CES Monthly Musings

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Seeking integral community
in an ecological age . . . .

"Ecozoic" means "house of life." An "Ecozoic Society" means a society of life.
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The "Ecozoic Era" is a time of mutually enhancing relationships among humans and the larger community of life.
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The "Great Work" is living the promise of the ecozoic.

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In this issue: "Environment and the Rise and Fall of Civilizations: Turning China from Unsustainable Modern to Ecological Civilization" by John B. Cobb, Jr.

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ENVIRONMENT AND THE RISE AND FALL OF CIVILIZATIONS: TURNING CHINA FROM UNSUSTAINABLE MODERN TO ECOLOGICAL CIVILIZATION

History is usually written in terms of the rise and fall of nations and empires. But we know that there is a deeper history. Marx taught us to focus on how goods are produced and how the means of production are owned or controlled. In the twentieth century we learned that the most important question about the economy is its sustainability.

In some ways, hunting and gathering societies were essentially "ecological." Human beings adapted themselves to their environment understanding themselves as one species among others. They developed deep sensitivity to their inanimate context and to the behavior of the members of other species. Nevertheless many hunting and gathering societies developed ways of relating to their environment that were destructive. Growth of population led to overexploitation of the natural environment. Overshoot and collapse occurred. Also changes in weather made vast areas that had once supported hunting and gathering societies uninhabitable. Hence, even human societies that were far more "ecological" than ours proved unsustainable.

On the other hand, some hunting and gathering societies were sustained over tens of thousands of years. In Australia, societies that depended on the kangaroo developed cultural patterns and taboos that prevented the over hunting of these animals. It took the coming of Europeans to destroy these societies.

One response to the unsustainability of hunting and gathering societies was the rise of agriculture and herding. The change in the relation to nature was great. Heretofore, human beings understood themselves as one species among others. Now human beings became managers of plants and animals. Especially in river valleys where irrigation was possible, population grew enormously. Agriculture provided surplus food for huge cities.

There were, however, elements of unsustainability built into many of these societies. Over centuries irrigation led to salinization of the soil. In tropical forested areas exposure of the soil to the sun resulted in laterization. Away from rivers, repeated droughts could force whole societies to abandon their homes. On the other hand, some agricultural societies were highly sustainable. The annual flooding of the Nile kept the land of Egypt fertile without salinization. In China peasants learned to farm in remarkably sustainable ways so that some land has been farmed continuously for thousands of years.

In hunting and gathering societies some individuals had more authority than others, but differences in wealth and work were minor problems. There were no essential roles that members of the community would not willingly perform. There was no ownership of the means of production. Although different bands or tribes sometimes disputed hunting rights or stole horses from one another, conflict was generally sporadic. There was no warrior class.

In agricultural societies, however, especially those based on systems of irrigation, there was much labor that normal people would avoid if possible. To get the work done, some must be forced to do it. Slavery became an institution of great importance. Also, because slaves were needed and because agricultural products could be accumulated, and because other treasures were stored in the cities, there was much that one society might covet accumulated in another. Raiding or conquering other societies became a common practice. Both defense and conquest of others required armies. A military establishment became necessary. And the control of that establishment gave one great power in one's own society. The importance of armies and the advantages of size soon made empires common.

The great cities based on slavery and military prowess became centers of production of goods that were totally absent in hunting and gathering societies. Skills developed in architecture and the fine arts and artisans produced all kinds of goods that added to the quality of life of those who could afford them. The importance of trade increased over time as wealthy people in one region became aware that those in other regions had desirable goods not locally available. In the early modern period European exploration, conquest, and colonialization created a global civilization. In this context, societies that would otherwise be unsustainable could sustain themselves by absorbing goods from great distances.

Nevertheless, the most dramatic and abrupt change in the history of civilization was the industrial revolution. Prior to the eighteenth century the amount of goods produced in a society was roughly proportional to the number of workers. While the powerful had luxuries of many kinds, the great majority of the population in all countries lived near the level of subsistence. The industrial revolution was the organization of production so as to increase greatly the amount produced per worker. Whereas production of clothing and utensils had previously been by skilled artisans who performed many kinds of labor, they were now replaced by assembly lines in which each performed just one kind of act repeatedly. Whereas the energy employed in production had previously been primarily human (of course, other animals were also employed and windmills and waterwheels contributed), now most of the energy was supplied by coal and subsequently other fossil fuels (although water power and nuclear energy also contributed). The amount produced increased greatly. It seemed that in principle everyone could become rich.

In reality, of course, after two hundred years, industrialization has not made everyone rich. It has replaced artisans who previously lived somewhat above mere subsistence levels with factory workers whose wages have been based on the cost of subsistence. By reorganizing urban life, it has made subsistence much more expensive. For example, in the United States today one's home must be electrified, and one requires a refrigerator to preserve food as well as transportation, which is typically understood as owning a car. As wages are driven up by these needs, industrial production moves to places where subsistence is much cheaper.

