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Some thoughts on industrializing North Carolina. There are two aspects to industrial development; one, the technology, the experience, the skills for transforming something natural into a consumer thing; and two, the control apparatus that directs the operation, distributes the proceeds and enjoys the surplus. In development situations where the developed nation assists the undeveloped, only part one is transferred, never part two. In the case of North Carolina and GE, for instance, we may as well name ourselves Taiwan and understand what is happening in that context. While GE is in North Carolina they will exert every management skill they possess toward holding down costs of production to include taxes, pollution controls, utilities and labor to name a few. They will press the law to its limits in all these areas and use their vast power to obtain concessions in them all. They are not amateurs at the game and nobody yet knows just what concessions have already been made. They are here because it suits their purposes, not Governor Hunt's. Their presence may bless some, but when the "bottom line" says move they will move, with no compunction at all for the devastation that will cause. When we have come to understand that the invasion we so eagerly solicit will be at the expense of air, water, soil, people and amiability, then maybe we can start to think of other ways to do things. There are other ways.

Not many people will argue much about the statement that growth cannot go on indefinitely, and most will not contest the statement that the economy of the US requires continual growth. In like manner, the contradictions of productivity are apparent. It is said and widely believed, that industry must achieve greater productivity in order to compete in world markets. That means that there must be more manufacture per hour of labor expended. Which means that there must be fewer laborers, which means more unemployment. Take robotics and the computerized office. The reason managers want such things is to reduce the human labor component in production. Yet we keep such industries as Chrysler going because of the number of jobs that will be lost if Chrysler folds up. Which is to say that we must make automobiles whether or not there is a market for them because that keeps people at work. So now we make things just to be making them, whether or not they are needed. And at the same time we put enormous effort into making it less and less necessary to have humans involved in the process. Where is the logic of that?

The economists will tell you that the laborers released by automation will then be available to do other things, to produce something else. And they will bring to bear in proving that point the history of the economics of the industrial revolution. The labor force has continually grown, productivity has taken giant leaps, yet there has been overall a steady increase in employment and in the standard of living for 200 years. That is a difficult point to deal with.

I go at it with the argument from entropy, the Second Law. What production does, is transform earth stuff from its natural condition into something to be used and then discarded, and what high productivity does is to accelerate the rate at which that happens. Entry into new fields of manufacture also accelerates the rate at which earth stuff is converted into junk. Considerations of the Second Law begin to be recognized as controlling. "Things, once used, are thereafter less useful".

Georgescu-Roegen is the prophet of the Second Law and the economist who most needs studying. Hazel Henderson makes this same point, as does Herman Daley. The earth has limits. Repeat that twenty times. Thrift and frugality and renewability are imperatives which cannot be ignored. Say that a lot too.

A "sustainable society" is one with a set of relationships which promise a high degree of permanence; which depends on preserving the capability of the earth to support its life systems over long periods, centuries, at least. Continual growth is incompatible with sustainability. Requirements of humans in a sustainable society are the necessities, plus love, knowledge, harmony, peace of mind, mystery, ritual. Animals require surroundings suitable to their natures. It ought to be plain that the economic and philosophic system we live in will not work toward the realization of those needs for humans or animals. Taking guidance from the Riverdale Center for Earth Studies, we must seek a philosophy based on earth systems, economics based on morality and permanence, and a theology that finds God in Nature, ~~are~~ <sup>ed</sup> a start toward the goal of sustainability.

One American farmer has several thousand acres in wheat, only wheat. Every acre loses tons of top soil every year and every acre is under mortgage. If he does not get maximum yield by means of the most advanced mechanical and chemical technologies (tractors, combines, aircraft, herbicides, pesticides, fertilizers, all staggeringly expensive) and good weather, he is going to lose the farm. In his own words, he cannot afford to practise soil conservation, say by planting strip crops, so that huge tracts will not lie bare to wind and rain for long periods. If he did, labor costs would go up to the extent that he could not pay his bills and so the bank would repossess. The farmer knows what happens to top soil and he regrets it as much or more than anyone else, but he has got to pay this year's bills this year, and bankers are bankers, caught up in the logic of money; "Pay up or move out". The need to get maximum cash return at the fastest possible rate is the curse of an economy of shareholders. Money itself is a resource and money must make money, a requirement that overrides all considerations of morality or good sense.

Why should farming be captive to a system that forces practises so insane as to produce the kind of result just described. Monoculture is recognized to be stupid, but most farmers are forced to it. Strip cropping and reduced-till or no-till methods look ahead to long term relationships between humans and the land, but a money economy which demands the most profit that can be gained in the shortest possible time does not permit it. Read Wendell Berry, The Gift of Good Land.

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Second Law Study Group:

- August 27, 1982 - Thomas Berry, Reinvesting North Carolina
- September 28, 1982 - Les Real, The Evolution of Human Consciousness
- October 26, 1982 - Murray Bookchin