

Food First: Reflections on *Cannibals and Kings* by Marvin Harris, 1977

Cannibals and Kings, by now-deceased American anthropologist Marvin Harris, is a masterful account of man's social evolution from stone-age hunter-gathering clans to modern day capitalistic societies, interpreted in ecological terms. Seen in this light, our culture is shaped by the tension between the sexual drive to have children, which leads to larger populations, and the available land, water, game, fish and forest resources, which limit the population. This approach, called "cultural materialism", gives a radically different picture of the development of civilization than we are used to hearing. The synthesis is remarkable in its scope: a single powerful framework can explain such cultural forms as war, cannibalism, male-supremacy, food taboos and even the transformation from hunter-gathering to farming. The framework also explains the rise and development of the nation-state through early stages of "big-man" societies such as in Polynesia to the early empires of China, the Middle-East, the Indus Valley and Mesoamerica, to democratic capitalism today.

Population limited by food

In short, the analysis goes as follows: Throughout history man is pushed to find food and materials for survival. As the population grows—and left to biological instinct, it always does—limits to the food supply are eventually reached and the standard of living begins to decrease. To compensate and restore human health and nutrition, people have two basic choices: 1) to intensify food production and 2) to limit the number of surviving offspring. Because limiting the number of children has not been easy without modern contraceptive methods, increasing food production has historically been the dominant solution. For hunter-gatherers, this meant hunting game farther from home; for farming societies it meant cutting down forests to make more farmland and, later, other intensifications such as irrigation and fertilizers. But all forms of intensified food production deplete the resource base (once the renewable rate of production has been exceeded). Intensification also raises the labor cost of obtaining food: hunters had to travel farther to find game, farmers had to use less-productive marginal lands. Thus much of the big game was exterminated all over the world during the end of the last ice-age about 13 000 years ago. These extinctions were especially significant in Mexico and Mesoamerica, where no animals were left that could be domesticated to fill the niche of combined meat and milk providers and draft animals, for early farmers. When good river-valley farmland was all taken, mountain forests were cut down and marginal grasslands put under the plow, thus diminishing the forest available to provide habitat for game, timber for building, fuel for cooking and heating, and reducing the grassland available for cattle and sheep. A modern example would be the intensification of fishing worldwide since about 1950, in which species after species has been decimated or wiped out entirely, depleting the resource stocks, upsetting ecosystem balance and making it extremely costly to find fish.

Despite environmental degradation and depletion of resources, our predecessors always found ways to increase production so that once again the standard of living could increase and the population grow. One wonders that societies did not limit their populations, but as Harris carefully explains, this was not easy with the means then available. People of earlier ages did not like primitive abortions in which the mother might also die, nor having to leave their babies to die in the forest, in order to keep the number of mouths to feed manageable. Instead they warred with each other over territory and, in so doing, developed male-supremacist cultures in which female babies could be left to die *for the common good*, thereby limiting the population in a culturally

acceptable manner. Competition for food thus led to the whole complex today known as the aggressive patriarchal society. Matriarchal societies also developed. However, those that survived were not mirror images of the patriarchal, but instead modified to allow the aggressive male behavior necessary for war with its built-in preference for male over female babies.

Technology played a significant role—our ancestors were as creative as we are—but always with the backside of depleting limited resources or degrading the environmental base. Late in the successive stages of human technology came the use of fossil fuels together with the industrial revolution. More food, more intensification meant more babies survived and populations swelled. With the invention of modern contraceptives and women's entry into the workforce, it was possible for the first time for *a relatively stable population* to increase its standard of living dramatically—this is our familiar industrial world. This stage did not come to all—about half the world still lives with pre-industrial food production where any benefits of fossil fuels and technological invention have been more than eaten up by enormous population growth, the usual historical pattern. Harris believes the fossil fuel era is an anomaly in humanity's hundred thousand year long history, and is bound to end, whereupon human ingenuity will again be put to the test, and culture shaped accordingly, by the need to find food.

