

The Oil Drum: Campfire

Discussions about Energy and Our Future

The Great Reskilling

Posted by [Jason Bradford](#) on April 1, 2009 - 6:21pm in [The Oil Drum: Campfire](#)

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This is a guest post by Michael Foley (user Greenuprising) who is another academic-turned-farmer. This post makes a nice follow-up to Nate's [What Do We Tell Our Children?](#) essay. Perhaps we don't have to say a whole lot if our actions align with newly emerging realities. Want a sense of purpose? Want to belong and feel valuable in your social sphere? Reskilling might make a whole lot of sense. What do you think?

Reskilling for an Age of Energy Descent

Transition Towns founder [Rob Hopkins](#) calls the educational work we need to be doing over the next couple of decades “the Great Reskilling,” acquiring and re-acquiring the skills we will need to manage the energy transition we face. I've already written a bit about the [organizational skills we will need on the local level](#). Here I want to offer some thoughts about the sorts of practical skills adults and children alike could start learning now to cope with a world of drastically reduced and altered energy sources.



We're not talking here about turning back the clock in all respects. We come at the prospects of a generalized powerdown with a lot of technological advances that may make the transition smoother. Granted, photovoltaics entail a lot of embodied energy and currently draw on raw materials we can't continue sustainably to withdraw from the earth, to take just one example. Nor could we hope to replace the energy currently derived from fossil fuels from photovoltaics, wind power, small-scale hydro power, solar hot water, biomass, hydrogen fuel cells, wave energy, etc. That's part of the problem. But we can employ some or all of these technologies as part of a transition; and we need people who know them well and keep up with advances.

The same is true in transportation. We have lots of options for individual and mass transit that didn't exist a hundred years ago. Electric bicycles and scooters have reached a high level of sophistication, as have the batteries that run them. Light rail (OK, we had light rail a hundred years ago) is an important option for inter- and intra-urban transport that already has a small industry behind and some good examples on the ground. Plug-in electric vehicles, especially buses and mini-buses, have to be part of any transition. So we need more (transportation) bicycle builders and repair people. (I emphasize transportation, because most of the bicycle skills around today are for sport biking, which bears the same relation to our future needs as the military-industrial complex does to civilian technology development – yeh, maybe it has contributed to advances, but the cost just in misdirected energy has been enormous.) And we need rail specialists and electric vehicle people and people to figure out how to configure roads so everybody can safely bicycle without wearing funny clothes.

Some Skills for All

But there are also daily living skills that will become more important as cheap energy fades from view – or suddenly disappears. Growing food is one of those closest to my heart and experience. We've already seen a two-year jump in seed sales for home gardens. Books on how to do it appear with increasing frequency, from my glance at the listings. And for good reason. Growing your own food takes some doing, especially if you plan to do it on a really suitable scale. It can be done on a surprisingly small patch of ground, but it takes attention and technique. And getting started takes hard work. The good news is that more and more schools are incorporating kitchen gardens into the school environment and the curriculum. The bad news is that most of this effort is directed toward “giving children a sense of where their food comes from,” not toward training future farmers and gardeners. The best and biggest school gardening programs can have difficulty attracting students, for reasons I'll explore below.

Kids are also learning to cook, as are their parents, though progress is slow considering the continued profitability of the fast foods industry. Beyond cooking, we also need to preserve food for those lean times. Jason Bradford has described a couple of options for maintaining an adequate food supply in a powereddown future. [Storing basic grains](#) and [low-energy canning and preserving](#) are old skills with sometimes new techniques that we will need to learn.



Powerdown means energy conservation. It also means we'll have to wean ourselves from our throw-away culture, starting with the food front. Already many countries and localities have banned plastic bags. What do we use for packaging? How do we make it? You can buy fancy “green bags” for keeping fresh vegetables, but anyone with minimal sewing skills can make muslins bags that serve just as well – which is not just as well as plastic, in most instances;

learning to shop frequently, or depend upon the garden more, is also an important new skill for most of us. We might also learn to cook more at one time. M.F.K. Fisher's [The Art of Eating](#) starts with her World War II era book, *How to Cook a Wolf*, where she talks about strategies for cooking a week's meals with minimal uses of (rationed) energy by cooking one-pot dinners, sharing oven space among several dishes, and other tricks.

