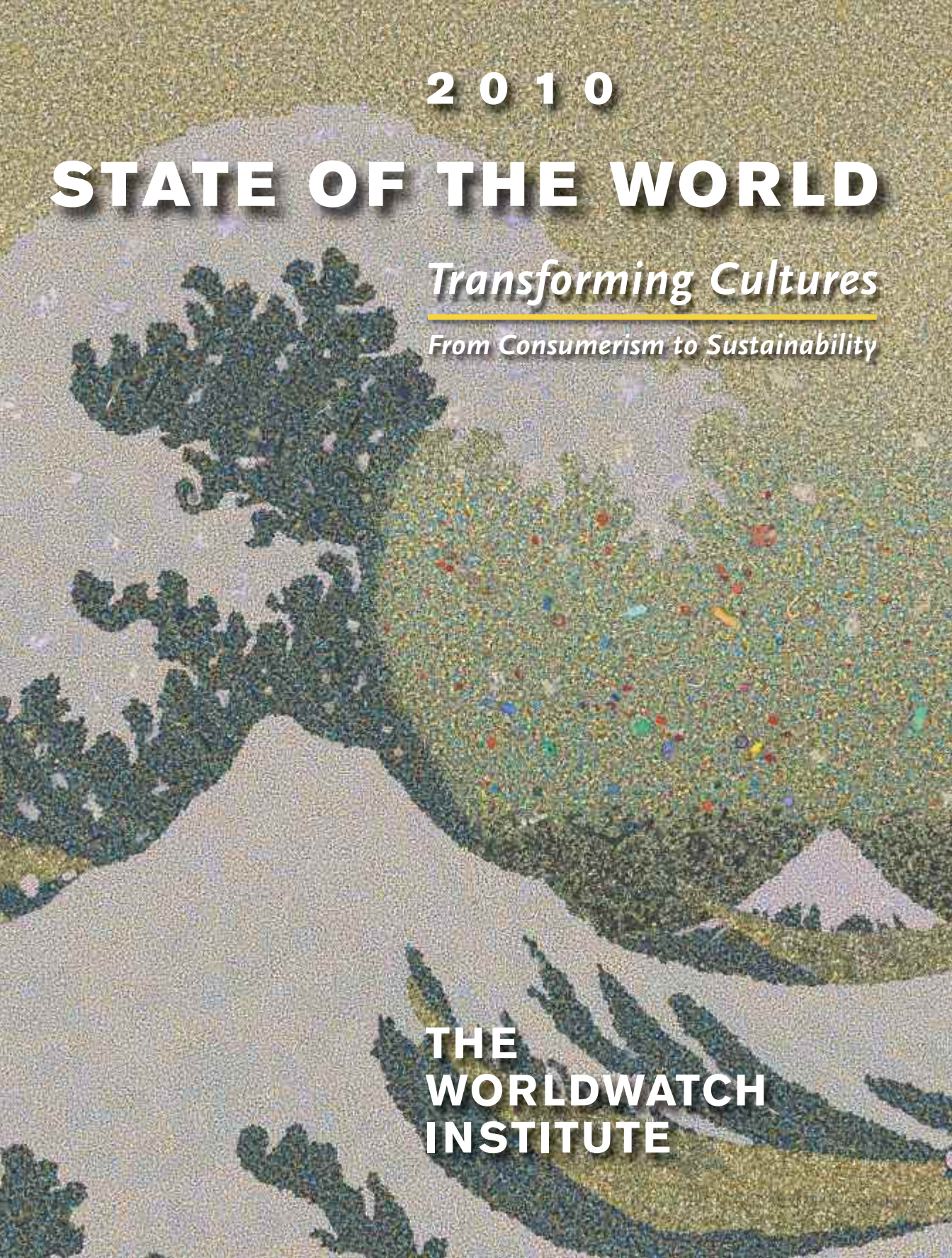

2010

STATE OF THE WORLD

Transforming Cultures

From Consumerism to Sustainability

THE WORLDWATCH INSTITUTE

2010

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Transforming Cultures

From Consumerism to Sustainability

A Worldwatch Institute Report on
Progress Toward a Sustainable Society

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Foreword

Muhammad Yunus
Founder, Grameen Bank, and 2006 Nobel Peace Prize Laureate

I am pleased that the Worldwatch Institute has chosen to tackle the difficult issue of cultural change in *State of the World 2010*. Over the past three decades, at the heart of my work with microfinance, I had to challenge the centuries-old belief that poor, illiterate women cannot be agents of their own prosperity. Microfinance rejects this fundamental cultural misconception.

Culturally rooted fallacies are difficult to slay. My early requests to established bankers to lend to poor women were met with clear and strong objections. "Poor people are not bankable. They're not creditworthy," a local banker insisted, adding for good measure, "You can say goodbye to your money." The initial experiment was highly encouraging—our borrowers turned out to be excellent customers who repaid their debts on time. The conventional bankers were unimpressed, calling the results a fluke. When we were successful in multiple villages, they shrugged their shoulders.

I realized that their cultural presumptions about the poor would not budge easily, no matter how many successes we earned. Their minds were made up—*Poor people are not creditworthy!* My job, I realized, was to sow the seeds of a new financial culture by turning this false notion on its head: the truth is not that the poor are not creditworthy, but that conventional banks are not people-worthy.

So we set out to create a different kind of bank, one geared to serve the poor. Conventional banks are built around the principle that "the more you have, the more you can get." We reversed that principle to the less you have, the higher your priority for receiving a loan. Thus began a new culture of finance and poverty alleviation, in which the poorest are served first and a fistful of capital could turn abject poverty into a livelihood.

After years of careful cultivation, these ideals became Grameen Bank, which today lends a billion dollars annually to 8 million borrowers. Our average loan is $360, and 99 percent of funds are paid back on time. Programs now include lending to beggars, micro-savings accounts, and micro-insurance policies. And we are proud to note that microcredit has expanded worldwide.

A financial industry for impoverished people, mostly women. That is a cultural change.

Now I know that cultural assumptions, even well-established ones, can be overturned, which is why I am excited about *State of the World 2010*. It calls for one of the greatest cultural shifts imaginable: from cultures of consumerism to cultures of sustainability. The book goes well beyond standard prescriptions for clean technologies and enlightened policies. It advocates rethinking the founda-

tions of modern consumerism—the practices and values regarded as "natural," which paradoxically undermine nature and jeopardize human prosperity.

Worldwatch has taken on an ambitious agenda in this volume. No generation in history has achieved a cultural transformation as sweeping as the one called for here. The book's many articles demonstrate that such a shift is possible by reexamining core assumptions of modern life, from how businesses are run and what is taught in classrooms to how weddings are celebrated and the way cities are organized. Readers may not agree with every idea presented here. But it is hard not to be impressed with the book's boldness: its initial assumption is that wholesale cultural transformation is possible. I believe this is possible after having lived through the cultural transformation of women in Bangladesh. Culture, after all, is for making it easy for people to unleash their potential, not for standing there as a wall to stop them from moving forward. Culture that does not let people grow is a dead culture. Dead culture should be in the museum, not in human society.

Preface

Christopher Flavin
President, Worldwatch Institute

The past five years have witnessed an unprecedented mobilization of efforts to combat the world's accelerating ecological crisis. Since 2005, thousands of new government policies have been enacted, hundreds of billions of dollars have been invested in green businesses and infrastructure, scientists and engineers have greatly accelerated development of a new generation of "green" technologies, and the mass media have turned environmental problems into a mainstream concern.

Amid this flurry of activity, one dimension of our environmental dilemma remains largely neglected: its cultural roots. As consumerism has taken root in culture upon culture over the past half-century, it has become a powerful driver of the inexorable increase in demand for resources and production of waste that marks our age. Of course, environmental impacts on this scale would not be possible without an unprecedented population explosion, rising affluence, and breakthroughs in science and technology. But consumer cultures support—and exaggerate—the other forces that have allowed human societies to outgrow their environmental support systems.

Human cultures are numerous and diverse—and in many cases have deep and ancient roots. They allow people to make sense of their lives and to manage their relationships with other people and the natural world. Strikingly, anthropologists report that many traditional cultures have at their core respect for and protection of the natural systems that support human societies. Unfortunately, many of these cultures have already been lost, along with the languages and skills they nurtured, pushed aside by a global consumer culture that first took hold in Europe and North America and is now pressing to the far corners of the world. This new cultural orientation is not only seductive but powerful. Economists believe that it has played a big role in spurring economic growth and reducing poverty in recent decades.

Even if these arguments are accepted, there can be no doubt that consumer cultures are behind what Gus Speth has called the "Great Collision" between a finite planet and the seemingly infinite demands of human society. More than 6.8 billion human beings are now demanding ever greater quantities of material resources, decimating the world's richest ecosystems, and dumping billions of tons of heat-trapping gases into the atmosphere each year. Despite a 30-percent increase in resource efficiency, global resource use has expanded 50 percent over the past three decades. And those numbers could continue to soar for decades to come as more than 5 billion people who currently consume one tenth as many resources per person as the average Euro-

pean try to follow the trail blazed by the world's affluent.