The pressure to shift production away from long-industrialized countries was accentuated by the success of workers in organizing and demanding a larger share of the profits of industrial corporations. In

the United States industrial labor in the first two decades after World War II became middle class, that is, had substantial disposable income. Of course, there was another workforce doing nonunion work that still received only subsistence income. Nevertheless, it was possible to hope that the industrial revolution would realize its dream of giving everyone disposable income. This dream was ended by the shift of production to other parts of the world.

Just as the shift from the hunting and gathering society to the agricultural one greatly increased total production and made it possible for a few to have extra comforts and luxuries, while enslaving vast numbers; so the industrial revolution has greatly increased the number of people in industrialized countries who enjoy heretofore unimaginable technology and luxury, while replacing the previous artisan class with subsistence laborers in factories. Both revolutions vastly increased the gap between rich and poor.

Now, what about the sustainability of industrial societies? Actually the question must be asked differently now. The various parts of the world are so integrated that the issue is not about one industrial society or another. It is about the global industrial society. Is industrial society sustainable? The answer is that the actual industrial society that has now transformed the planet is not sustainable. Humanity faces in the decades ahead its greatest crisis. Previously many societies have collapsed because of their unsustainable treatment of their environment. But never before has there been a global overshoot and collapse of the human species.

I make the prediction of collapse with great sadness. By Earth Day, 1970, those who paid attention to what has been happening knew that humanity was set on an unsustainable course, but we thought that this course could be changed. I have devoted much of my life to promoting alternatives to catastrophe. But the actual changes that have occurred in the past half century have functioned to hasten the coming of catastrophe. Humanity has hastened and still hastens toward the precipice.

This does not mean that what we do now no longer matters. The policies we adopt even today may shorten or lengthen the time before collapse and may ease the process of collapse or worsen it. They are very important. But we need to think now about building a new society on the ruins of the old rather than modifying the old so that it can survive.

Why do I make this statement so baldly? Is there not still the possibility of saving the present global industrial civilization? This is an important question.

There are many features of the present global system that are unsustainable as they are, but could still be fixed for a time. Peak oil is a reality, and it will cause immense disruptions, but new technology might generate sufficient energy for industrial civilization to keep going. The financial system is extremely fragile, but its collapse would not necessarily bring an end to global industrial civilization. More decisively threatening are the dramatic disruptions that will follow from the climate change that is now inescapable. Rivers *will* dry up. Ocean levels *will* rise and flood deltas and other low lying coastlands. Deserts *will* spread. Storms *will* increase in number and be more destructive. Rainfall *will* become less predictable. Hundreds of millions of people *will* become environmental refugees. It may be that none of these particular disasters will directly end the globalized market or the American empire, or even necessarily prevent continuing industrial growth, but it will make all of these far more difficult to continue.

My belief that these *will* collapse is based on the additional judgment that these institutions are already fragile. We have seen how close the global financial system came to collapsing without any environmental crisis. The American empire is paid for by borrowed money that can never be repaid, and has little support from its citizens. The global market has depended on cheap transportation that is, in any case, doomed. Instability caused by weather change will accent food security as the priority, and this will cut against accepting continued dependence on massive imports. Already the people of many countries are saying that “another world is possible,” and thus withdrawing their support from the present global system, and a few governments are beginning to work for this other world.

The collapse of the modern globalized industrial civilization is leaving us with Earth far less habitable than the one that we have enjoyed since the last ice age. Our question is what kind of society can be built on the ruins. Our topic, and the hoped for answer to this question, is “ecological civilization.” What can that mean?

In the first place, we should note that the singular is misleading. What we can hope will emerge are many local societies, some of which will be sustainable for hundreds, even thousands of years despite the much less favorable context in which they will operate. I have called them "societies" instead of "civilizations" to leave open initially whether they will resemble more the ancient hunting and gathering societies, the agricultural societies that succeeded these, or industrial society. We use "civilization" only for the latter two, partly because the English word, at least, points toward an urbanization that may not characterize all the new experiments.

However, very few new societies will hark back to pre-urban, pre-agricultural patterns. The impoverished planet could support very few people on a hunting and gathering basis. What we have learned about farming and manufacturing will provide important knowledge for whatever comes next. Even "high tech" may provide some of the possibilities for the "other world" that is possible. We want sustainable civilizations.

But why call them "ecological?" We saw that although hunting and gathering societies could be called "ecological," some of them were not sustainable. Is "sustainability" not the issue?

My answer is that the modern study of ecology provides us the deepest basis for thinking about what is sustainable. We have based modern civilization and its globalization on economic theory. This has been the science of how to increase production and consumption of goods and services. This theory has led the world on the path of growth which necessarily leads to overshoot and collapse. A civilization based on growth economics cannot be sustainable. If, instead, we take ecology as our basic guide and ask how our activities can improve the ecosystem of which we humans and all our activities are a part, we have a far better chance of developing sustainable civilizations.

