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Discussions about Energy and Our Future

Can we solve two problems at once - unemployment and preparing for power down?

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Solving the Unemployment Problem and Preparing for Power Down Simultaneously

Here is an old idea with a potential future:

Put People to Work Doing Something Worthwhile

While the politicians wring their hands and cry about how awful the jobs situation is, and as they contemplate a possible stimulus package (except, of course for the Republicans who have bravely led the fight to curb the deficit — as if it mattered), the real solution will evade them because they simply do not see the future. They are as lost as the neoclassical economists are in believing this economic ‘situation’ is temporary and that we will eventually get back to business as usual. That is we will eventually get back on the track to growth and prosperity. Not likely.

There is really only one physically feasible solution. It's not one that anyone will like, and so it will be contested and rejected until it is too late. It isn't, as we say, politically feasible. But it would work if humans were wise enough to follow it. What is it?

The model is simple and has been done before. From 1933 to 1942 the [Civilian Conservation Corp \(CCC\)](#) provided jobs for younger workers conserving natural resources (e.g. our national parks) in the US. The program was part of a general jobs creation program proposed by President Franklin D. Roosevelt during the Great Depression to provide a stimulus to the economy and, so to speak, kill two birds with one stone. There was a great deal of resource management work that needed to be done, things like building access roads in national parks, and there were millions of unemployed young men who, without meaningful work, would have likely run amuck. It was, in fact, a brilliant idea. Coupling work that needed doing with labor that needed work. The same thing applies today. The problem is that the powers that be don't grasp the nature of the work that needs to be done.

Over the next twenty years the US and the world will need to transition from an industrial agriculture model to one based on [permaculture](#) and more organic, labor intensive approaches to

growing food. Oil is going to decline, meaning that diesel fuels to run tractors and combines will become increasingly costly. And natural gas, meaning fertilizers, will also go into decline. The era of agribusiness is coming to a close sooner than anybody might have imagined. And we are not prepared for what follows.

The work that should be started soon and will be labor intensive is relatively straightforward enough. We need, literally, millions of men and women reconditioning and building [soils capable of sustaining permaculture](#) and local production/delivery of food. The Green Revolution has done a great deal to degrade so much of our natural soils through the increasing use of fertilizers and pesticides as well as irrigation. Now, without these petroleum-derived inputs, it is likely that food yields would drop significantly. Some land areas currently under cultivation might even fail completely. As far as oil-based transportation is concerned, the world is going to grow very large once again, and very round, once long-distance hauling is no longer cost effective. Foods will have to be grown and consumed locally and the only alternative to industrial agriculture that might hope to produce sufficient calories and nutrients to keep huge numbers from starving is permaculture. That is where the jobs will be. And the sooner we get started developing our skills and knowledge of how to do this, the better off we will all be.

A Modern CCC for Soils Remediation

Make no bones about it. We are talking hard work, physical labor, just as was the case in 1933. In all likelihood, the initial bulk of work will go to young men and women who are physically capable of doing it. Nevertheless, the benefits and even rewards to society as a whole will be substantial.

The main task is to remediate the condition of our prime soils in regions that will be least affected by climate change. There are several regional models of what to expect in the next fifty to one hundred years (even in worst case scenarios) that suggest that there are potential areas of the US and Canada that might still be viable high yield areas even as the climate changes. In addition to remediation of soils there is the need to ensure the availability of water as needed. This may involve building new canals from regions of increased rainfall to regions that will have less, but are still viable for growing crops in other respects.

Agribusiness has relied so heavily on the elements of the so-called Green Revolution, fertilizers, irrigation, and pesticides along with massive and complex delivery vehicles, all made from or run on fossil fuels. At the same time, the very use of these elements has depleted the natural capacities of regional soils. In some cases it has killed off soil microbes that are essential for natural ecosystems to survive and thrive. And that is the way we will need to understand our food production, as a natural, though assisted, ecosystem (the whole point of permaculture). Now that the soils have been so badly damaged it will take years of careful management to rebuild the natural capacities of these soils. And it won't be done with tractors so much as with compost, shovels, and horse-drawn wagons and plows.

What we need (and I mean desperately) is a modern version of the CCC dedicated to restoring key soil regions to natural productivity. The key is in the kinds of things that organic farmers have been practicing for years. It takes a lot of work and time to recreate organic productive soils from the sterile dust that passes for farmland under the current set of Green Revolution practices. We actually know how to do this, but the simple fact is that it requires a tremendous amount of labor to accomplish it.

Unlike the CCC, this organization need not be limited to just young men, even if they might form a

large percentage of those hired. Young women would be every bit as qualified for most of the jobs*. And as with any major labor force undertaking this one would also require management. There are quite a few highly qualified out-of-work (older) managers out there. The management structure need not be complex. The same basic operations would be performed in distributed fashion all over the country (and, by the way, this isn't such a bad idea for the rest of the world where agriculture has had a negative impact on the soils). Setting up a basic operations management school to provide these people with the particulars of their new responsibilities would be pretty straight forward (see below about Free Education for all). The curriculum need not be complex since it is just adding on specific soil management operations management to supplement the management skills they already possess.