State of the World has touched on the cultural dimensions of sustainability in the past—particularly in *State of the World 2004*, which focused on consumption. But these discussions have been brief and superficial. Early last year, my colleague Erik Assadourian convinced me that the elephant in the room could no longer be ignored. At Worldwatch, no good idea goes unpunished, and Erik became the Project Director for this year's book.

While shifting a culture—particularly one that is global in scope—sounds daunting if not impossible, the chapters that follow will convince you otherwise. They contain scores of examples of cultural pioneers—from business leaders and government officials to elementary school teachers and Buddhist monks. These pioneers are convincing their customers, constituents, and peers of the advantages of cultures based on nurturing the natural world and ensuring that future generations live as well or better than the current one.

Religious values can be revitalized, business models can be transformed, and educational paradigms can be elevated. Even advertisers, lawyers, and musicians can make cultural shifts that allow them to contribute to sustainability rather than undermine it.

While the destructive power of modern cultures is a reality that many government and business decisionmakers continue to willfully ignore, it is keenly felt by a new generation of environmentalists who are growing up in an era of global limits. Young people are always a potent cultural force—and often a leading indicator of where the culture is headed. From modern Chinese who draw on the ancient philosophy of Taoism to Indians who cite the work of Mahatma Gandhi, from Americans who follow the teachings of the new *Green Bible* to Europeans who draw on the scientific principles of ecology, *State of the World 2010* documents that the renaissance of cultures of sustainability is already well under way.

To ensure that this renaissance succeeds, we will need to make living sustainably as natural tomorrow as consumerism is today. This volume shows that this is beginning to happen. In Italy, school menus are being reformulated, using healthy, local, and environmentally sound foods, transforming children's dietary norms in the process. In suburbs like Vauban, Germany, bike paths, wind turbines, and farmers' markets are not only making it easy to live sustainably, they are making it hard not to. At the Interface Corporation in the United States, CEO Ray Anderson radicalized a business culture by setting the goal of taking nothing from Earth that cannot be replaced by Earth. And in Ecuador, rights for the planet have even entered into the Constitution—providing a strong impetus to safeguard the country's ecological systems and ensure the long-term flourishing of its people.

While sustainability pioneers are still few in number, their voices are growing louder, and at a moment of profound economic and ecological crisis, they are being heard. As the world struggles to recover from the most serious global economic crisis since the Great Depression, we have an unprecedented opportunity to turn away from consumerism.

Forced deprivation is causing many to rethink the benefits of ever-greater levels of consumption—and its accompanying debt, stress, and chronic health problems. In early 2009, *Time Magazine* proclaimed the "end of excess" and called for Americans to push the "reset" button on their cultural values. In fact, many people are already questioning the cowboy culture, buying smaller cars, moving into less grandiose homes, and questioning the suburban sprawl that has characterized the postwar era. And in poor countries around the globe, the disadvantages of the "American model" are being discussed openly. In *Blessed Unrest*, Paul Hawken has documented the

recent rise of a plethora of diverse non-governmental movements that are working to redefine human beings' relationships to the planet and each other.

While consumerism remains powerful and entrenched, it cannot possibly prove as durable as most people assume. Our cultures are in fact already sowing the seeds of their own destruction. In the end, the human instinct for survival must triumph over the urge to consume at any cost.

The Rise and Fall of Consumer Cultures

Erik Assadourian

In the 2009 documentary *The Age of Stupid*, a fictional historian who is possibly the last man on Earth looks at archival film footage from 2008 and contemplates the last years in which humanity could have saved itself from global ecological collapse. As he reflects on the lives of several individuals—an Indian businessman building a new low-cost airline, a British community group concerned about climate change but fighting a new wind turbine development in the area, a Nigerian student striving to live the American dream, and an American oilman who sees no contradiction between his work and his love of the outdoors—the historian wonders, "Why didn't we save ourselves when we had the chance?" Were we just being stupid? Or was it that "on some level we weren't sure that we were worth saving?" The answer has little to do with humans being stupid or self-destructive but everything to do with culture.[1]

Human beings are embedded in cultural systems, are shaped and constrained by their cultures, and for the most part act only within the cultural realities of their lives. The cultural norms, symbols, values, and traditions a person grows up with become "natural." Thus, asking people who live in consumer cultures to curb consumption is akin to asking them to stop breathing—they can do it for a moment, but then, gasping, they will inhale again. Driving cars, flying in planes, having large homes, using air conditioning…these are not decadent choices but simply natural parts of life—at least according to the cultural norms present in a growing number of consumer cultures in the world. Yet while they seem natural to people who are part of those cultural realities, these patterns are neither sustainable nor innate manifestations of human nature. They have developed over several centuries and today are actively being reinforced and spread to millions of people in developing countries.

Preventing the collapse of human civilization requires nothing less than a wholesale transformation of dominant cultural patterns. This transformation would reject consumerism—the cultural orientation that leads people to find meaning, contentment, and acceptance through what they consume—as taboo and establish in its place a new cultural framework centered on sustainability. In the process, a revamped understanding of "natural" would emerge: it would mean individual

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and societal choices that cause minimal ecological damage or, better yet, that restore Earth's ecological systems to health. Such a shift—something more fundamental than the adoption of new technologies or government policies, which are often regarded as the key drivers of a shift to sustainable societies—would radically reshape the way people understand and act in the world.

Transforming cultures is of course no small task. It will require decades of effort in which cultural pioneers—those who can step out of their cultural realities enough to critically examine them—work tirelessly to redirect key culture-shaping institutions: education, business, government, and the media, as well as social movements and long-standing human traditions. Harnessing these drivers of cultural change will be critical if humanity is to survive and thrive for centuries and millennia to come and prove that we are, indeed, "worth saving."

The Unsustainability of Current Consumption Patterns

In 2006, people around the world spent $30.5 trillion on goods and services (in 2008 dollars). These expenditures included basic necessities like food and shelter, but as discretionary incomes rose, people spent more on consumer goods—from richer foods and larger homes to televisions, cars, computers, and air travel. In 2008 alone, people around the world purchased 68 million vehicles, 85 million refrigerators, 297 million computers, and 1.2 billion mobile (cell) phones.[2]

Consumption has grown dramatically over the past five decades, up 28 percent from the $23.9 trillion spent in 1996 and up sixfold from the $4.9 trillion spent in 1960 (in 2008 dollars). Some of this increase comes from the growth in population, but human numbers only grew by a factor of 2.2 between 1960 and 2006. Thus consumption expenditures per person still almost tripled.[3]

As consumption has risen, more fossil fuels, minerals, and metals have been mined from the earth, more trees have been cut down, and more land has been plowed to grow food (often to feed livestock as people at higher income levels started to eat more meat). Between 1950 and 2005, for example, metals production grew sixfold, oil consumption eightfold, and natural gas consumption 14-fold. In total, 60 billion tons of resources are now extracted annually—about 50 percent more than just 30 years ago. Today, the average European uses 43 kilograms of resources daily, and the average American uses 88 kilograms. All in all, the world extracts the equivalent of 112 Empire State Buildings from the earth every single day.[4]

The exploitation of these resources to maintain ever higher levels of consumption has put increasing pressure on Earth's systems and in the process has dramatically disrupted the ecological systems on which humanity and countless other species depend.

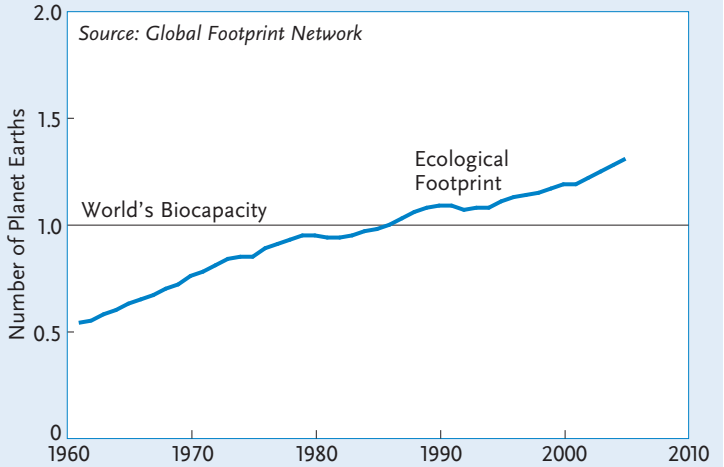
The Ecological Footprint Indicator, which compares humanity's ecological impact with the amount of productive land and sea area available to supply key ecosystem services, shows that humanity now uses the resources and services of 1.3 Earths. (See Figure 1.) In other words, people are using about a third more of Earth's capacity than is available, undermining the resilience of the very ecosystems on which humanity depends.[5]