One clear element in the ecological model is that it focuses attention on what is happening in a particular location. This contrasts sharply with economics, which takes location into account only in terms of the cost of transportation. An ecological model calls for an ecological economics, and that means for local economic systems that are largely autonomous. The qualification "largely" is important. An ecosystem interrelates with neighboring ecosystems. Indeed it is a part of a larger ecosystem. The world as a whole may be regarded as an ecosystem. However, the larger ecosystem does not impose any kind of standardization on local ecosystems. On the contrary, it is always a network of local ecosystems, and it is these on which attention and effort are primarily concentrated. If, even now, before the global industrial civilization has collapsed, we would begin to construct the basis for survival and for building ecological civilizations, we will concentrate on local institutions and production that will not cease because the connections to distant places break down.

In terms of current issues in China, some implications are very clear. First, do not "modernize" agriculture. That does not mean that Chinese should not work now to improve farming even by bringing to it much that has been learned in recent times. It does mean we should "improve" farming only in ways that keep farmers on their farms and make use of their accumulated wisdom. We may know more now than in the past about the use of natural means to fight destructive insects and weed infestation. That kind of knowledge can be widely shared. Wes Jackson is teaching the world how to develop a perennial polyculture that is just the opposite of the annual monoculture of industrial agriculture. Recently acquired knowledge may help farmers respond to changes in weather and shortage of water. An ecological agriculture will reduce inputs of resources such as fertilizers, herbicides, and insecticides that are not locally produced, both for the sake of the soil and for the sake of local independence. An ecological civilization should employ all the knowledge that modernity has given us for purposes that are quite different from those that have dominated recent decades. China can choose the path of ecological agriculture as an enormous contribution to the survival of its people and to the construction of an ecological civilization.

A second issue in China is the extent to which it can shift from manufacturing goods for foreign markets to producing what will improve the lives of its own people. Clearly the collapse of the current global system will massively disrupt Chinese industry insofar as it is export oriented. China has already made efforts to increase its own market for the goods it produces. That is the right direction. Every step taken to increase its dependence on the world market is a mistake. Every step that is taken to increase its local market is in the right direction.

Third, by "local" market I do not mean simply the Chinese market. I mean that within China, the more industry in a particular province finds markets within that province, the better position that province will be in to develop an ecological civilization. If the economic condition of farmers improves, they will be in position to buy industrial goods. If the income of factory workers rises, they will be in position to buy those industrial goods as well.

Fourth, another crucial consideration is the ability of factories to operate on the basis of local resources of energy and material while at the same time contributing minimally to global warming and other forms of pollution. Here high tech may indeed help. If factories buy their natural resources locally, those who provide them will also be in position to purchase industrial goods. If they pollute minimally, they will contribute minimally to the continuing deterioration of the context of human life.

An ecological civilization will aim at the well being of people and the other creatures with which it shares the region. Working for these ends will often require foregoing the activities that, in terms of the values of the currently dominant civilization, are most profitable. As long as the thought of citizens is shaped by the current civilization, foregoing these opportunities for larger profits will be deeply resented and resisted. An ecological civilization cannot be built on opposition to the desires of the people.

This means that a fifth major contribution to preparing to build an ecological civilization in the ruins of the global industrial must be cultural and educational change. We must persuade people that short-term profit does not make for true human happiness or well being. We are happier when we live in a more harmonious society than when we are endlessly competitive and live in the midst of much misery and suffering. That is a hard lesson for Americans to learn. I hope it is not as difficult for Chinese.

Universities built on the model of modern American research universities work well for certain purposes, but these are primarily for the purposes of modern industrial global civilization. They make the emergence of ecological civilizations more difficult. Reform of research universities is far from easy, but it is crucial. They must begin to support the values of an ecological civilization.

Even more important is the task of making sure that in the earlier grades the values of the best of Chinese tradition are communicated to children and adolescents. I believe those values are appropriate to ecological civilization, but of course, they too require modification to avoid the patriarchalism and hierarchy built into much of traditional Chinese society.

We here in Claremont have used the term "constructive postmodern" to indicate our own hopes for the future. Since modern civilization is destroying the basis of its own existence at many levels, clearly, commitment to the "modern," which China has implemented so brilliantly, must be profoundly altered. Clearly also, there is no way to return to the China that preceded the modern one. But we believe that many of the values of ancient China can be combined with selected features of modernity, political, scientific, and technological, and subsumed into a new vision that will point toward what can emerge in the ruins of the modern. We believe that the modern academic study of ecology can provide a far better model for these new societies than those models developed by modern economists, which have played so disastrous a role in the past century and our century until now. We believe that the faster China shifts away from modern economistic policies and institutions to constructive postmodern or ecological ones, the better the chance that it can survive and even flourish in the decades ahead. It can lead the world in this way, rather than in the race to gain control of the scarce global resources needed for further "modern" progress.

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The mission of CES is to offer a vision, through dialogue, of an ecozoic society and contribute to its realization through research, education and the arts.

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