As part of this story, Harris explains many specific cultural attributes such as taboos against pork and beef, cannibalism and male-supremacy, all stemming from a society's need to feed itself, to preserve resources, and, later, in more complex societies, for the ruling elite class to maintain itself in power. For example, Harris argues that perhaps two-thirds of the world's people today live in involuntary vegetarianism (and a great many in malnutrition) because of meat supplies that have been insufficient ever since the advent of farming (and the fact that the rich get the meat first). Vegetarianism became religious dogma in India to preserve the cow for its milk. Agriculture itself arose, not because it was preferable to hunting, but to replace calories from wild game gone extinct with calories from the plant kingdom, an involuntary, necessary choice of early societies. Today we understand the enormous environmental cost of meat and fish (depleted forests, destroyed marine ecosystems, loss of species) and again face the tough choices of our ancestors: who will live, who will eat, who will get the limited meat and fish.

The loss of freedom

A secondary theme in Harris' analysis traces how we lost much of our freedom (and for many, our health) when humans adopted agriculture, and ever more as societies became bigger and more complex. The hunter-gatherer could wake up in the morning and decide whether or not to go hunting (in modern researched cases, tribesmen hunted only one of every three days), a tribeswoman could decide to go visit her mother in a neighboring village instead of weaving or preparing food. In village farming societies, people were more restricted and worked significantly longer hours on average. Later, imperial subjects, peasant farmers and factory workers had even less freedom and worked longer hours as a direct consequence of overpopulation. The meager, often degraded land meant even more hard work to produce the food with little time—or work free days—allowed for play, socializing and other human pastimes.

Inequality made things worse. Harris explains better than Marx, Malthus and many other writers the creation of inequality in society and why poverty has been and is so prevalent. The twin pressures of population growth and environmental limitations lead without conscious direction to a crowded, ever more-depleted earth. Leaders, who first arose naturally to manage food sharing and

war parties, were in village societies dependent for their popularity on followers with the result that the community shared more or less equally. But as incipient states came into being for greater security, leaders became independent of their subjects' goodwill through a monopoly over weapons. Such feudal leaders were nevertheless forced to provide a modicum of food and safety in order to keep order in the realm. Later in full-blown empires, the existence of a powerful managing elite made possible immense construction projects such as irrigation canals that increased the food supply and city walls that provided security. While such giant projects might have been positive in themselves, at this stage subjects became wholly dependent on the leadership of a managing elite who controlled them by controlling the key resources for survival (land and water in farming societies; today: jobs, money, education and legal rights). Farmer became peasant, craftsman became laborer.

Continuous growth, continuous depletion

Through historical analysis, Harris makes a good case to show that the gains of the last 150 years are not permanent and exposes the myth of continual progress as the human imperative. Rather, our history has been one of continuous expansion, contraction and adaptation to the existing environment (like that of other animals, one might add).

And, at least since the killing off of the giant mammals at the end of the last ice-age, the human story has also resulted in a continuous depletion of the earth's resources. Man has been engaged in a technological race to uphold living standards while population grows. For each new technological stage, we use up more resources. With fewer resources, the planet can support fewer humans. In fact, a shrinking resource base implies a shrinking long term sustainable population. Technology is not the answer to man's current dilemma. Both population and consumption per person must decrease dramatically from today's levels if a healthy, nutritious, sustainable level of food production is to be reached for all. Food is man's first priority, as it always has been.

Our current prosperity blinds us to this truth. Our prosperity is due to fossil fuels—a temporary parenthesis in human history—together with limitation of the population through widespread voluntary contraception in the Western countries. But fossil fuels are limited and voluntary contraception is the exception, not the rule, across the globe. Thus “business as usual” politics and “life as usual” personal expectations are leading the world toward catastrophe, when radical change of both consumption and family size is called for.

Food first

Harris' story makes abundantly clear the absolute importance of food production to human society. Food production allows us to survive and it has driven the development of culture, of how we organize ourselves and how we live. Renewable food *produced without fossil fuels* must therefore become society's first and foremost objective today, even more important than renewable energy. To secure our survival we must reorganize society for renewable food production (and it will take a major reorganization to do this). Currently, most discussion concerned with the environment, social justice and resource depletion (peak oil, etc) seems to go under the assumption that we can maintain our culture and way of life by simply replacing fossil fuels with renewable fuels. No, resources are limited and neither “business as usual” nor “culture as usual” will do: food comes first!