In 2005 the Millennium Ecosystem Assessment (MA), a comprehensive review of scientific research that involved 1,360 experts from 95 countries, reinforced these findings. It found that some 60 percent of ecosystem services—climate regulation, the provision of fresh water, waste treatment, food from fisheries, and many other services—were being degraded or used unsustainably. The findings were so unsettling that the MA Board warned that "human activity is putting such strain on the natural functions of Earth that the ability of the planet's ecosys-

tems to sustain future generations can no longer be taken for granted."[6]

The shifts in one particular ecosystem service—climate regulation—are especially disturbing. After remaining at stable levels for the past 1,000 years at about 280 parts per million, atmospheric concentrations of carbon dioxide (CO_2) are now at 385 parts per million, driven by a growing human population consuming ever more fossil fuels, eating more meat, and converting more land to agriculture and urban areas. The Intergovernmental Panel on Climate Change found that climate change due to human activities is causing major disruptions in Earth's systems. If greenhouse gas emissions are not curbed, disastrous changes will occur in the next century.[7]

Figure 1. Humanity's Ecological Footprint, 1961–2005



A May 2009 study that used the Integrated Global Systems Model of the Massachusetts Institute of Technology found that unless significant action is taken soon, median temperature increases would be 5.1 degrees Celsius by 2100, more than twice as much as the model had projected in 2003. A September 2009 study reinforced that finding, stating that business as usual would lead to a 4.5 degree Celsius increase by 2100, and that even if all countries stuck to their most ambitious proposals to reduce greenhouse gas emissions, temperatures would still go up by 3.5 degrees Celsius. In other words, policy alone will not be enough. A dramatic shift in the very design of human societies will be essential.[8]

These projected levels of temperature change mean the odds would be great that ocean levels would increase by two or more meters due to the partial melting of Greenland or Western Antarctica ice sheets, which in turn would cause massive coastal flooding and potentially submerge entire island nations. The one sixth of the world who depend on glacier- or snowmelt-fed rivers for water would face extreme water scarcity. Vast swaths of the Amazon forest would become savanna, coral reefs would die, and many of the world's most vulnerable fisheries would collapse. All of this would translate into major political and social disruptions—with environmental refugees projected to reach up to 1 billion by 2050.[9]

And climate change is just one of the many symptoms of excessive consumption levels. Air pollution, the average loss of 7 million hectares of forests per year, soil erosion, the annual production of over 100 million tons of hazardous waste, abusive labor practices driven by the desire to produce more and cheaper consumer goods, obesity, increasing time stress—the list could go on and on. All these problems are often treated separately, even as many of their roots trace back to current consumption patterns.[10]

In addition to being excessive overall, modern consumption levels are highly skewed, leading to disproportionate responsibility for modern environmental ills among the rich.

According to a study by Princeton ecologist Stephen Pacala, the world's richest 500 million people (roughly 7 percent of the world's population) are currently responsible for 50 percent of the world's carbon dioxide emissions, while the poorest 3 billion are responsible for just 6 percent. These numbers should not be surprising, for it is the rich who have the largest homes, drive cars, jet around the world, use large amounts of electricity, eat more meat and processed foods, and buy more stuff—all of which has significant ecological impact. Granted, higher incomes do not always equate with increased consumption, but where consumerism is the cultural norm, the odds of consuming more go up when people have more money, even for ecologically conscious consumers.[11]

In 2006, the 65 high-income countries where consumerism is most dominant accounted for 78 percent of consumption expenditures but just 16 percent of world population. People in the United States alone spent $9.7 trillion on consumption that year—about $32,400 per person—accounting for 32 percent of global expenditures with only 5 percent of global population. It is these countries that most urgently need to redirect their consumption patterns, as the planet cannot handle such high levels of consumption. Indeed, if everyone lived like Americans, Earth could sustain only 1.4 billion people. At slightly lower consumption levels, though still high, the planet could support 2.1 billion people. But even at middle-income levels—the equivalent of what people in Jordan and Thailand earn on average today—Earth can sustain fewer people than are alive today. (See Table 1.) These numbers convey a reality that few want to confront: in today's world of 6.8 billion, modern consumption patterns—even at relatively basic levels—are not sustainable.[12]

A 2009 analysis of consumption patterns across socioeconomic classes in India made this particularly clear. Consumer goods are broadly accessible in India today. Even at annual income levels of about $2,500 per person in purchasing power parity (PPP), many households have access to basic lighting and a fan. As incomes reach about $5,000 per year PPP, access to television becomes standard and access to hot water heaters grows. By $8,000 a year PPP, most people have an array of consumer goods, from washing machines and DVD players to kitchen appliances and computers. As incomes rise further, air conditioning and air travel become common.[13]

Not surprisingly, the richest 1 percent of Indians (10 million people), who earn more than $24,500 PPP a year, are now each respon-

Table 1. Sustainable World Population at Different Consumption Levels

Consumption Level	Per Capita Income, 2005	Biocapacity Used Per Person, 2005	Sustainable Population at this Level
	(GNI, PPP, 2008 dollars)	(global hectares)	(billion)
Low-income	1,230	1.0	13.6
Middle-income	5,100	2.2	6.2
High-income	35,690	6.4	2.1
United States	45,580	9.4	1.4
Global average	9,460	2.7	5.0

Source: See endnote 12.

sible for more than 5 tons of CO_2 emissions annually—still just a fifth of American per capita emissions but twice the average level of 2.5 tons per person needed to keep temperatures under 2 degrees Celsius. Even the 151 million Indians earning more than $6,500 per person PPP are living above the threshold of 2.5 tons per person, while the 156 million Indians earning $5,000 are nearing it, producing 2.2 tons per person.[14]

As the Ecological Footprint Indicator and Indian survey demonstrate, even at income levels that most observers would think of as subsistence—about $5,000–6,000 PPP per person a year—people are already consuming at unsustainable levels. And today, more than a third of the world's people live above this threshold.[15]

The adoption of sustainable technologies should enable basic levels of consumption to remain ecologically viable. From Earth's perspective, however, the American or even the European way of life is simply not viable. A recent analysis found that in order to produce enough energy over the next 25 years to replace most of what is supplied by fossil fuels, the world would need to build 200 square meters of solar photovoltaic panels every second plus 100 square meters of solar thermal every second plus 24 3-megawatt wind turbines every hour nonstop for the next 25 years. All of this would take tremendous energy and materials—ironically frontloading carbon emissions just when they most need to be reduced—and expand humanity's total ecological impact significantly in the short term.[16]

Add to this the fact that population is projected to grow by another 2.3 billion by 2050 and even with effective strategies to curb growth will probably still grow by at least another 1.1 billion before peaking. Thus it becomes clear that while shifting technologies and stabilizing population will be essential in creating sustainable societies, neither will succeed without considerable changes in consumption patterns, including reducing and even eliminating the use of certain goods, such as cars and airplanes, that have become important parts of life today for many. Habits that are firmly set—from where people live to what they eat—will all need to be altered and in many cases simplified or minimized. These, however, are not changes that people will want to make, as their current patterns are comfortable and feel "natural," in large part because of sustained and methodical efforts to make them feel just that way.[17]

In considering how societies can be put on paths toward a sustainable future, it is important to recognize that human behaviors that are so central to modern cultural identities and economic systems are not choices that are fully in consumers' control. They are systematically reinforced by an increasingly dominant cultural paradigm: consumerism.

Consumerism Across Cultures

To understand what consumerism is, first it is necessary to understand what culture is. Culture is not simply the arts, or values, or belief systems. It is not a distinct institution functioning alongside economic or political systems. Rather, it is all of these elements—values, beliefs, customs, traditions, symbols, norms, and institutions—combining to create the overarching frames that shape how humans perceive reality. Because of individual cultural systems, one person can interpret an action as insulting that another would find friendly—such as making a "thumbs up" sign, which is an exceptionally vulgar gesture in some cultures. Culture leads some people to believe that social roles are designated by birth, determines where people's eyes focus when they talk to others, and even dictates what forms of sexual relationships (such as monogamy, polyandry, or polygamy) are acceptable.[18]

Cultures, as broader systems, arise out of the complex interactions of many different elements of social behaviors and guide humans at

Hegariz

Grub to go: Sago grubs, a gourmet delicacy in New Guinea.

an almost invisible level. They are, in the words of anthropologists Robert Welsch and Luis Vivanco, the sum of all "social processes that make the artificial (or human constructed) seem natural." It is these social processes—from direct interaction with other people and with cultural artifacts or "stuff" to exposure to the media, laws, religions, and economic systems—that shape people's realities.[19]

Most of what seems "natural" to people is actually cultural. Take eating, for example. All humans eat, but what, how, and even when they eat is determined by cultural systems. Few Europeans would eat insects because these creatures are intrinsically repulsive to them due to cultural conditioning, though many of them would eat shrimp or snails. Yet in other cultures, bugs are an important part of cuisine, and in some cases—like the Sago grub for the Korowai people of New Guinea—bugs are delicacies.[20]

