

## POVERTY, HUMAN RIGHTS, AND THE CONSEQUENCES OF DEFORESTATION

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Each day 40,000 to 45,000 of our fellow world citizens die of hunger or hunger-related diseases. Poverty and hunger are frequently related to environmental degradation. The causal nexus in and of the process is often viciously circular and involuted. One of the primary contributions which philosophy of technology can make is that of being keenly vigilant in discerning the fallacy of simplistic causality in the analysis and evaluation of social, economic, and environmental projects and their implementation. Most causal relationships involving humankind and the environment are extremely complex. The sources of any human activity are multifarious and the consequences of any environmental change are exceedingly elaborate and anything but singular, linear, and simple. Technology can play a constructive role in addressing environmental problems. However, in situations of incredible need and overwhelming poverty a number of criteria must be met. Technological solutions must be simple, sustainable, and extremely inexpensive. These concepts and criteria were creatively and rigorously discussed in the pioneering work of E. F. Schumacher, Hans Jonas, and many others. Some of the results of this discourse have been the creation of the appropriate technology movement and a substantive change in the kinds of machines and infrastructure created and used in development projects.

In addition, the relationship between economic realities and the environment has been addressed in a variety of forums. The recent summit at Rio devoted much of its time to this issue. One organization which has contributed creatively and systematically to examining the relationship between the environment and economic development is the Worldwatch Institute. In every volume of their annual report they have continued to focus and refine their primary thesis which is that economic and social development is sustainable if and only if the environment and a balanced ecology are deeply and systematically considered and understood in the process of economic change and or technological development. It will be the primary contention of the brief case studies which follow that technological solutions addressing conditions of abject poverty can be effective if they are a part of a very comprehensive social, political, and economic

process of development which focuses on the universal human rights of our fellow world citizens. Technology that is created to alleviate environmental degradation, for example, must be available to the least enfranchised and the poorest of the world's poor. It should empower them rather than be easily manipulated in order to foster more extensive structures of control and dependency. Let us examine one dimension of this issue that has a direct impact on hunger and poverty.

Access to good food-producing land and appropriate technology potentially provides individuals and families with some degree of independence and autonomy. This presumes, however, that their land holdings, their crops and products, and the modest equipment which they possess cannot be confiscated in an arbitrary manner. Very simply, civil rights and fundamental human rights are a necessary requirement for any process that seeks to assist the poorest of the world's poor in creating the conditions for even the rudiments of human dignity and a semblance of freedom. Unless the right to land and its products is protected, technology cannot alleviate human suffering in this context. It also presumes that the land to which the poor have access is not so fragile that tilling it causes immediate or systemic deterioration.

In many countries of the so-called developing world there is a concerted effort to keep the poor landless and utterly disenfranchised. If they are completely vulnerable both economically and socially the poor can be easily coerced into working for the rural and urban elites for a pittance. If they cannot produce their own food then they are hooked into the cash economy. If in addition to being landless they can be kept in chronic debt, de facto slavery emerges. It may be illegal in most countries to own another human being, but bonded labor abounds in the developing world. A bonded laborer has frequently sold his or her time, often on a multi-year basis. The cash which he or she receives from the sale of his or her work capacity frequently goes for food or medical expenses. The money lender and/or land owner frequently makes sure that the individual and his or her family are never free from debt, and thus he owns a family's time for its members' entire productive lives.

Through examining two case studies from two very different parts of the world, we can discern the complexity of the social, political, and environmental nexus in which poverty and environmental degradation occur. The first case study involves Guatemala and aspects of the relationship between poverty and

deforestation in that country.

In the first half of the twentieth century, United Fruit owned vast holdings of agricultural or potentially tillable land in Guatemala. It only used 10% of what it possessed. The fledgling democracy led by Jacobo Arbenz Guzman in the early 50s decided to purchase some of this idle land and sell it for reasonable prices to the poorest citizens of the country. With proposed payments spanning many years, the government was prepared to distribute land to the campesinos in ways such that they could afford ownership.

United Fruit objected to this plan and began to play on the paranoia of John Foster Dulles. United Fruit's officials said that distributing land to the peasants sounds like land reform. Land reform sounds like communism and thus there must be a communist threat in Central America. Dulles and the CIA gathered rightist forces in Guatemala and supported an invasion from Honduras. They toppled the Arbenz government and outlawed the communist party. The new regime supported by the United States and led by Armas imprisoned anyone they perceived to be the opposition and made things very comfortable for United Fruit.

United Fruit did not need the vast holdings it was not using. What it wanted was cheap and socially disenfranchised labor. A peasant with a small tract of land does not have to sell himself and his family to day labor or economic bondage. United Fruit wanted to keep the poor utterly dependent on the large companies and plantations for work.