Speaking of management of this organization, it should be noted that it would be a huge mistake to create another bureaucracy as our government is wont to do. It would need basic accounting and performance auditing and some kind of oversight committee. But it would probably diminish the overall effectiveness of the organization to hobble it with a few layers of middle and upper civil service managers even if this meant more jobs! Keep the system simple and flat. But, of course, if the government were to do this I can easily imagine the bureaucratic nightmare that would ensue. I would bet the bill authorizing and funding such an organization would be ten thousand pages thick so the Congress can appear to be doing lots of work!

What is needed is a clear, conceptually simple vision/mission. **FIX THE SOILS**; enable the start of widespread permaculture operations over the next twenty years. Put people in charge who are already doing soil development and permaculture, not lawyers or academics who have never done any actual digging themselves. And for Pete's sake, don't let economists get involved, except of course for biophysical or ecological economists!

These are the jobs that need to be done now in order to assure some kind of food security for the greatest number of people as possible in the not-so-distant future. This is possible. It is feasible from a physical point of view. We still have the physical resources (organic wastes that could be turned into compost and used to remediate soils) needed to get the process rolling. We even have enough fossil fuels left to transport said resources if we put a priority on it.

The problem, as always, is that almost no one will believe it is critical and essential until it is too late to act.

Financing This Modern CCC

One of the greatest hurdles to any kind of jobs creation program right now is that financing it will simply drive the government into deeper debt. There are strong political voices that object on grounds of fiscal responsibility (where were you guys during Reagan, Bush I, and Bush II years?) I actually think they have a valid point even if their reasoning is completely cockeyed. We can't really do this by increasing debt unless there is a valid and long term payback. Whatever debt is created needs to be for a worthy investment. Just using the shotgun approach to create jobs is madness. What kinds of work are we talking about? Spending money on what will become useless projects, like building highways when the age of auto travel is coming to an end, is sheer lunacy. Yet those are the kinds of projects that our great congressional and executive leaders can imagine it seems. So we borrow, pay for roads to be built, and then in ten years find that the investments were worthless? Some leadership. Some imagination.

Investing in soil remediation and permaculture infrastructure is going to pay off in an energy constrained world. What we do now to improve the natural carrying capacity of soils and regions is going to have a great benefit in the future that building new roads won't even be able to match. So if we were to borrow money to do anything worthwhile, it should be to fund the new *Permaculture Enabling Corp* (PEC).

As it turns out there are ways in which funding this project will not require going into heavy debt. There will be a need to invest in what we could call capital, facilities and equipment. But the largest operating costs will be in payroll, which can be paid in ways other than cash. Just like in the original CCC, workers can be fed, sheltered, and provided for near their work sites. Food, shelter, and health care are major cost concerns for everybody, but the costs could be more easily managed in bulk and thus the cash requirements would be much lower for the program (as compared with paying road crews to build or repair roads at their higher wage levels). There are many ways these can be provided to the young workers who would come into the program. Dormitories, cafeterias, and so on can be built within biking or busing distance of major operations. It might even be a good idea to build a few couples and small family facilities. This would resemble graduate student housing on resident university campuses or enlisted housing on a military base. Not exactly luxury living, but functional and accommodating.

There is an even better means to finance this effort. Pull the troops out of our foreign involvements, bring them back home and stop spending on the war on terrorism (a ludicrous notion from day one in my opinion). The military men and women have learned discipline which will be needed to focus on the work at hand. Hire them as part of this jobs program. Otherwise, what are the alternatives? Continue throwing money down the war black hole and wasting good lives? Or bring them home, redirect the money to fund this organization, but discharge the troops so they too would then be jobless? One way or another, they will need to be integrated into this effort. By the way, Mr. Obama, if you want to do nation building, how about starting at home? If you want homeland security, how about starting with food?

Free Education

As another, even more valuable benefit to young workers in such a program, we could provide a free education in the technical and principled basis of permaculture^{**}. Our future society will depend on permaculture for not just sustenance but for intellectual guidance in how to live in the natural world. Humans have long believed that they had risen above the natural world, had in fact come to dominate it in some sort of spiritualistic transcendency. But now those who can get past this hubris can see that we are as much a part of the natural order as any other creature in the Ecos. We need to learn to live within our boundaries in such a way that the majority of humans, in the future, can live to seek their self-actualization. That is something we did evolve to pursue. But we can only do so within the natural limitations of our biophysical world.