Ultimately, while human behavior is rooted in evolution and physiology, it is guided primarily by the cultural systems people are born into. As with all systems, there are dominant paradigms that guide cultures—shared ideas and assumptions that, over generations, are shaped and reinforced by leading cultural actors and institutions and by the participants in the cultures themselves. Today the cultural paradigm that is dominant in many parts of the world and across many cultural systems is consumerism.[21]

British economist Paul Ekins describes consumerism as a cultural orientation in which "the possession and use of an increasing number and variety of goods and services is the principal cultural aspiration and the surest perceived route to personal happiness, social status, and national success." Put more simply: consumerism is a cultural pattern that leads people to find meaning, contentment, and acceptance primarily through the consumption of goods and services. While this takes different forms in different cultures, consumerism leads people everywhere to associate high consumption levels with well-being and success. Ironically though, research shows that consuming more does not necessarily mean a better individual quality of life. (See Box 1.)[22]

Consumerism has now so fully worked its way into human cultures that it is sometimes hard to even recognize it as a cultural construction. It simply seems to be natural. But in fact the elements of cultures—language and symbols, norms and traditions, values and institutions—have been profoundly transformed by consumerism in societies around the world. Indeed, "consumer" is now often used interchangeably with person in the 10 most commonly used languages of the world, and most likely in many more.[23]

Consider symbols—what anthropologist Leslie White once described as "the origin and basis of human behavior." In most countries today people are exposed to hundreds if not thousands of consumerist symbols every day. Logos, jingles, slogans, spokespersons, mascots—all these symbols of different brands routinely bombard people, influencing behavior even at unconscious levels. Many people today recognize these consumerist symbols more easily than they do common wildlife

Box 1. Do High Consumption Levels Improve Human Well-being?

Ultimately, whether high consumption levels make people better off is irrelevant if they lead to the degradation of Earth's systems, as ecological decline will undermine human well-being for the majority of society in the long term. But even assuming this threat were not looming, there is strong evidence that higher levels of consumption do not significantly increase the quality of life beyond a certain point, and they may even reduce it.

First, psychological evidence suggests that it is close relationships, a meaningful life, economic security, and health that contribute most to well-being. While there are marked improvements in happiness when people at low levels of income earn more (as their economic security improves and their range of opportunities grows), as incomes increase this extra earning power converts less effectively into increased happiness. In part, this may stem from people's tendency to habituate to the consumption level they are exposed to. Goods that were once perceived as luxuries can over time be seen as entitlements or even necessities.

By the 1960s, for instance, the Japanese already viewed a fan, a washing machine, and electric rice cookers as essential goods for a satisfactory living standard. In due course, a car, an air conditioner, and a color television were added to the list of "essentials." And in the United States, 83 percent of people saw clothes dryers as a necessity in 2006. Even products around only a short time quickly become viewed as necessities. Half of Americans now think they must have a mobile phone, and one third of them see a high-speed Internet connection as essential.

A high-consumption lifestyle can also have many side effects that do not improve well-being, from increased work stress and debt to more illness and a greater risk of death. Each year roughly half of all deaths worldwide are caused by cancers, cardiovascular and lung diseases, diabetes, and auto accidents. Many of these deaths are caused or at least largely influenced by individual consumption choices such as smoking, being sedentary, eating too few fruits and vegetables, and being overweight. Today 1.6 billion people around the world are overweight or obese, lowering their quality of life and shortening their lives, for the obese, by 3 to 10 years on average.

Source: See endnote 22.

species, birdsong, animal calls, or other elements of nature. One study in 2002 found that British children could identify more Pokémon characters (a brand of toy) than common wildlife species. And logos are recognized by children as young as two years old. One investigation of American two-year-olds found that although they could not identify the letter M, many could identify McDonald's M-shaped golden arches.[24]

Cultural norms—how people spend their leisure time, how regularly they upgrade their wardrobes, even how they raise their children—are now increasingly oriented around purchasing goods or services. One norm of particular interest is diet. It now seems natural to eat highly sweetened, highly processed foods. Children from a very early age are exposed to candy, sweetened cereals, and other unhealthy but highly profitable and highly advertised foods—a shift that has had a dramatic impact on global obesity rates. Today, fast-food vendors and soda machines are found even in schools, shaping children's dietary norms from a young age and in turn reinforcing and perpetuating these norms throughout societies. According to a study by the U.S. Centers for Disease Control and Prevention, nearly two thirds of U.S. school districts earn a percentage of the revenue from

vending machine sales, and a third receive financial awards from soda companies when a certain amount of their product is sold.[25]

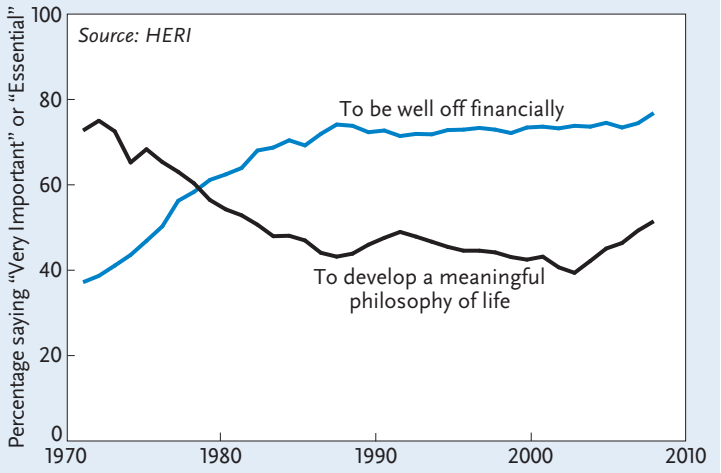
Traditions—the most ritualized and deeply rooted aspects of cultures—are also now shaped by consumerism. From weddings that cost an average $22,000 in the United States to funeral norms that pressure grieving loved ones to purchase elaborate coffins, headstones, and other expensive symbolic goods, consumerism is deeply embedded in how people observe rituals. Choosing to celebrate rituals in a simple manner can be a difficult choice to make, whether because of norms, family pressure, or advertising influence.[26]

Christmas demonstrates this point well. While for Christians this day marks the birth of Jesus, for many people the holiday is more oriented around Santa Claus, gift giving, and feasting. A 2008 survey on Christmas spending in 18 countries found that individuals spent hundreds of dollars on gifts and hundreds more on socializing and food. In Ireland, the United Kingdom, and the United States—the three with the largest expenditures—individuals on average spent $942, $721, and $581 on gifts, respectively. Increasingly, even many non-Christians celebrate Christmas as a time to exchange gifts. In Japan, Christmas is a big holiday, even though only 2 percent of the population is Christian. As Reverend Billy of the tongue-in-cheek consumer education effort The Church of Stop Shopping notes: "We think we are consumers at Christmas time. No! We are being consumed at Christmastime."[27]

Consumerism is also affecting peoples' values. The belief that more wealth and more material possessions are essential to achieving the good life has grown noticeably across many countries in the past several decades. One annual survey of first-year college students in the United States has investigated students' life priorities for more than 35 years. Over this time the importance of being well-off financially has grown while the importance of developing a meaningful life philosophy has fallen. (See Figure 2.) And this is not just an American phenomenon. A study by psychologists Güliz Ger and Russell Belk found high levels of materialism in two thirds of the 12 countries they surveyed, including several transitional economies.[28]

While consumerism is now found in nearly all cultures, it is not without consequences. On this finite planet, defining success and happiness through how much a person consumes is not sustainable. Moreover, it is abundantly clear that this cultural orientation did not just happen to appear as a byproduct of growing incomes. It was engineered over several centuries. Today, since consumerism has been internalized by many societies, it is self-perpetuating to some extent, yet institutions within society—

Figure 2. Aspirations of First-Year College Students in the United States, 1971–2008



including businesses, the media, governments, and educational facilities—continue to prop up this cultural orientation. These institutions also are actively working to expand markets around the world for new consumer goods and services. Understanding the role of these institutional drivers will be essential in order to cultivate new cultures of sustainability.

Institutional Roots of Consumerism

As long ago as the late 1600s, societal shifts in Europe began to lay the groundwork for the emergence of consumerism. Expanding populations and a fixed base of land, combined with a weakening of traditional sources of authority such as the church and community social structures, meant that a young person's customary path of social advancement—inheriting the family plot or apprenticing in a father's trade—could no longer be taken for granted. People sought new avenues for identity and self-fulfillment, and the acquisition and use of goods became popular substitutes.[29]

Meanwhile, entrepreneurs were quick to capitalize on these shifts to stimulate purchase of their new wares, using new types of advertising, endorsements by prominent people, creation of shop displays, "loss-leaders" (selling a popular item at a loss as a way to pull customers into a store), creative financing options, even consumer research and the stoking of new fads. For example, one eighteenth-century British pottery manufacturer, Josiah Wedgwood, had salespeople drum up excitement for new pottery designs, creating demand for newer lines of products even from customers who already had a perfectly good, but now seemingly outdated, set of pottery.[30]

Still, traditional social mores blocked the rapid advance of a consumerist mindset. Peasants with extra income traditionally would increase landholdings or support community works rather than buy new fashions or home furnishings—two of the earliest consumer goods. Workers whose increased productivity resulted in greater pay tended to favor more leisure time rather than the wealth that a full day at increased pay might have brought them.[31]

But over time the emerging consumerist orientation was internalized by a growing share of the populace—with the continued help of merchants and traders—redefining what was understood as natural. The universe of "basic necessities" grew, so that by the French Revolution, Parisian workers were demanding candles, coffee, soap, and sugar as "goods of prime necessity" even though all but the candles had been luxury items less than 100 years earlier.[32]

By the early 1900s, a consumerist orientation had become increasingly embedded in many of the dominant societal institutions of many cultures—from businesses and governments to the media and education. And in the latter half of the century, new innovations like television, sophisticated advertising techniques, transnational corporations, franchises, and the Internet helped institutions to spread consumerism across the planet.

