

Narrative Progress Report for John Templeton Foundation  
Grant ID# 15543  
The Modern Project in the Light of Human Evolution

In my last narrative report I commented on the social development index as formulated by Ian Morris as giving us a reasonable quantitative measure of when modernity began and how the rate of change since 1800 has been so astronomically different from all previous history. For the last 14,000 years his index, based on energy use per capita and several other dimensions, rose very gradually with many ups and downs from 2 14,000 years ago to about 43 in 1750. Twice before the index had hit 43—in the first century Roman Empire and twelfth century Song China and then fell again. In 1750 when for the third time in 2000 years the index again reached about 43 in England and China all the indications were that another “hard ceiling” was approaching and the index was about to fall again. But it was not long after that point that the steam engine was invented and for the first time in history energy other than that of human and animal muscles and wind and water was harnessed in what appeared to be endless abundance: coal turning water into steam whose energy could create a multiplicity of engines for pumps, railroads, industrial machines, etc, creating an entirely new world. Subsequently the social development index took a sudden turn almost straight up and has only accelerated ever since, reaching nearly 1000 in our own day.

What I want to emphasize in this report is fragility. I had always imagined that something like social growth would have shown over the last 14,000 years a long slow upward rising curve from the earliest period on the lower left side of the graph to a relatively high point on the upper right side of the graph where we are today. I did not expect a curve that bumped along the bottom of the graph for most of the last 14,000 years and then suddenly shot up, so not a gently rising curve but a backward L shaped curve with not a lot going on and then something close to an explosion. But of course such a graph minimizes what was in fact considerable growth over the long term, especially since the beginning of agriculture and urban civilization. But that growth was not steady—rather it showed significant peaks and then long valleys. That the world of 1750 was in terms of material culture much the same as first century Rome simply amazed me. But think of something as simple as mail: sending a letter would take as much time in 1750 as it did in 50 since it all depended on a reliable postal service and the speed of horses carrying the mail. Similarly there were improvements in ship building and navigation to be sure, but basically river and sea travel still depended on the wind and the fiber sails that were able to utilize its power. And I am talking about the high points which were relatively brief and much of those 2000 years in east and west were much poorer in every way. Not only was material culture degraded but much high culture was simply lost. If we realize that the first millennium BCE was one of the greatest of all culturally creative periods then we can remember how much of that culture in both east and west was lost: much of pre-Socratic philosophy, most of the great Greek tragedies, major texts in every school of early Chinese thought, etc.

To put it in the largest frame, we live on a fragile planet. 65 million years ago a not really huge meteorite hit the Yucatan Peninsula and destroyed the majority of all living species including all the dinosaurs. Volcanic activity and plate tectonics have given rise to wild swings in weather from tropical swamps at the poles to a nearly totally frozen planet. Probably 99.9 percent of all species have gone extinct and a similar percentage of all human societies. And there is the irony that probably our fragility is related to our creativity, both biologically and culturally. Our recent upward surge indicates that we are now more fragile than ever. That surge has given us a previously unknown capacity to control the biosphere. How will we use it?