Toward a Humane Environment:
Sustainable Design and Social Justice

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Sustainable design is changing every area of human enterprise. But as it becomes more popular, its definition and goals become less clear.

As it is typically used, the word "sustainability" implies environmentally responsible development, but only vaguely. What "environmentally responsible" means is subject to debate, and any attempt at clarification inevitably leads to disagreement, especially among designers. Architects often use "sustainable design" interchangeably with "high performance building," as if the term refers only to the construction industry and includes only the efficient use of resources. Certainly American architects' familiarity with sustainability over the last several years has come in large part from the U.S. Green Building Council's Leadership in Energy and Environmental Design (LEED) program, a popular method of measuring the environmental impact of buildings. For many LEED has become synonymous with sustainable design, an impression strengthened by the USGBC itself. In 2004 at Greenbuild, the organization's annual conference, its president declared, "If it's not LEED, it's not green." Yet, in the eighty-one-page document outlining LEED 2.2 for new construction (October 2005), the word "sustainable" appears only a few times, and it is never defined. The manual claims that a "green building" "helps create a sustainable community," but it neglects to describe what such a community entails. Architects equate LEED with sustainable design, but LEED does not clarify what it is.

Undoubtedly the most frequently quoted definition of sustainable development comes from "Our Common Future," the United Nations study commonly known as the Brundtland Report, after the chairperson of the World Commission on Environment and Development (WCED), Gro Harlem Brundtland. 2007 marks the twentieth anniversary of the report, and over the last two decades a single phrase has become a mantra for many environmentalists and designers alike— "meeting the needs of the present without compromising the needs of the future." Many interpret this to mean that we cannot squander current resources and leave nothing for our heirs. In his oft-cited 1992 address to the U.N., Chief Oren Lyons urged societies "to make every decision on behalf of the seventh generation to come; to have compassion and love for those generations yet unborn." Our legacy should be one of hope, not destruction.

Yet, the syntax of the Brundtland statement suggests a focus on the present, not the future— meet current needs but do it gracefully, thoughtfully, with foresight. This begs the question— how well are we meeting our current needs? Although industrialized nations now are wealthier than any society in human history, globally there are also more poor people than ever before. The wealthiest twenty percent of the world's population has sixty times the income of the poorest twenty percent. Today more than a billion people live in extreme poverty— a sixth of humanity is literally starving to death. Over 20,000 die every day for lack of food, water, and basic sanitation, and most are children. The seventh generation view protects tomorrow's children, but what of today's? Even in wealthy nations, the proportion of children living in low-income households has risen over the last decade. UNICEF's Carol Bellamy puts it this way: "When half the world's children are growing up hungry and unhealthy, when schools have become targets and whole villages are being emptied by AIDS, we've failed to deliver on the promise of childhood." The needs of the present are far from being met.

Poverty may not immediately strike many as part of sustainability's scope, but in fact it is integral to the most familiar sources of sustainability's principles. The "triple bottom line" (a phrase coined by John Eckhart in 1998) recognizes that ecological, economic, and social conditions are inextricably bound. The popular Brundtland definition is invariably cited out of context and rarely if ever discussed in terms of economic and social equity, though the report itself focused on global community and poverty eradication: "Sustainable development seeks to meet the needs and aspirations of the present without compromising the ability to meet those of the future. Far from requiring the cessation of economic growth, it recognizes that the problems of poverty and underdevelopment cannot be solved unless we have a new era of growth in which developing countries play a large role and reap large benefits." And elsewhere: "Sustainable development requires meeting the basic needs of all and extending to all the opportunity to fulfill their aspirations for a better life. A world in which poverty is endemic will always be prone to ecological and other catastrophes." The very idea of sustainability rose from the recognition that poverty is the most significant problem of our time.

Despite this original understanding, sustainability's focus has been forgotten. The word "green" brings to mind trees and streams, not the plight of the poor. We have overlooked this crisis because empathy often depends on proximity— most of us do not see the problem because we never encounter it. The U.N. and other organizations identify three types of poverty— relative, moderate, and extreme. Relative poverty means living below a regional standard. The United States defines the national poverty line for an individual as an annual income below about $10,000. With moderate poverty, a person has enough to survive, but just barely. And extreme poverty is poverty that kills. In the world's poorest countries, most live on less than the equivalent of $1 per day, and many have

much less than that. Extreme poverty does not exist in developed nations. We do not live with it, and most of us have never witnessed it. As a culture, we are blind to it.

In an effort to correct course, all 191 members of the U.N. have signed the Millennium Declaration, which include eight key goals for the year 2015:

1 Eradicate extreme poverty and hunger
2 Achieve universal primary education
3 Promote gender equality and empower women
4 Reduce child mortality
5 Improve maternal health
6 Combat HIV/AIDS, malaria and other diseases
7 Ensure environmental sustainability
8 Develop a Global Partnership for Development

The Millennium Development Goals (MDG's) constitute a common set of values for all of humanity. The primary concerns are universal equity and health, and "environmental sustainability" does not appear until late in the list. In other words, socioeconomic concerns precede ecological. Though all of these goals are bound together, some are considered more urgent than others. The future of the earth depends on the fate of humanity.

