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Utopia Questioned

"The popular press frequently carries reports of people who advocate returning to the balanced and reverential regard they suppose our ancestors had for the natural world. The Garden of Eden is a primal myth of Western civilization, and it was preceded in classical antiquity by the belief in the Golden Age - a time, alas now lost, when humans lived in innocent harmony with their natural environment." - Thomas DeGregori.[1]

Some environmentalists consider tiny communities as a model for society. They wish to spend their lives in small economies, living under government imposed self sufficiency and not relying on the world over the horizon for any important goods or services, notes Gregg Easterbrook.[2] For example, Rudolf Bahro, a founding member of Germany's Green Party has said that "people should live in socialist communities of no more than 3,000, consuming what they produce and not trading outside of the community."[3]

Sounds good but there are some examples showing that this is not all that great.

Michael Crichton in his book, *Travels*, reports about Shangri-La. "Five years after hearing my friend Peter Kann talk about his visit to the fabled place, I, too, was going to Hunza. The tiny mountain state, known as the original Shangri-La and traditionally closed to foreigners, had been opened the year before. It was the place where the people were beautiful, intelligent and immune to disease; where they lived to be 140 years old on a diet of apricots; where they existed in harmony in a spectacular mountain setting, cut off from everything that was bad and corrupting in the civilized world. That was Hunza, I was excited to go."[4] After many days of arduous travel, most on a dangerous bus ride along one of the most rugged mountain ranges in the world, Crichton reached Hunza. Here's his report, "A group of children came running to meet greet us. I was struck by how scraggly and unattractive they were. Here a mixture of ethnic origins - Chinese, Persian, Afghani, Mongol - led not to a beautiful blending, but to a stunted, deformed pack of mongrels. In this fabled land of self-sufficiency, the children clutched at our clothing, begging to sell us locally mined garnets. In the villages themselves, I looked for the fabulously old people, but saw none. There was disease and poverty, and signs of a harsh mountain life on all sides: genetic defects, evidence of inbreeding, cataracts, rashes, infections, running sores." This was not the Shangri-La of imagination.

It's been thought that native Inuit people lived healthful outdoor lives. Autopsies of families that have been exhumed in Barrow, Alaska prove otherwise. One woman had scar tissue which indicated that she had suffered from pneumonia but had recovered. She also had hardened arteries. Another woman's muscles carried trichinosis worms - the result, perhaps, of a raw meat diet. Dissection of the lungs revealed a heavy film of soot: both women had severe black-lung disease, which was most likely caused by living indoors all winter with a smoky seal-oil lamp.[5]

The remotest occupied island in the British Isles, the Outer Hebridean outlier Hirta in the St. Kilda archipelago was described by many nineteenth and twentieth century chroniclers as a Utopia. John McCulloch wrote of his 1815 visit: "If this land is not the Eutopia (sic) so long thought, where will it be found?"[6]

Andy Meharg reports, "The extent of anthropological study of the small St. Kildan community is unparalleled and has spawned a vast literature in the past 300 years. The documenters of island life were captivated by a culture solely dependent on the exploitation of seabirds, which were harvested for food, oil and feathers. They were also entranced by the island's remoteness and apparent independence. The island was self-sufficient and had no cash economy. It had a 'parliament' that met every day to take democratic decisions affecting the life of the community." Meharg adds: "The Hirta community is now an iconic image for a devolved Scotland with a strong socialist tradition. But this Utopia is a myth. The St. Kildans' bird culture had severe effects on European seabird populations. Most notably, the islanders beat to death the last observed great auk in Britain, which they held to be a witch, in 1840, just before the global extinction of the species."[6]

Meharg's research reveals that agronomic practices led to severe pollution of the arable land. The St. Kildans recycled all their wastes - feces, peat ash and bird guts and bones and used them as fertilizer. This eventually resulted in soils highly contaminated with lead and zinc, reaching 500 mg per kg, comparable with the soils of Britain's most polluted industrial cities.[7] This small island with only 40 acres of arable land had supported a population of around 200 inhabitants at least since the Iron Age. However as Meharg concludes, "The island could sustain such a population only because the inhabitants acquired their protein from massive exploitation of seabird colonies. The accretion of human waste streams over the millennia has resulted in the polluted soil. Very far from paradise."[6]

Most folks are familiar with Easter Island, properly known as Rapa Nui because of the island's nearly 400 stone statues representing a long-eared legless human male torso, mostly 15 to 20 feet tall, with the largest 70 feet tall and weighing from 10 to 270 tons. Yet there's more to Easter Island than just the stone statues. Jared Diamond observes, "Easter Island, with an area of only 64 square miles, is the world's most isolated scrap of habitable land. It lies in the Pacific Ocean more than 2,000 miles west of the nearest continent (South America), 1,400 miles from even the nearest habitable island (Pitcairn). Its subtropical location and latitude - at 27 degrees south, it is approximately as far below the equator as Houston is north of it - help give it a rather mild climate, while

its volcanic origins make its soil fertile. In theory, this combination of blessings should have made Easter a miniature paradise, remote from the problems that beset the rest of the world."[8]

For some reason the islanders disappeared. Popular thinking is that Easter Island is a case study of human induced environmental disaster or 'ecocide,' and this is covered in depth by Jared Diamond in his book *Collapse*.[9] He depicts native inhabitants triggering the fall of their once flourishing civilization by cutting down all of the island's trees. However, new research points to a very different story. A revised timeline that takes into account radiocarbon dates points to initial settlement around 1200 AD, much later than previously thought.[10] According to this revised version, the human population never grew much larger than about 3,000 and rats played a dominant role in the deforestation of the island. This suggests that the Easter Island culture did not decline significantly until after arrival of Europeans.[11]