Arguably, the strongest driver of this cultural shift has been business interests. On a diverse set of fronts, businesses found ways to coax more consumption out of people. Credit was liberalized, for instance, with installment payments, and the credit card was promoted heavily in the United States, which led to an almost 11-fold increase in consumer credit between 1945 and 1960. Products were designed to have short lives or to go out of style quickly (strategies called, respectively, physical and psychological obsolescence). And workers were encouraged to take pay raises rather than more time off, increasing their disposable incomes.[33]

Perhaps the biggest business tool for stoking consumption is marketing. Global advertising expenditures hit $643 billion in 2008, and in countries like China and India they are growing at 10 percent or more per year. In the United States, the average "consumer"

Cereal content: a comic book ad from 1964.

sees or hears hundreds of advertisements every day and from an early age learns to associate products with positive imagery and messages. Clearly, if advertising were not effective, businesses would not spend 1 percent of the gross world product to sell their wares, as they do. And they are right: studies have demonstrated that advertising indeed encourages certain behaviors and that children, who have difficulty distinguishing between advertising and content, are particularly susceptible. As one U.S. National Academy of Sciences panel found, "food and beverage marketing influences the preferences and purchase requests of children, influences consumption at least in the short term, is a likely contributor to less healthful diets, and may contribute to negative diet-related health outcomes and risks among children and youth."[34]

In addition to direct advertising, product placement—intentionally showing products in television programs or movies so that they are positively associated with characters—is a growing practice. Companies spent $3.5 billion placing their products strategically in 2004 in the United States, four times the amount spent 15 years earlier. And, like advertising, product placements influence choices. Research has found, for example, a causal relationship between cigarette smoking in the movies and the initiation of this behavior in young adults in a "dose-response" manner, meaning that the more that teenagers are exposed to cigarette smoking in the movies, the more likely they are to start smoking.[35]

Other clever marketing efforts are also increasingly common tools. In "word of mouth" marketing, people who are acting as unpaid "brand agents" push products on unsuspecting friends or acquaintances. In 2008, U.S. businesses spent $1.5 billion on this kind of marketing, a number expected to grow to $1.9 billion by 2010. One company, BzzAgent, currently has 600,000 of these brand agents volunteering in its network; they help to spread the good word about new products—from the latest fragrance or fashion accessory to the newest juice beverage or coffee drink—by talking about them to their friends, completing surveys, rating Web sites, writing blogs, and so on. In Tokyo, Sample Lab Ltd. recently brought this idea to a new level with a "marketing café" specifically created to expose consumers to samples of new products. Companies now even harness anthropologists to figure out what drives consumers' choices, as Disney did in 2009 in order to better target male teens, one of their weaker customer bases.[36]

Any of these marketing strategies, taken alone, stimulates interest in a single good or service. Together these diverse initiatives stimulate an overall culture of consumerism. As economist and marketing analyst Victor Lebow

explained in the *Journal of Retailing* over 50 years ago, "A specific advertising and promotional campaign, for a particular product at a particular time, has no automatic guarantee of success, yet it may contribute to the general pressure by which wants are stimulated and maintained. Thus its very failure may serve to fertilize this soil, as does so much else that seems to go down the drain." Industries, even as they pursue limited agendas of expanding sales for their products, play a significant role in stimulating consumerism. And whether intentionally or not, they transform cultural norms in the process. (See Table 2.)[37]

The media are a second major societal institution that plays a driving role in stimulating consumerism, and not just as a vehicle for marketing. The media are a powerful tool for transmitting cultural symbols, norms, customs, myths, and stories. As Duane Elgin, author and media activist, explains: "To control a society, you don't need to control its courts, you don't need to control its armies, all you need to do is control its stories. And it's television and Madison Avenue that is telling us most of the stories most of the time to most of the people."[38]

Between television, movies, and increasingly the Internet, the media are a dominant form of leisure time activity. In 2006, some 83 percent of the world's population had access to television and 21 percent had access to the Internet. (See Table 3.) In countries that belong to the Organisation for Economic Cooperation and Development, 95 percent of households have at least one television, and people watch about three to four hours a day on average. Add to this the two to three hours spent online each day, plus radio broadcasts, newspapers, magazines, and the 8 billion movie tickets sold in 2006 worldwide, and it becomes clear that media exposure consumes anywhere from a third to half of people's waking day in large parts of the world.[39]

During those hours, much of media output reinforces consumer norms and promotes materialistic aspirations, whether directly by extolling the high-consumption lives of celebrities and the wealthy or more subtly through stories that reinforce the belief that happiness comes from being better off financially, from buying the newest consumer gadget or fashion accessory, and so on. There is clear evidence that media exposure has an impact on norms, values, and preferences. Social modeling studies have found connections between such exposure and violence, smoking, reproductive norms, and various unhealthy behaviors. One study found that for every additional hour of television people watched each week, they spent an additional $208 a year on stuff (even though they had less time in a day to spend it).[40]

Government is another institution that often reinforces the consumerist orientation. Promoting consumer behavior happens in myriad ways—perhaps most famously in 2001 when U.S. President George W. Bush, U.K. Prime Minister Tony Blair, and several other western leaders encouraged their citizens to go out and shop after the terrorist attacks of September 11th. But it also happens more systemically. Subsidies for particular industries—especially in the transportation and energy sectors, where cheap oil or electricity has ripple effects throughout the economy—also work to stoke consumption. And to the extent that manufacturers are not required to internalize the environmental and social costs of production—when pollution of air or water is unregulated, for example—the cost of goods is artificially low, stimulating their use. Between these subsidies and externalities, total support of polluting business interests was pegged at $1.9 trillion in 2001.[41]

Some of these government actions are driven by "regulatory capture," when special interests wield undue influence over regulators. In 2008, that influence could be observed in the United States through the $3.9 billion spent on campaign donations by business

Table 2. How Industries Have Shifted Cultural Norms

Industry	Shift
Bottled water	This $60-billion industry sold 241 billion liters of water in 2008, more than double the amount sold in 2000. Through its global advertising efforts, the industry has helped create the impression that bottled water is healthier, tastier, and more fashionable than publicly supplied water, even as studies have found some bottled water brands to be less safe than public tap water and to cost 240 to 10,000 times as much.
Fast food	Fast food is now a $120-billion industry in the United States, with about 200,000 restaurants in operation. Among major restaurant chains, half are now hamburger joints. In the early 1900s, the hamburger was scorned in the United States as a dirty "food for the poor," but by the 1960s the hamburger had become a loved meal. By spending an annual $1.2 billion in advertising, promoting convenience and value, and providing play places for children, McDonald's in particular has helped transform dietary norms. It now serves 58 million people every day in its 32,000 restaurants spread across 118 countries.
Disposable paper products	From paper towels and plates to diapers and facial tissue, the disposable paper product industry has cultivated the belief that these products provide convenience and hygiene. In China, the market for these goods hit $14.6 billion in 2008, up 11 percent from the previous year. For many around the world, use of these products is today seen as a necessity, although this is a belief actively cultivated over many years by the industry. In China, when the disposable diaper industry entered the market it worked aggressively to make the use of "split-pants" taboo and instead to have disposable diapers be a symbol of affluence and sophistication.
Vehicles	Car companies are the second largest advertiser in the United States. They spent $15.6 billion on ads in 2008 and actively pushed the image of cars as sexy, exciting, and liberating. Since the 1920s, car companies have played an aggressive role in shifting the American culture to be car-centric, lobbying for increased road support, supporting organizations that fought against regulating car usage, even buying up several public trolley systems and dismantling them. Today car companies everywhere continue to promote auto-centric societies. In 2008, they spent $67 million on lobbying and $19 million on campaign contributions in the United States alone.
Pet industry	Views of specific animal species are primarily determined by cultures. The pet industry, which earns $42 billion globally each year on pet food alone, is a driving force in making it seem natural to view dogs, cats, and several other animals as friends and even members of the family. The "humanization" of these animals is a stated strategy of the industry and in 2005 was backed by over $300 million in advertising in the United States. As these pets are increasingly humanized, consumers become more willing to spend greater sums on expensive foods, veterinary services, clothing, and toys. Pets, however, consume considerable ecological resources. For example, two pet German Shepherds use more resources in a year than the average Bangladeshi does.