A new vision

How does a healthy, sustainable human society look? Harris' insightful book does not tell us but gives us clues. Begin rethinking a world of say 1 billion people living in villages that produce 95% of their own food within biking distance of where they live (as our predecessors lived until coal and oil changed everything), a world with fewer and smaller cities, where people are healthy, educated and free, perhaps tied together across the world as now by a wonderful electronic network! Then begin working locally to create one of those ten thousand self-sufficient villages! For who else is going to create *your* village? (For an excellent presentation of an ecologically sustainable society together with a ruralization scenario for how today's city can gradually transform itself into small, self-sufficient communities on land in the surrounding area, see the presentation by system ecologist Folke Gunther at http://portal.sliderocket.com/AVDRS/What-is-__Nature__.)

Harris describes the freedom of our ancestors living in self-sufficient communities. Today this vision can be seen in the **Transition Town** movement, **Permaculture**, **La Via Campesina** and, most recently, the new agricultural paradigm developed by the United Nations FAO called "**Save and Grow**", all based on local, self-sufficient, smallholder agriculture. Traditional **ecological** and **organic** growing organizations have also kept this vision alive.

This is the direction that can give humans health and food-security, as well as dignity and freedom, long into the future—*if coupled with population control*—not more centralized, industrialized agricultural technology that further depletes the earth. This is the highly preferable next step in human cultural evolution.

A precarious situation

The situation today is precarious: mankind simply has no buffers. Rising food prices everywhere are a consequence of oil depletion, the use of land to grow fuels, population growth, long term environmental degradation and climate change. We live in the largest, most centrally planned economy the world has ever known, but it is *planned for the profits and wealth of the few, rather than for the health and well being of all*. It is measured in money rather than in health and happiness. It is based on the false premise that we are the masters of the planet and the dubious hope that technology will save us from the population-resource limit. No, something new is called for, something that goes to the root of the problem. Once again in our long history, our culture must adapt to a new situation.

Three conclusions from reading this book are:

- ⤴ First, to secure our survival, renewable food produced without fossil fuels must become society's first objective today, even more important than renewable energy.
- ⤴ Second, population and consumption must both decrease radically to prevent further destruction of resources.
- ⤴ Third, the carrying capacity of the entire planet is decreasing year by year—fewer and fewer humans (and other life) will be able to survive in future civilizations.

We can blame our ancestors for not acting earlier and more wisely to preserve the planet's resources, but now it is up to us.

Archie Duncanson, September 2011

Further reading:

Feeding People is Easy and So Shall We Reap by Colin Tudge. Explains how traditional small-holder mixed animal and crop farms, using local manure, compost and resources, can feed the world not only sufficiently but with greater food security and higher food quality, both healthwise and tastewise, than today's industrial agricultural. These methods preserve rather than degrade the planet's land, water and biological resources (but require sufficient land, grazing land, forest and natural water).

Water by Alice Outwater. This is the story of how Europeans degraded the self-sustaining ecosystems of North America and depleted its resources during the 500 year expansion of the population from Columbus to modern times. One of the most readable environmental histories and one that gives an understanding of ecology, how all species and habitats interact as an ecosystem.

Citations from *Cannibals and Kings*:

(page numbers from Vintage Books edition, June 1991, pages 1-351)

“What is happening to today's standard of living has happened in the past. Our culture is not the first that technology has failed. Nor is it the first to reach its limits of growth.” p x

“The terminal phase of the last ice age represented the peak of specialized big-game hunting in the New World...By 7000 BC predation and the climatological changes brought about by the receding glaciers had resulted in the total extinction of 32 large New World animals including horses, giant bison, oxen, elephant, camels, antelope, pigs, ground sloths, and giant rodents.” p31

“Our stone age ancestors were perfectly capable of maintaining a stationary population, but there was a cost associated with it—the waste of infant lives.” p 25

“War and female infanticide are part of the price our stone age ancestors had to pay for regulating their populations in order to prevent a lowering of living standards to the bare subsistence level.” 64

“The ancient empires were warrens full of illiterate peasants toiling from morning to night only to earn protein-deficient vegetarian diets.” p 235

“Two-thirds of the people alive today are involuntary vegetarians.” p xi

“Intensification inevitably leads to declining efficiencies.” p266

“How fast and how low standards of living in the industrial nations will fall depends on how long conversion to alternative energy sources is delayed.” p 282

“Without reproductive pressure, neither warfare nor female infanticide would have become widespread.” p 60

“Matrilineal village societies tend to practice a brand of warfare different from that practiced by patrilineal village societies.” 87