Let's look at rats since they are now claimed to have played such an important role. Terry Hunt reports, "Paleobotanists have demonstrated the destructive effect of rats on native vegetation on a number of other islands. Whether the rats were stowaways or a source of protein for the Polynesian voyagers, they would have found a welcoming environment on Rapa Nui - an almost unlimited supply of high quality food and, other than people, no predators. In such and ideal setting, rats can reproduce so quickly that their population doubles about every six or seven weeks. A single mating pair could thus reach a population of almost 17 million in just over three years. The evidence from elsewhere in the Pacific makes it hard to believe that rats would not have caused rapid and widespread environmental degradation. The rats ate palm nuts and in so doing made it difficult for the trees to regenerate."[11*]

Even Jared Diamond had reported, "The rats introduced accidentally as stowaways 'used' the palm tree and doubtless other trees for their own purposes: Every Easter palm nut that has been recovered shows tooth marks from rats gnawing on it and would have been incapable of germinating."[13] However, he preferred to blame all degradation on human inhabitants. Diamond wrote in *Discover* magazine, "The people of Easter Island wiped out their forest, drove their plants and animals to extinction, and saw their complex society spiral into chaos and cannibalism. Are we to follow their lead?"[8] In his 2005 book *Collapse*, Diamond described the Easter Island natives as "the clearest example of a society that destroyed itself by overexploiting its own resources." He adds, "The parallels between Easter Island and the whole modern world are chillingly obvious. Thanks to globalization, international trade, jet planes and the Internet, all countries on Earth today share resources and affect each other, just as did Easter's dozen clans. Polynesian Easter Island was as isolated in the Pacific Ocean as the Earth is today in space. When the Easter Islanders got into difficulties, there was nowhere to which they could flee, nor to which they could turn for help; nor shall we modern Earthlings have recourse elsewhere if our troubles increase. Those are the reasons why people see the collapse of Easter Island society as a metaphor, a worst-case scenario, for what may lie ahead of us in our own future."[13]

Terry Hunt rebuts, "Newly introduced diseases, conflict with European invaders and enslavement followed over a century and a half, and these were the chief causes of the collapse. In the early 1860s, more than a thousand Rapa Nui were taken from the island as slaves, and by the late 1870s the number of native islanders numbered only around 100. French ethnographer Alfred Metraux described the demise of Rapa Nui as "one of the most hideous atrocities committed by white men in the South Seas." It was genocide, not ecocide, that caused the demise of the Rapa Nui. An ecological catastrophe did occur on Rapa Nui, but it was the result of a number of factors, not just human short-sightedness."[11]

According to Hunt's view, there was no extended period during which the human population lived in some sort of idyllic balance with the fragile environment. He concludes, "I believe that the world faces today an unprecedented global environmental crisis, and I see the usefulness of historical examples of the pitfalls of environmental destruction. So it was with some unease that I concluded that Rapa Nui does not provide such a model. But as a scientist I cannot ignore the problems with the accepted narrative of the island's prehistory. Mistakes or exaggerations in arguments for protecting the environment only lead to oversimplified answers and hurt the cause of environmentalists! We will end up wondering why our simple answers were not enough to make a difference in confronting today's problems."[11]

Others have also taken critical issue with Diamond's analysis. In a special edition of *Energy and Environment*, edited by Julian Morris and Kendra Okonski, here's what Morris said, "In sum, on the basis of the societies considered by authors in this volume, Diamond's description of the collapse of past societies as well as existing societies he considers particularly vulnerable is sorely lacking. He fails to consider much of the available evidence and instead develops his own line of reasoning based on dubious and often faulty data. The result is a series of rhetorically appealing but analytically dubious claims regarding the nature of collapse of past societies and the condition of present societies. Diamond's obsession with trees leads him to conclude that the most important difference between the Dominican Republic and Haiti - the two halves of the island of Hispaniola - is tree management. Never mind that Haiti has for the past 100 years been run by a succession of tyrants intent on plundering the people and thereby successfully scaring off practically all those who might have invested in economic improvements."[14]

Gregg Easterbrook, writing in the *New York Times Book Review*, observed, "*Collapse* attempts to use history as a science to forecast whether the current world order will fail. *Collapse* tries to generalize from environmental failures on isolated islands to environmental threats to society as a whole. … He [Diamond] thinks backward 13,000 years, forward only a decade or two."[15] Easterbrook provides this final appropriate observation, "Most of the people who exist in small-is-beautiful fashion today do so in abject misery in the impoverished Third World. Nevertheless, if abiding in a small village economy and consuming only what you or your neighbors make really is the ideal existence, nothing stops environmentalists from living that way right now in the United States. Nothing except convenience."[2] ***P&SF***

References

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Continued on page 25.

tions of surfactants dramatically reduce the solution surface tension. Larger doses of surfactants at best will only minimally reduce the surface tension further. The surface tension in working cleaners may range from 20 to 35 dyne/cm. By comparison, the surface tension of water is approximately 70 dyne/cm.

Many years ago substantial theoretical studies were supported by experimental work, confirming a relationship between temperature of the solution and surface tension. This relationship is almost linear when considering long temperature ranges. It confirmed that surface tension decreases with rising temperature. By increasing temperature of the cleaner, wettability and penetration into soils is improved.

For the purists who need a technical explanation, here it is. Increasing temperature causes the free surface energy to pull molecules inward from the solution surface to the interior. This is counteracted by the opposing tendency of thermal agitation, pushing the molecules outward through the surface into the vapor phase. Let's keep it simple. Having established a fixed time and the optimum cleaner chemistry, maintain solution heat within the recommended range, for best results. **P&SF**

Fact or Fiction

Continued from page 21.

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