Source: See endnote 37.

interests (71 percent of total contributions) and the $2.8 billion spent by business interests to lobby policymakers (86 percent of total lobbying dollars).[42]

A clear example of official stimulation of consumption came in the 1940s when governments started to actively promote consumption as a vehicle for development. For

Table 3. Media Access by Global Income Group, 2006

Income Group	Population	Household Consumption Expenditure Per Capita	Households with Television	Internet Users
	(million)	(PPP 2008 dollars)	(percent)	(per 100 people)
World	6,538	5,360	83	21
High-income	1,053	21,350	98	59
Upper-middle-income	933	6,090	93	22
Lower-middle-income	3,619	1,770	80	11
Low-income	933	780	16	4

Source: See endnote 39.

example, the United States, which came out of World War II relatively unscathed, had mobilized a massive war-time economy—one that was poised to recede now that the war was over. Intentionally stimulating high levels of consumption was seen as a good solution to address this (especially with the memory of the Great Depression still raw). As Victor Lebow explained in 1955, "our enormously productive economy demands that we make consumption our way of life, that we convert the buying and use of goods into rituals, that we seek our spiritual satisfactions, our ego satisfactions, in consumption."[43]

Today, this same attitude toward consumption has spread far beyond the United States and is the leading policy of many of the world's governments. As the global economic recession accelerated in 2009, wealthy countries did not see this as an opportunity to shift to a sustainable "no-growth" economy—essential if they are to rein in carbon emissions, which is also on the global agenda—but instead primed national economies with $2.8 trillion of new government stimulus packages, only a small percentage of which focused on green initiatives.[44]

Finally, education plays a powerful role in cultivating consumerism. As with governments, in part this is because education seems to be increasingly susceptible to business influence. Today schools accept classroom materials sponsored by business interests, like the "bias-balanced" energy education materials by groups representing oil companies in Canada. And *Channel One News*, a 12-minute daily "news" program with 2 minutes of commercials and some segments sponsored by products or companies, is now shown in 8,000 middle and high schools across the United States, exposing 6 million students—nearly a quarter of all American teens—to marketing and product placements with the tacit support of educators.[45]

Perhaps the greatest critique of schools is that they represent a huge missed opportunity to combat consumerism and to educate students about its effects on people and the environment. Few schools teach media literacy to help students critically interpret marketing; few teach or model proper nutrition, even while providing access to unhealthy or unsustainable consumer products; and few teach a basic understanding of the ecological sciences—specifically that the human species is not unique but in fact just as dependent on a functioning Earth system for its survival as every other species. The lack of integration of this basic knowledge into the school curriculum, coupled with repeated exposure to con-

sumer goods and advertising and with leisure time focused in large part on television, helps reinforce the unrealistic idea that humans are separate from Earth and the illusion that perpetual increases in consumption are ecologically possible and even valuable.

Cultivating Cultures of Sustainability

Considering the social and ecological costs that come with consumerism, it makes sense to intentionally shift to a cultural paradigm where the norms, symbols, values, and traditions encourage just enough consumption to satisfy human well-being while directing more human energy toward practices that help to restore planetary well-being.

In a 2006 interview, Catholic priest and ecological philosopher Thomas Berry noted that "we might summarize our present human situation by the simple statement: In the 20th century, the glory of the human has become the desolation of the Earth. And now, the desolation of the Earth is becoming the destiny of the human. From here on, the primary judgment of all human institutions, professions, and programs and activities will be determined by the extent to which they inhibit, ignore, or foster a mutually enhancing human-Earth relationship." Berry made it clear that a tremendous shift is necessary in society's institutions, in its very cultures, if humans are to thrive as a species long into the future. Institutions will have to be fundamentally oriented on sustainability.[46]

How can this be done? In an analysis on places to intervene in a system, environmental scientist and systems analyst Donella Meadows explained that the most effective leverage point for changing a system is to change the paradigm of the system—that is to say, the shared ideas or basic assumptions around which the system functions. In the case of the consumerism paradigm, the assumptions that need to change include that more stuff makes people happier, that perpetual growth is good, that humans are separate from nature, and that nature is a stock of resources to be exploited for human purposes.[47]

Although paradigms are difficult to change and societies will resist efforts to do so, the result of such a change can be a dramatic transformation of the system. Yes, altering a system's rules (with legislation, for instance) or its flow rates (with taxes or subsidies) can change a system too, but not as fundamentally. These will typically produce only incremental changes. Today more systemic change is needed.[48]

Cultural systems vary widely, as noted earlier, and so too would sustainable cultures. Some may use norms, taboos, rituals, and other social tools to reinforce sustainable life choices; others may lean more on institutions, laws, and technologies. But regardless of which tools are used, and the specific result, there would be common themes across sustainable cultures. Just as a consumerism paradigm encourages people to define their well-being through their consumption patterns, a sustainability paradigm would work to find an alternative set of aspirations and reinforce this through cultural institutions and drivers.

Ecological restoration would be a leading theme. It should become "natural" to find value and meaning in life through how much a person helps restore the planet rather than how much that individual earns, how large a home is, or how many gadgets someone has.

Equity would also be a strong theme. As it is the richest who have some of the largest ecological impacts, and the very poorest who often by necessity are forced into unsustainable behaviors like deforestation in a search for fuelwood, more equitable distribution of resources within society could help to curb some of the worst ecological impacts. Recent research also shows that societies that are more equitable have less violence, better health, higher literacy levels, lower incarceration rates,

less obesity, and lower levels of teen pregnancy—all substantial bonus dividends that would come with cultivating this value.[49]

More concretely, the role of consumption and the acceptability of different types of consumption could be altered culturally as well. Again, while the exact vision of this will vary across cultural systems, three simple goals should hold true universally.

First, consumption that actively undermines well-being needs to be actively discouraged. The examples in this category are many: consuming excessive processed and junk foods, tobacco use, disposable goods, and giant houses that lead to sprawl and car dependency and to such social ills as obesity, social isolation, long commutes, and increased resource use. Through strategies such as government regulation of choices available to consumers, social pressures, education, and social marketing, certain behaviors and consumption choices can be made taboo. At the same time, creating easy access to healthier alternatives is important—such as offering affordable, easily accessible fruits and vegetables to replace unhealthy foods.[50]

Second, it will be important to replace the private consumption of goods with public consumption, the consumption of services, or even minimal or no consumption when possible. By increasing support of public parks, libraries, transit systems, and community gardens, much of the unsustainable consumption choices today could be replaced by sustainable alternatives—from borrowing books and traveling by bus instead of by car to growing food in shared gardens and spending time in parks.

The clearest example of this is transportation. Reorganizing infrastructure to support walkable neighborhoods and public transit could lead to a dramatic reduction in road transportation—which pollutes locally, contributes about 17 percent to total greenhouse gas emissions, and leads to 1.3 million deaths from accidents each year. The centrality of

Back for more: Factory farm freedom fighters from The Meatrix II.

cars is a cultural norm, not a natural fact—cultivated over decades by car interests. But this can once again be redirected, extracting cars from cities, as Masdar in Abu Dhabi, Curitiba in Brazil, Perth in Australia, and Hasselt in Belgium have already started to demonstrate. For example, the Hasselt city council, facing rapid growth in car usage and budget shortfalls, decided in the mid-1990s to bolster the city's public transit system and make it free for all residents instead of building another expensive ring road. In the 10 years since then, bus ridership has jumped 10-fold, while traffic has lessened and city revenues have increased from an enlivened city center.[51]

Third, goods that do remain necessary should be designed to last a long time and be "cradle to cradle"—that is, products need to eliminate waste, use renewable resources, and be completely recyclable at the end of their useful lives. As Charles Moore, who has fol-

lowed the routes of plastic waste through oceans, explains, "Only we humans make waste that nature can't digest," a practice that will have to stop. The cultivation of both psychological and physical obsolescence will need to be discouraged so that, for example, a computer will stay functional, upgradable, and fashionable for a decade rather than a year. Rather than gaining praise from friends for owning the newest phone or camera, having an "old faithful" that has lasted a dozen years will be celebrated.[52]

Having a vision of what values, norms, and behaviors should be seen as natural will be essential in guiding the reorientation of cultures toward sustainability. Of course, this cultural transformation will not be easy. Shifting cultural systems is a long process measured in decades, not years. Even consumerism, with sophisticated technological advances and many devoted resources, took centuries to become dominant. The shift to a culture of sustainability will depend on powerful networks of cultural pioneers who initiate, champion, and drive forward this new, urgently needed paradigm. (See Box 2.)[53]

As the spread of consumerism also demonstrates, leading cultural institutions can be harnessed by specific actors and can play a central role in redirecting cultural norms—whether government, the media, or education.

The good news is that this process has already started, as discussed in the 25 articles that follow this chapter. Significant efforts are being undertaken to redirect societies' cultural orientation by harnessing six powerful institutions: education, business, government, and the media, which have played such powerful roles in driving consumerism, plus social movements and sustainable traditions, both old and new.