The poorest of Guatemala's poor are the Mayan Indians. They live for a greater part in the mountains, although the poverty and landlessness of the last decades have brought many to the shacks and slums of the cities. In the mountains a small percentage of them own minuscule plots of their ancestral lands. Others work as sharecroppers or day laborers. Many of them try to develop cash crops for their basic needs if they have handy access to arable soils.

Firewood commands a good price in Guatemala if it can be delivered to the cities. It is used for cooking in nearly all the households of Guatemala aside from those of the very rich. Given the incredible poverty and the tremendous demand for firewood, the result is massive and unsustainable deforestation. Farms creep higher and higher into the mountains, and firewood is transported by

backpack to cities. Legislation that is designed to protect the forests of Guatemala is often used to persecute and prosecute the poor rather than mitigate the process of deforestation. Extortion abounds, for it is very difficult for the poor to prove whether their cutting of wood for a cash crop is legal or illegal.

In addressing problems such as deforestation in Guatemala, where political, economic, and social oppression are the primary causes of poverty, what role can technological development or technology transfer play in improving the circumstances for the poorest citizens of this country? Small, highly efficient, and inexpensive cooking stoves are one possibility. Cooking over an open fire and heating with an open hearth are highly inefficient processes. Design and experimentation with stove technology is not new to the development community or to the history of technological development.

The amount of time spent gathering firewood, the consequences of deforestation on soil and water, the flooding of lowlands, and the consequences for food production are all compellingly significant factors. Technology that increases fuel efficiency and appropriate technologies to assist in the process of reforestation are direly needed. What is absolutely mandatory is the enfranchisement of the peasants in this process. Dams, terracing, companion planting, and carefully controlled tree plantations for firewood are all possibilities. By supporting the poorest of the poor in their search for fundamental human rights and including them in the creation of solutions to these problems, constructive change can occur. If the exploitation of the campesinos continues, the human and environmental degradation will continue and indeed worsen in Guatemala.

The second very brief case study is Bangladesh and the consequences for this country of the deforestation in India and Nepal. The poor of Nepal are pushing higher and higher into the mountains. As the mountains are cultivated, they no longer hold the tremendous waters of the monsoons within a non-destructive flow. Nepal thereby loses its mountain soils, its trees, and the steady, relatively clean water of its streams and rivers. They are replaced by muddy, silt-filled torrents which flood Bangladesh. Nepal has lost 30% of its woodland in the twentieth century.

India has lost over 40% of its forests in the same time period. One does

not have to be sophisticated in mathematics to realize how these patterns are utterly unsustainable. The social, political, and economic consequences of the continuation of this process are undeniably devastating. The poor of Bangladesh have few rights and places of safety and security in their own country. Now they also live and die dealing with the consequences of environmental degradation beyond their own borders.

In India, money lenders, land owners, and a caste system keep the poor utterly vulnerable and disenfranchised. These structures of poverty result in endless cycles of bonded labor and the sale of young women into life-long prostitution. These are just a few of the inhumane consequences of poverty and dire need.

Forests are cleared by people who are desperate to grow food. Parts of India are becoming barren and eroded, resembling the moonscape of Haiti. The social, economic, and human consequences of further deforestation in India, in addition to the impact which is increasingly traumatic for Bangladesh, will send these countries and ecologies into a deepening spiral of human and environmental degradation.

Unless the so-called developed countries decide to become political, psychological, and economic bastions in which they delude themselves and each other into thinking that they can keep the problems of the poorest of the world's poor out of their thoughts, away from their borders, and utterly foreign to their concerns, they would do well to address these issues of poverty and environmental devastation collectively and systematically. This can be accomplished through the United Nations or through private voluntary organizations which have proven records in working with the poorest of the world's poor. These organizations have some environmental reclamation projects in place. It is also essential, however, that we make all development assistance contingent on compliance with the human rights declarations of the United Nations.

The poverty and instability of Haiti is literally a human and environmental tragedy, but it also could symbolize the kind of future we will all face if human rights, poverty, and the degradation of the global environment are not addressed as interdependent variables of an exceedingly complex problem.

Perhaps we have become quiet and myopic Malthusians. If enough people die, if the environment becomes incredibly degraded, then somehow the global ecology will correct its own imbalance.

I prefer, however, to choose the path of the Stoics and presume that humankind has an important role in nature and that it is our role and responsibility to promote justice and world citizenship. The Stoics believed that reason, law, justice, and morality are part of the harmony and order of nature. In working with the poorest of the world's poor, it is manifestly obvious that universal human rights and world citizenship are essential factors in maintaining a sound and sustainable environment and achieving some semblance of social and economic justice and an ecological balance which makes possible the renewal of essential resources such as soil, trees, and water. Perhaps the Stoics were right. The balance of nature and the rational and just ordering of human activity may be one inseparable reality.