For the really ambitious on the food front, there are all those old animal husbandry skills. They haven't changed much, though we know more about disease today than a hundred years ago. What we've lost with the new knowledge are the old skills at handling disease. Today we rely on the vet to vaccinate, dose with pharmaceuticals, or put down out animals; but the old skills are still useful and still used, especially among those who raise large animals. One of the main obstacles to raising animals for food is the regulatory system. While you can still keep chickens, and even goats, in many cities in the United States, in other places, even semi-rural ones, planners trained at urban universities have written codes that make such "unsanitary" practices illegal. In most places, it's also illegal to sell fresh (so-call "raw") milk, or extremely costly to set up the procedures for doing so legally, making it difficult for a family to dispose of the 3 to 8 gallons of milk daily that a dairy cow produces.

But how about those sewing skills? I can remember my grandmother darning socks for my father and her daughter's seven children. Who darns anymore? A recent intern on our little farm was a professional costume designer, who spent her spare time hearing knitting socks with amazing patterns and getting started on a bikini. None of the knitters I know has advanced much beyond the winter cap. We've started, at least, to turn old bedsheets and scraps of clothing into rags to replace paper towels and store-bought shop rags. But making clothing at home? Who has the time? As the Depression deepens, it's clear, more and more people do. But as long as Wal-Mart has access to Chinese factories, incentives may be short.

And then there are all those steel blades that make our life so easy. Most of us are in the habit of tossing out a knife when it dulls, or giving it a perfunctory run on the steel strop that comes with every kitchen knife set. And many knives, especially the serrated ones, simply can't be sharpened with any ease. Sharpening is a lost art, but one that can be easily learned. And once you've gotten used to it, all sorts of tools become fair game, from chisels (brittle and requiring heavy-duty grinding once they chip) to lawn mower blades. Last year I bought a [hand-forged scythe](#) to keep our yard and orchards trim. It requires regular sharpening and occasional peening, banging out with hammer; but it's a wonderful tool, and the sharpening is just part of the rhythm of the work.

Some of what I cut turned out to be medicinal herbs, which my wife is now anxious to cultivate. Most of us, it turns out, already self-medicate. We don't trust doctors, or the pharmaceutical companies, often for very good reasons, and we're in searching of better answers. We tend to look for them, like everything else, off the shelf. A better answer might be to learn to identify and grow your own and prepare them to suit your needs. It's not hard, and it's not rocket science, despite a sophisticated industry dedicated to extracting the "active ingredient", and just that ingredient, from herbs in an effort to give a veneer of science (and expense) to what has always been a folk art. If you're willing to trust that the folk art works (as reliably as the medical art works, at any rate), herbal medicine may be a skill you need to cultivate.

Then there are basic mechanical and carpentry skills. I learned a good deal from my father when I was a kid, but I succeeded, in a mostly academic life, in handing down few of these skills to my children. What a shame. We'll need to build for ourselves a good deal more in a poweredown

world, I suspect, and do more of our own repairs. I'm in the middle of building a shack for one of my younger daughters, and I've sharpened those old skills considerably in the process, using hand tools as much as possible. The skill saw certainly came in handy, as did a portable drill occasionally; and I may yet regret that I don't have a table saw. But the whole process is one of learning when and where to expend what sorts of energy.

The Great Unskilling: Why It May Be Hard to Stop Saving Labor

The bottom line is that we need to engage in a serious effort at reskilling, not just ourselves but our children and our society as a whole. We'll also need to promote some serious changes in attitude, because two centuries of cheap energy have led to expectations that don't bode well for powerdown. Chief of these is the expectation that "labor-saving devices" will make for a better and brighter future. That, together with the myth of the unending drudgery of traditional work, militate against any mass embrace of the Great Reskilling.

As industrialization proceeded, small producers of all kinds were forced into "jobs" that allowed little time for the everyday tasks of providing for oneself, and into urban environments where the resources for doing so were very scarce. At the same time, consumers were increasingly recruited to enjoy ready-made products and home appliances that ended time-consuming processes of home cooking, manufacture and upkeep. Services were professionalized so that householders could count on professional plumbers and electricians, builders and gardeners, to do work that used to be done by everyone. In the 1920's advertising was devised to save American manufacturing from a crisis of overproduction by encouraging ever-growing consumption of such goods and services. (The other vehicle for sales was a foreign policy dedicated to opening and keeping opening foreign markets for American goods and buyers – a policy choice whose direct descendants are the wars in Iraq and Afghanistan.)