In the realm of education, there are early signs that every aspect is being transformed—from preschool to the university, from the museum to the school lunch menu. The very act of walking to and from school is being used to teach children to live sustainably, as "walking buses" in Italy, New Zealand, and elsewhere demonstrate. In Lecco, Italy, for example, 450 elementary school students walk with a "driver" and volunteering parents along 17 routes to 10 different schools each day. There are no school buses in the city. Since their creation in 2003, these "piedibuses" have prevented over 160,000 kilometers of driving and thus have reduced carbon emissions and other auto pollutants. Along with reducing the ecological impact of children's commutes, the piedibuses teach road safety (in a supervised setting), provide exercise, and help children connect with nature on the way to school.[54]

The basic role of business is also starting to be readdressed. Social enterprises are challenging the assumption that profit is the primary or even sole purpose of business. More businesses—from the Grameen Bank in Bangladesh to a restaurant chain in Thailand called Cabbages and Condoms—are putting their social missions front and center, helping people while being financially successful as well. New corporate charters—like the B Corporation (the B stands for Benefit)—are even being designed to ensure that businesses over time are legally bound to consider the well-being of Earth, workers, customers, and other stakeholders as they make business decisions.[55]

In government, some innovative shifts are taking place. A long-standing government role known as "choice editing," in which governments encourage good choices while discouraging bad ones, is being harnessed to reinforce sustainable choices—everything from questioning perverse subsidies to outright bans of unsustainable technologies like the incandescent lightbulb. And more than that, entire ideas are being reassessed, from security to law. New concepts like Earth jurisprudence, in which the Earth community has fundamental rights that human laws must incorporate, are starting to take hold. In September

Box 2. The Essential Role of Cultural Pioneers

Considering that consumerism is such a powerful force and that the majority of resources and wealth are still overwhelmingly being used to stimulate it, how realistic is it to think that the pattern can shift? James Davison Hunter's analysis of how cultures change is instructive. As Hunter, the Director of the Institute for Advanced Studies in Culture at the University of Virginia, explains, cultural change can best be understood not through the Great Man approach (whereby heroic individuals redirect the course of history), but through the Great Network approach. "The key actor in history is not individual genius but rather the network."

When networks come together, they can change history. But not always. Change depends on "overlapping networks of leaders" of similar orientation and with complementary resources (whether cultural clout, money, political power, or other assets) acting "in common purpose." Networks can spread many ideas, whether consumption patterns, habits, political views, or even a new cultural paradigm.

But as Hunter notes, as culture is driven by institutions, success will depend on pulling ideas of sustainability into the center of these institutions, not allowing them to remain on the periphery. This means that as individuals internalize new norms and values personally, they also need to actively spread these ideas along their networks. They need to bring these ideas directly to the center of leading human institutions—spreading them through all available vehicles—so that others adopt this orientation and use their own leadership capacities to spread it even further. Like brand agents who now volunteer to surreptitiously promote the newest consumer product, individuals who recognize the dangerous ecological and social disruptions arising from unsustainable consumerism need to mobilize their networks to help spread a new paradigm. These networks, tapping whatever resources they have—financial, cultural, political, or familial—will play essential roles in pioneering a new cultural orientation.

The story of the documentary *The Age of Stupid* illustrates this point. The filmmakers raised funds from small investments by friends and supporters, and they marketed the film and organized 600 showings in over 60 countries by tapping into a global network of concerned individuals. They then channeled the momentum of the film to build a climate change campaign. This campaign, 10:10, encourages people to commit to reduce their carbon emissions by 10 percent in 2010 and to mobilize policymakers to do the same. By October 2009, some 900 businesses, 220 schools, 330 organizations, and 21,000 individuals had signed the 10:10 pledge.

And if all these networks of pioneers fail? As scientist James Lovelock notes, "Civilization in its present form hasn't got long." Consumerism—due to its ecological impossibility—cannot continue much longer. The more seeds sown by cultural pioneers now, the higher the probability that the political, social, and cultural vacuum created by the decline of consumerism will be filled with ideas of sustainability as opposed to other less humanistic ideologies.

Source: See endnote 53.

2008, Ecuador even incorporated this into its new constitution, declaring that "Nature or Mother Earth, where life is reproduced and exists, has the right to exist, persist, maintain and regenerate its vital cycles, structures, functions and its evolutionary processes" and that "every person, community, and nation will be able to demand the recognition of nature's rights before public institutions."[56]

Film, the arts, music, and other forms of

media are all starting to draw more attention to sustainability. Even a segment of the marketing community is mobilizing to use the knowledge of the industry to persuade people to live sustainably. These "social marketers" are creating ads, videos for the Internet, and campaigns to drive awareness about issues as diverse as the dangers of smoking, the importance of family planning, and the problems associated with factory farming. One social marketing campaign by Free Range Studios, *The Meatrix*, spoofed the global blockbuster movie *The Matrix* by following a group of farm animals as they rebel against factory farms and the ecological and social ills these operations cause. This generally unpalatable message, treated in a humorous way, spread virally across the Internet. It has reached an estimated 20 million viewers to date while costing only $50,000, a tiny fraction of what a 30-second TV ad would have cost to reach an audience of the same size.[57]

A host of social movements are starting to form that directly or indirectly tackle issues of sustainability. Hundreds of thousands of organizations are working, often quietly on their own and unknown to each other, on the many essential aspects of building sustainable cultures—such as social and environmental justice, corporate responsibility, restoration of ecosystems, and government reform. "This unnamed movement is the most diverse movement the world has ever seen," explains environmentalist Paul Hawken. "The very word movement I think is too small to describe it." Together these have the power to redirect the momentum of consumerism and provide a vision of a sustainable future that appeals to everyone. Efforts to promote working less and living more simply, the Slow Food movement, Transition Towns, and ecovillages are all inspiring and empowering people to redirect both their own lives and broader society toward sustainability.[58]

Finally, cultural traditions are starting to be reoriented toward sustainability. New eco-friendly ways to celebrate rituals are being established, for instance, and are becoming socially acceptable. Family size norms are starting to shift. Lost traditions like the wise guidance of elders are being rediscovered and used to support the shift to sustainability. And religious organizations are starting to use their mighty influence to tackle environmental issues—printing *Green Bibles*, encouraging their congregations to conserve energy, investing institution funds responsibly, and taking a stance against abuses of Creation, such as razing forests and blowing up mountaintops for coal.[59]

Perhaps in a century or two, extensive efforts to pioneer a new cultural orientation will no longer be needed as people will have internalized many of these new ideas, seeing sustainability—rather than consumerism—as "natural." Until then, networks of cultural pioneers will be needed to push institutions to proactively and intentionally accelerate this shift. Anthropologist Margaret Mead is often quoted as saying: "Never doubt that a small group of thoughtful, committed citizens can change the world. Indeed, it's the only thing that ever has." With many interconnected citizens energized, organized, and committed to spreading a sustainable way of life, a new cultural paradigm can take hold—one that will allow humanity to live better lives today and long into the future.[60]

Traditions Old and New

Countless choices in human lives are reinforced, driven by, or stem from traditions, whether religious traditions, rituals, cultural taboos, or what people learn from elders and their families. Taking advantage of these traditions and in some cases reorienting them to reinforce sustainable ways of life could help make human societies a restorative element of broader ecological systems. As many cultures throughout history have found, traditional ways can often help enhance rather than undermine sustainable life choices.

This section considers several important traditions in people's lives and in society. Gary Gardner of Worldwatch suggests that religious organizations, which cultivate many of humanity's deepest held beliefs, could play a central role in cultivating sustainability and deterring consumerism. Considering the financial resources of these bodies, their moral authority, and the fact that 86 percent of the people in the world say they belong to an organized religion, getting religions involved in spreading cultures of sustainability will unquestionably be essential.[1]

Rituals and taboos play an important role in human lives and help reinforce norms, behaviors, and relationships. So Gary Gardner also looks at rites of passage, holidays, political rituals, and even daily actions that can be redirected from moments that stimulate consumption to those that reconnect people with the planet and remind them of their dependence on Earth for continued well-being.

Traditions shape not just day-to-day activities but major life choices, such as how many children to have. Tapping into traditions—families' influence, religious teachings, and social pressures—to shift family size norms to more sustainable levels will be essential in global efforts to stabilize population growth. Robert Engelman of Worldwatch points out that the prerequisite of this will be to ensure that women have the ability to control their reproductive choices and that their families and governments let them make these choices in ways that respect their decisions.

Another important and unfortunately diminishing force for sustainability is the wisdom of elders. Through their long lives and breadth of experience, elders traditionally held a place of respect in communities and served as knowledge keepers, religious leaders, and shapers of community norms. These roles, however, have weakened as consumerism and its subsequent celebration of youth and rejection of tradition have spread across the planet. Recognizing the power of elders and taking advantage of all they know, as Judi Aubel of the

Grandmother Project describes, can be an important tool in cultivating traditions that reinforce sustainable practices.