Design can make a difference in pursuing these aims. To date, sustainable design has focused on technical solutions, an important step in increasing our efficiency with resources. Yet, as the Brundtland Report pointed out twenty years ago, "Human progress has always depended on our technical ingenuity… but this is not enough." What we need is a new mindset, a new culture of design. Designers can benefit the global community by reconsidering the purpose, process, and products of design all at once.

Think about plastic bottles. Approximately forty million plastic containers end up as litter or landfill every day, and they never break down and get absorbed into the earth safely, so environmentalists dream of a better bottle. But in addition to the container, consider the contents. Water is an extremely scarce commodity in impoverished regions, and dehydration and poor sanitation are primary causes of death. To get clean water, many sub-Saharan Africans spend up to eight hours a day doing what we in the West do each time we turn on a tap. Trips to the closest potable source can be over an hour each way, and because people (mostly women and children) only transport what they can carry on foot, they must make this trip at least three times every day. Usually they move the water in heavy ceramic urns supported on their heads or shoulders, so bodily injury is common, and these

are people who are malnourished to begin with. When smart designers turn their attention to this problem, they can save lives. South African architect Hans Hendrickes invented the Q-drum, a double polyethylene cylinder that even small children can easily tug across sandy terrain. Lighter than typical jars and pulled rather than carried, the drum reduces physical strain and travel time, and a hygienic seal avoids contamination. With a little ingenuity, Hendrickes created a simple device that radically altered the lives of thousands of people.

This example applies design directly to the problem, as when architects create better temporary shelters for disaster recovery areas. In these cases, the *product* of design serves people, but the *process* of design and construction can also benefit people by conceiving commerce as a form of service. Every year, U.S. foreign aid falls far short of U.N. commitments and ranks last among developed nations as a percentage of gross domestic product. Industry can help meet these commitments through trade, not aid. The annual value of the U.S. construction industry is nearly a trillion dollars. Imagine the buying power if some of this money were used to combat poverty in developing countries. If merely two percent of the construction industry traded with emerging markets, it would match U.S. foreign aid. Over half the population of Mauritania, whose chief export is iron ore for steel, falls below the extreme poverty line. Strategic trade can benefit every strata of the global economy and alleviate a dire problem at the same time.

The U.S. already imports much of its construction materials and products, including a quarter of all steel and cement, and these numbers will rise. Statistics show that the population of wealthy nations continues to age and dwindle, while poor regions are getting younger and more crowded. As a result, we inevitably will outsource more services and import more goods. Yet, at the moment we have no way to observe or control the conditions under which most of these products are made— who is making them and what is their standard of living? Fair trade ensures equitable wages to economically disadvantaged workers worldwide, and the fair trade coffee movement has helped alleviate extreme poverty in many areas. But of the trillions of dollars in goods exchanged globally every year, fair trade accounts for only one one-hundredth of a percent, and currently no construction-related companies belong to the Fair Trade Federation (FTF). To address these issues, concerned architects and builders have started the Just Building Alliance, an organization dedicated to reconsidering how building can serve the global community. The JBA promotes emerging markets in developing regions and explores ways to safeguard working conditions and living wages. The design and construction industry needs new standards to judge not just whether a building *is* good, but whether it *does* good.

Design can make a difference. Designers, make a difference.

FIVE PRINCIPLES TOWARD A HUMANE ENVIRONMENT

People come first

The problem of the planet is first and foremost a human problem. To reverse the devastation of nature, reverse the devastation of culture. We can better the environment by bettering ourselves. The United Nations has set poverty eradication and universal health as the world community's first priority. Every industry has a responsibility and opportunity to promote this goal.

Now comes before later

Conventional understandings of sustainability focus on the future. While we cannot consume all our resources today and leave nothing for tomorrow, we also should not forget our responsibility to the generations currently occupying the earth. If the living do not survive, their heirs will never exist. The present cannot be sacrificed for the future.

More for more

Prosperity must be measured with all of humanity together. No one is completely settled if anyone else is truly suffering. As Martin Luther King put it, "We are all caught in an inescapable network of mutuality, tied to a single garment of destiny. Whatever affects one directly affects all indirectly." Or in the words of Gandhi, "Though we are many bodies, we are but one soul."

The triple bottom line is bottom up

Social justice may be defined as first helping those most in need. Social, economic and ecological value must be built from the ground up, beginning with the most disadvantaged among us. "If a free society cannot help the many who are poor, it cannot save the few who are rich" (John F. Kennedy).

Nature knows no borders

In the age of global warming, national boundaries have little bearing on the most pressing problems. Natural and human communities transcend politics. In the words of naturalist Aldo Leopold, "All ethics rest upon a single premise: that the individual is a member of a community of interdependent parts." We share one world.