

09/2008

Joseph Tainter, anthropologist and historian



"We'll never be able to say 'Aha! We are sustainable!'"

Anthropologist and historian Joseph Tainter is Head of the Department of Environment and Society at Utah State University. He has led several research projects on culture and society such as the Cultural Heritage Research Project, Rocky Mountain Forest and Range Experiment Station. His work has been referenced by the United Nations Environment Programme and he is author of numerous articles and monographs. His best-known work, *The Collapse of Complex Societies*, examines the collapse of civilizations such as the Maya or the Roman Empire. Tainter is considered one of the first researchers to have analysed the causes of collapsing societies in terms of sustainability. He was invited by ICTA to visit the UAB and give a conference on *The Fundamental Elements of Being Sustainable*.

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What is your conception of sustainability?

In my conception, sustainability arises from a society's capacity to solve problems. It is common today to think about sustainability as something that emerges somehow passively, as a consequence of consuming fewer resources. But I think it is not so simple. Sustainability is an active condition of solving a society's problems. Society has encountered very large problems, which are very expensive to solve. In our days we are looking at problems involving, let's say, the large retirement costs for the people of my generation, the baby boom generation, very high medical costs, costs of restoring environmental systems, of adapting to climate change. The ability to address all of these problems will determine our future sustainability. And of course we could add to that problems of energy supply and energy cost. We must address these problems to ensure sustainability. And this is what societies in the past have either succeeded or failed in doing. If they have succeeded in addressing their problem in an economical manner, then they were sustainable. If not, then they collapsed.

Could you give us an example of a society that has not been sustainable in the past?

Yes. There is a very excellent example and that is the collapse of the Western Roman Empire. In the 3rd century it encountered a severe crisis that nearly caused it to come to an end. For 50 years there were nearly continuous civil wars and foreign wars. Many cities were lost, much land was devastated, and peasant population was lost. The Empire survived this crisis by reforms in the late 3rd and early 4th centuries, initiated by the very well known emperors, Diocletian and Constantine, and these emperors resolved the problems by increasing the complexity of the Roman government, and the size and complexity of the Roman army. They created many new institutions of government. They increased the size of the Roman army. And this was all very costly. So they had to increase taxes on the peasants in order to pay for this. But the taxes on the peasants had very severe consequences and repercussions. What happened after a few decades was that peasants did not have enough money, enough crops to pay their taxes, and they began to abandon their land, they even began to sell their children into slavery because they could not feed them. The cost of sustainability was really being borne by the peasantry. The solution worked, by increasing the complexity of the government and the size of the army. The government was able to repel all the invaders, restore order and reunite the empire, and it achieved sustainability for another two hundred years. But it did so at a cost that undermined the ability to solve future problems. In other words, it was consuming their capital resources and that was producing lands and peasant population.

If our trends are not sustainable, what awaits us? How will the future be for us?

This is in some way like the future that we may face ourselves. We will have to undertake higher and higher costs just to maintain the status quo. And this is what can undermine a society's sustainability.

What do we need to give up to become sustainable?

Sustainability is always a trade-off. There is no simple answer to this question. If we give up our consumption of energy, we may have less wealth, and that would mean that we would have less ability to solve problems, because if we have less wealth then we have less science. We have fewer technical specialists. We have less engineering. So we would have less capacity to solve all of these problems that will be coming at us over the next 20 to 30 years. If we don't give up something like our present consumption of energy, then that entails other problems. It creates problems on the climate, and on the environment overall. So sustainability is always a trade-off between costs and benefits. And there is no simple long term answer. In talking about sustainability I like to use a metaphor of sport, of a game. When you are in a sustainability exercise it is possible to lose. You can be unsustainable. But the converse doesn't hold. There is no point at which you can say that you have won. Sustainability consists of staying in the game; that is, continuing with the ability to solve problems. It is like a dance where you must be constantly in motion. There is no point where you can rest and say "Aha! We are sustainable!" It is something that always requires adjustment.

Entrevista: Maria Jesus Delgado

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