One result was the Great Unskilling, when homemakers forgot how to cook and sew and keep a garden (see Betty Friedan's classic account, [The Feminine Mystique](#)) and their husbands forgot how to build and repair and raise crops. Another, more insidious, was the discovery of "leisure." The advertisers led us to believe that leisure was a product of modern ingenuity. In fact, most peasants over the millenia have enjoyed more leisure time than late twentieth-century Americans tied to the daily grind of the job, fifty miserable weeks a year. What modern ingenuity gave us was time on our hands, and marketers and others quickly moved to fill it up with something called "entertainment." Who could wish it otherwise? After 8 or 10 hours on the job and a serious commute to and fro, many people just want to "veg out" in front of the tube, not tend the garden, cook a meal from scratch, mend clothes, or build a new chicken coop. Who has the time? Let's watch TV! The TV industry has been glad to accommodate with endless choices and endless spots for advertisers.

Along with the Great Unskilling came a growing aversion to physical labor. That – if you were unlucky in school – was for the job, not for home. For those who felt restless, or concerned about their weight, or worried about their health, the market produced a growing array of expensive hobbies and exercise regimes. God forbid we should put what energy we had left after work to use providing for our own needs. We had professionals to do that, even professionals dedicated to tending to our needs for physical exertion.

Perhaps worst off are the children. In place of jobs, we subject them to school, perhaps the worst job yet. There they have to please the boss – multiple bosses by the time they reach high school – who sets them progressively more difficult, arbitrary tasks and judges their worth on their

performance. At the end of five or six hours of this, they are sent home with “homework,” usually even more arbitrary than the tasks set during school hours. Parents not only go along with this but often demand more homework, on the supposition that the harder the kids work themselves as 10 or 16 year olds, the better their hopes of what is called a good job in later life. Traditionalists may require “chores” on top of all this, and many parents worry that they are not demanding enough in this regard.

Is it any wonder that young people come away from this experience with a profound aversion to work and a dedication to entertainment that is rival to none but that of professional entertainers themselves? The real wonder is that so many of them – though not as many as in the benighted past – acquire a taste for making music themselves, a last gasp of creative self-assertion that seems to have wide societal sanction and is even encouraged, at local levels at least, by the entertainment industry. Most, however, would prefer chatting with friends on the internet or watching old sitcoms packaged by Netflix to tending to their pets, never mind cleaning the house, mending a shirt, or fetching salad from the garden. Who can blame them? Deprived of any contact with real life, driven to spend hours on meaningless tasks on the promise that this will prepare them to undertake equally meaningless tasks the rest of their lives, they are naturally drawn to the life of leisure that the entertainment world promises them if only they can wrest some time from their homework and their parents.

The myth of drudgery, of course, isn't entirely a myth. Even today in most households cleaning the bathroom is a reminder of the unpleasant and time-consuming tasks that go with providing for oneself. Keeping a garden starts with making a garden, often back-breaking work, especially if you're starting, god forbid, with a lawn. Then there's keeping up with the weeds, and the bugs, and the watering. Having animals means cleaning up after animals, feeding them on a regular schedule, and looking after their deaths and births. There are all sorts of joys in this work, as people who undertake it quickly find, but there's also lots of work.

But that's the point, isn't it? If we want to (or will have to) provide more for ourselves, we'll have to learn to work. If the Great Reskilling is to take place before we really need it, and not under duress, we'll have to do a lot of re-education, of ourselves and our fellow adults, our children, and our schools.

The good news is that there is a lot of enthusiasm out there for reskilling. Our intern was one of a series of “WWOOFers,” mostly young people attracted to our place and several thousand others around the globe through World Wide Opportunities in Organic Farming. They bring energy (human energy, that is) to our little farm and learn some of those skills in return. We should be looking for such exchanges wherever we can find them. And older folks are learning new skills around the country and willingly sharing them. So there's hope yet and maybe a plan of action: share your skills, take a workshop, organize a reskilling course in your community.



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