Schools of permaculture (systems science applied to real life!) could be set up near all of the local sites of soil remediation work. As part of their remuneration for working the soil, these workers would be able to attend evening classes in formal education structures dedicated to helping them understand the importance of the work that they are doing and preparing them for being leaders in the new world of permaculture-managed food supply. Instead of learning how to manage a for-profit business, they would be learning how to manage food production in cooperation with the natural world. They would learn ecology as well as basic biology and nutrition sciences. And they would learn it in the context of managing resources for human well being. In that not-so-distant

This part of the project will take a bit of doing since it will be necessary to first teach the teachers. That will take some startup time. But I do feel that most high school and college science teachers will be able to come up to speed fairly quickly. The permaculture curriculum has been worked out and several schools are already in operation (c.f. [David Holmgren's page](#)). The number of truly qualified teachers is quite small. To be truly qualified you need to have actually practiced the arts, not just read about them. There are, however, many organic and biodynamic farmers who might be recruited to learn the permaculture principles and make excellent teachers. Some of these farmers might be having trouble keeping up in the market and find it attractive to not only learn how to teach permaculture but also use their own farms as facilities, paid for, of course, by the PEC.

Ramping up a viable education system will be one of the harder, but ultimately most important, parts of this program. The reason is simple. After the soils are remediated and ready to go, serious permaculture operations will begin. The actual building of soils and an integrated food ecosystem is a long-term process that is an outcome of permaculture. Getting the soils remediated isn't the same as just plowing the field before planting the crops. Indeed, part of remediation will involve establishing varieties of plants, including some native species, that will act to support the remediation (see: [phytoremediation](#)). For example, planting clovers for several years will help build nitrogen. Once the initial work is completed on a plot of land it is time to get the operation under way. And, in all likelihood, what this will mean is building a small village of permaculturists near the fields where some of those very people who went out looking for jobs and wound up digging up dirt with a purpose will want to settle near their time and energy investments to see the work through. I imagine these villages will sport their own local economy but may also be capable of exporting some produce, or at least trading with other nearby operations. This is what the future looks like, if there is to be a future at all for a larger number of humanity.

Feasibility?

I am growing into a cynic when it comes to what the masses of humanity will do in the near term to assure a long-term! I offer current political maneuvering as evidence of why it is rational to be cynical when it comes to the choices humans will make about their future.

Still, it might be worthwhile to ask how feasible is this proposal. Or, put another way, how might it be possible to actualize this notion? Understand that I think basic human foolishness will ultimately prevail. (I've had so little evidence to suggest otherwise of late!) But I could be wrong and might be surprised. So let's explore the possibilities.

Clearly what a proposal of this magnitude requires is presidential leadership, as with that provided by FDR in the Great Depression. One very good reason it will need to be national in scope and concurrently ramped up around the country is that it won't work to have pockets of permaculture communities, as is currently happening with the grass roots approach now being taken, surrounded by greater urban communities of hungry people. It could get dicey for the permaculture communities. We're either all in this together, or there won't really be a future. President Obama would have to be a firm supporter of this new program. He would have to understand the nature of peak oil and peak net energy as well as the futility of trying to substitute alternative energies (or that abomination he keeps mentioning — clean coal!) for what fossil fuels

supply in terms of driving our current economy. Once he truly grasped the scale and scope of the problem, he would have to propose appropriate legislation. Note that he would have to literally fight off the private interests, the lobbyists, and prevail upon the members of Congress to vote with his proposal.

Perhaps, at this point, you can see why I am so cynical. First, Obama hasn't shown any real grasp of the economic problems that we are facing. He is still listening to Tim Geithner and Larry Summers for goodness sakes. I just don't see him suddenly developing any real understanding of the true problems. He is both too young and too full of his own cleverness to really come to grips with reality outside of the neoclassical economics (and Wall Street) interpretation that he imbibed at Harvard. Second, imagine what would happen in the general public if he did grasp reality and made such a proposal. Let's face the reality of human nature here. The American people are extremely spoiled. They actually believe that because they are Americans they have some rights to consume without consequences. Do you really believe they would get behind an executive proposal to sacrifice the American dream in lieu of a hard labor future?

So how feasible is this idea in light of political realities? My guess is: not very. Please excuse me for being a cynic. What is needed is understanding and bravery. I don't see anyone in public office or in the public eye who has these two qualities. And even if they did (take Dennis Kucinich as an example of a close match) how far would they get?

Where Does That Leave Us?

So I've told you what needs to be done. I've given you a rough outline of how it could be done and what the major ingredients would be. I think it is technically feasible (what do you think?). And I think it is critical to solve both problems of jobs and what we will be doing in the future for food, in both cases preventing or minimizing riots in the near future. But I suspect you will agree with me that nothing even remotely resembling this proposal will come out of the Obama Whitehouse or from the Congress. So where does that leave us? Hoisted on our own petard.

* In my conception of this organization there would be a number of job categories relating to the kinds of things that have to be done, e.g. soil testing, moving compost, digging the compost in, etc. All of these jobs require a certain amount of skill and knowledge; they aren't just manual labor as we normally think of it. I also think it would be beneficial to have all workers cycle through the various job types over time so that they can acquire that knowledge and those skills through on-the-job training and then have time to practice and become proficient. But rather than lock someone into a single job just because they are doing it well, I think there is a global optimum to be achieved by doing this kind of rotation. Even though within each job type there will always be a few apprentices doing sub-optimal work I suspect the positive effects on peoples' psyches of not having to do the same thing day after day, endlessly, would lead to faster learning and better overall performance.



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