that we have lost so much of that urgency. We drive to the supermarket and shuffle through the aisles, filling our cart with boxes and cartons. We feel a chill and snick the thermostat one click higher. Everything smoothed over, cushioned, reduced to its most convenient. We endeavor to live in the moment because tomorrow has already been taken care of for us. No sweat. No skin of our backs. No stake.

Of course, it is a false luxury. The real luxury is knowing from experience what the future will bring and how best to prepare for it. Knowing when to harvest the firewood so it burns clean and hot. Knowing when the hay field is at its peak of energy. Knowing when a heifer is in heat and how to time the breeding so she’ll freshen just as the pasture ripens for grazing.

Knowing, as he pauses to sharpen his saw and ease the kinks from his back, that his future is in his hands. And hoping that they can continue to bear that weight.
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September 16:
The Buzz About Bees: Authors Rowan Jacobsen and Ross Conrad on Colony Collapse Disorder

September 23:
"Functional Independence" in Vermont: A Conversation with author Bill McKibben

September 30:
The U.S. Empire and the "Wars That Will Not End In Our Lifetimes" Citizen/Activist Ben Scotch

October 7:
Energizing a New Vermont Power Grid: Author and energy expert Greg Pahl

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Marko the Magician – Oct 17, 7 PM - An hour of magic for the whole family!

Pianist Jamie Shaak and soprano Michelle Areyzaga – Oct 18, 7:30 PM – This acclaimed duo returns to Chandler to premiere a new song cycle by composer Gwyneth Walker.

Manchester Chamber Orchestra – Oct 25, 7:30 PM – Guest cellist Nathaniel Rosen performs with the orchestra under the direction of Ariel Rudikov.
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200 Towns Campaign

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Below you will find one of the most interesting—may I say exciting—pieces of evidence of the strength and promise of the American secession movement.

A poll that the Middlebury Institute commissioned in July found that 22 percent of American citizens nationwide, contacted in a reliable scientific survey, said that American states and regions had the right to secede from the U.S. That, folks, translates to 68 million people. It doesn’t mean that every one of them actually wants to secede, but it means there is a hefty audience ready to accept and support this most radical of political alternatives for the 21st century.

### The modern secessionist movement advocates a rather ordinary and time-worn process of peaceable withdrawal from the national government.

(I wonder if “radical” is the right word. Radical means originally “from the root,” and in that sense secession today is based on the original process of secession enunciated in the Declaration and carried out by the 13 colonies. But it has also come to mean “extreme,” and for some even “revolutionary,” and the modern secessionist movement has none of that; it advocates a rather ordinary and time-worn process of peaceable withdrawal from the national government, and certainly doesn’t want to take over such a government, which is what revolutionaries are for. Maybe a better phrase would be “this most far-reaching of political alternatives.”)

But that’s not all. The poll also found that 18 percent of the public would support a secessionist movement in their state—and that, friends, comes to roughly 68 million people. That is surely a sufficient body to get the principle of secession into the general body politic and in a number of places to suggest setting up a referendum on it.

Many states are already chafing at federal restraints and regulations, often defying the national government, but usually ending up with federal agencies or the Supreme Court overturning or outlawing their acts. California and 10 other states passed acts allowing medical marijuana, only to have the Supreme Court overturn them in June 2005. In 2003 six state legislatures passed laws allowing citizens to buy drugs from Canada, and other states and cities did the same, only to stir up the wrath of the Federal Drug Administration, which declared that illegal. Six state legislatures have so far voted to defy the federal law on voter ID cards, and the government has threatened them with loss of funds if they don’t comply next year. And the Oklahoma House of Representatives in July passed a resolution that “claims sovereignty” for the state and tells the “Federal government to cease and desist” in any laws that defy Oklahoma’s—particularly its own laws on immigration. These are obviously places where secession can find fertile ground. Let’s get those 68 million people moving.

### The highest percentage agreeing with the right to secede was among Hispanics (43 percent) and African-Americans (40 percent).

...Middlebury Institute/Zogby Poll: One in Five Americans Believe States Have the Right to Secede

Survey finds 18% would support a secessionist effort in their state.

July 23, 2008

UTICA, New York—One in five American adults—22 percent—believe that any state or region has the right to “peaceably secede from the United States and become an independent republic,” a new Middlebury Institute/Zogby International telephone poll shows.

I believe any state or region has the right to peaceably secede and become an independent republic:

<table>
<thead>
<tr>
<th>Agree</th>
<th>Disagree</th>
<th>Not sure</th>
</tr>
</thead>
<tbody>
<tr>
<td>22%</td>
<td>73%</td>
<td>5%</td>
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The level of support for the right of secession was consistent in every region in the country, though the percentage was slightly higher in the South (26 percent) and the East (24 percent). The figures were also consistent for every age group, but backing was strongest among younger adults, as 40 percent among those age 18 to 24, and 24 percent among those age 25 to 34, agreed that states and regions have secession rights.

Broken down by race, the highest percentage agreeing with the right to secede was among Hispanics (43 percent) and African-Americans (40 percent). Among white respondents, 17 percent said states or regions should have the right to peaceably secede.

I believe the United States’ system is broken and cannot be fixed by traditional two-party politics and elections:

<table>
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<tr>
<th>Agree</th>
<th>Disagree</th>
<th>Not sure</th>
</tr>
</thead>
<tbody>
<tr>
<td>44%</td>
<td>53%</td>
<td>3%</td>
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Politically, liberal thinkers were much more likely to favor the right to secession for states and regions, as 32 percent of mainline liberals agreed with the concept. Among the very liberal the support was only slightly less enthusiastic—28 percent said they favored such a right. Meanwhile, just 17 percent of mainline conservatives thought it should exist as an option for states or regions of the nation.

### The highest percentage agreeing with the right to secede was among Hispanics (43 percent) and African-Americans (40 percent).

Asker whether they would support a secessionist movement in their own state, 18 percent said they would, with those in the South most likely to say they would back such an effort. In the South, 24 percent said they would support such an effort, while 15 percent in the West and Midwest said the same. Here, too, younger adults were more likely than older adults to be supportive—35 percent of those under age 30 would support secession in their state, compared to just 17 percent of those over age 65. Among African Americans, 33 percent said they would support secession, compared to just 15 percent of white adults. The more education respondents had, the less likely they were to support secession—as 38 percent of those with less than a high school diploma would support it, compared to just 10 percent of those with a college degree.

I would support a secessionist effort in my state:

<table>
<thead>
<tr>
<th>Agree</th>
<th>Disagree</th>
<th>Not sure</th>
</tr>
</thead>
<tbody>
<tr>
<td>18%</td>
<td>72%</td>
<td>10%</td>
</tr>
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</table>

To gauge the extent to which support for secession comes from a sense that the nation’s current system is not working, a separate question was asked about agreement that “the United States’ system is broken and cannot be fixed by traditional two-party politics and elections.” Nearly half of respondents agreed with this statement, with 27 percent who somewhat agree and 18 percent who strongly agree.

The telephone poll, conducted by Zogby International, included 1,209 American adult respondents. It was conducted July 9-13, 2008, and carries a margin of error of +/- 2.9 percent.

The sponsor of the poll was the Middlebury Institute, a think tank for “the study of separatism, secession, and self-determination,” based in Cold Spring, NY. Their website address is MiddleburyInstitute.org.

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