Finally, one long-lived tradition that has been dramatically altered in the past several generations is farming. Albert Bates of The Farm and Toby Hemenway of Pacific University describe how sustainable societies will depend on sustainable agricultural practices—systems in which farming methods no longer deplete soils and pollute the planet but actually help to replenish soils and heal scarred landscapes while providing healthy food and livelihoods.

Several Boxes in these articles also discuss important traditions, including the need for ethical systems to internalize humanity's dependence on Earth's systems, the value of rekindling an understanding of geologic-scale time, and the importance of reorienting dietary norms to encourage healthy and sustainable food choices.

These are just some of the many traditions that need to be critically examined and recalibrated to reflect a changing reality—one in which 6.8 billion people live on Earth, another 2.3 billion are projected to join by 2050, and the ecological systems on which humanity depends are under serious strain. Cultures in the past have also faced ecological crises. Some, like the Rapanui of Easter Island, failed to alter their traditions. The Rapanui continued, for example, to dedicate too many resources to their ritual building of Moai statues—until their society buckled under the strain and Easter Island's population collapsed. Others have been more like the Tikopians, who live on a small island in the southwestern Pacific Ocean. When they saw the dangers they faced as ecological systems became strained, they made dramatic changes in social roles, family planning strategies, and even their diet. Recognizing the resource-intensive nature of raising pigs, for instance, they stopped raising them altogether. As a result, Tikopia's population stayed stable and continues to thrive today.[2]

—Erik Assadourian

Engaging Religions to Shape Worldviews

Gary Gardner

When Pan Yue, Vice-Minister of China's Ministry of Environmental Protection, wants to advance environmentalism these days, he often reaches for an unusual tool: China's spiritual heritage. Confucianism, Taoism, and Buddhism, says Pan, can be powerful weapons in "preventing an environmental crisis" because of each tradition's respect for nature. Mary Evelyn Tucker, a Confucian scholar at Yale University, elaborates: "Pan realizes that the ecological crisis is also a crisis of culture and of the human spirit. It is a moment of re-conceptualizing the role of the human in nature."[1]

Religious groups have responded with interest to Pan's overtures. In October 2008, a group of Taoist masters met to formulate a formal response to climate change, with initiatives ranging from solar-powered temples to a Taoist environmental network. Inspiration came from the Taoist concept of yin and yang, the interplay of opposites to create a balanced whole, which infuses the climate crisis with transcendent meaning. "The carbon balance between Earth and Sky is off-kilter," explains a U.N. official who attended the meeting, interpreting the Taoist view. "It is…significant that the current masters of Taoism in China have started to communicate precisely through this ancient yet new vocabulary."[2]

The Chinese Taoists are not alone in their activism. Bahá'ís, Christians, Hindus, Jews, and Muslims—encouraged by a partnership of the United Nations and the Alliance for Religions and Conservation (a U.K. nonprofit)—developed seven-year climate and environment plans that were announced in November 2009, just before the start of the U.N. climate conference in Copenhagen. The plans are the latest religious efforts to address the sustainability crises of our time, including climate change, deforestation, water scarcity, and species loss. By greening their activities and uncovering or re-emphasizing the green dimensions of sacred texts, religious and spiritual groups are helping to create sustainable cultures.[3]

How influential such efforts will be is unclear—in most faiths, environmental activism generally involves a small minority. But in principle, religious people—four out of every five people alive today identify themselves as this—could become a major factor in forging new cultures of sustainability. There is plenty of precedent. The anti-apartheid and U.S. civil rights movements, the Sandinista revolution in Nicaragua, the Jubilee 2000

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debt-reduction initiative, the nuclear-freeze initiative in the United States in the 1980s—all these featured significant input and support from religious people and institutions. And indigenous peoples, drawing on an intimate and reciprocal relationship with nature, help people of all cultures to reconnect, often in a spiritual way, with the natural world that supports all human activity.[4]

The Greening of Religion

Over the past two decades, the indicators of engagement on environmental issues by religions and spiritual traditions have grown markedly. And opinion polls reveal increased interest in such developments. The World Values Survey, a poll of people in dozens of countries undertaken five times since the early 1980s, reports that some 62 percent of people worldwide feel it is appropriate for religious leaders to speak up about environmental issues, suggesting broad latitude for religious activism.[5]

More specific data from the United States suggest that faith communities are potentially an influential gateway to discussions about environmental protection. A 2009 poll found that 72 percent of Americans say that religious beliefs play at least a "somewhat important" role in their thinking about the stewardship of the environment and climate change.[6]

Another marker of the cultural influence of religious and spiritual traditions is the emergence of major reference works on religion and sustainability, giving the topic added legitimacy. Over the past decade, an encyclopedia, two journals, and a major research project on the environmental dimensions of 10 world religions have documented the growth of religions in the environmental field. (See Table 4.) Dozens of universities now offer courses on the religion/sustainability nexus, and the 2009 Parliament of the World's Religions had major panels on the topic.[7]

Table 4. Reference Works on Religion and Nature

Initiative	Date Appeared	Description
"Religions of the World and Ecology" Project	1995–2005	A Harvard-based research project that produced 10 volumes, each devoted to the relationship between a major world religion and the environment
Encyclopedia of Religion and Nature	2005	A 1,000-entry reference work that explores relationships among humans, the environment, and religious dimensions of life
The Spirit of Sustainability	2009	One volume in the 10-volume *Berkshire Encyclopedia of Sustainability*, examining the values dimension of sustainability through the lens of religions
Green Bible	2008	The New Revised Standard Version, with environmentally oriented verses in green and with essays from religious leaders about environmental topics; printed on recycled paper using soy-based ink
Worldviews: Global Religions, Culture, and Ecology and *Journal for the Study of Religion, Nature, and Culture*	1995, 1996	Journals devoted to the linkages among the spheres of nature, spirit, and culture

Source: See endnote 7.

Religious activism on behalf of the environment is now common—in some cases, to the point of becoming widespread, organized, and institutionalized. Three examples from the realms of water conservation, forest conservation, and energy and climate illustrate this broad-based impact.

First, His All Holiness, Patriarch Bartholomew, ecumenical leader of more than 300 million Orthodox Christians, founded Religion, Science and the Environment (RSE) in 1995 to advance religious and scientific dialogue around the environmental problems of major rivers and seas. RSE has organized shipboard symposia for scientists, religious leaders, scholars, journalists, and policymakers to study the problems of the Aegean, Black, Adriatic, and Baltic Seas; the Danube, Amazon, and Mississippi Rivers; and the Arctic Ocean.[8]

In addition to raising awareness about the problems of specific waterways, the symposia have generated initiatives for education, cooperation, and network-building among local communities and policymakers. Sponsors have included the Prince of Wales; attendees include policymakers from the United Nations and World Bank; and collaborators have included Pope John Paul II, who signed a joint declaration with Patriarch Bartholomew on humanity's need to protect the planet.[9]

Second, "ecology monks"—Buddhist advocates for the environment in Thailand—have taken stands against deforestation, shrimp farming, and the cultivation of cash crops. In several cases they have used a Buddhist ordination ritual to "ordain" a tree in an endangered forest, giving it sacred status in the eyes of villagers and spawning a forest conservation effort. One monk involved in tree ordinations has created a nongovernmental organization to leverage the monks' efforts by coordinating environmental activities of local village groups, government agencies, and other interested organizations.[10]

Third, Interfaith Power and Light (IPL), an initiative of the San Francisco–based Regeneration Project, helps U.S. faith communities green their buildings, conserve energy, educate about energy and climate, and advocate for climate and energy policies at the state and federal level. Led by Reverend Sally Bingham, an Episcopal priest, IPL is now active in 29 states and works with 10,000 congregations. It has developed a range of innovative programs to help faith communities green their work and worship, including Cool Congregations, which features an online carbon calculator and which in 2008 awarded $5,000 prizes to both the congregation with the lowest emissions per congregant and the congregation that reduced emissions by the greatest amount.[11]

These and other institutionalized initiatives, along with the thousands of individual grassroots religious projects at congregations worldwide—from Bahá'í environmental and solar technology education among rural women in India to Appalachian faith groups' efforts to stop mountaintop mining and the varied environmental efforts of "Green nuns"—suggest that religious and spiritual traditions are ready partners, and often leaders, in the effort to build sustainable cultures.[12]

Silence on False Gods?

In contrast to their active involvement in environmental matters, the world's religious traditions seem to hold a paradoxical position on consumerism: while they are well equipped to address the issue, and their help is sorely needed, religious involvement in consumerism is largely limited to occasional statements from religious leaders.

Religious warnings about excess and about excessive attachment to the material world are legion and date back millennia. (See Table 5.) Wealth and possessiveness—key features of a consumer society—have long been linked by religious traditions to greed, corruption, selfishness, and other character flaws. Moreover,

Table 5. Selected Religious Perspectives on Consumption

Faith	Perspective
Bahá'í Faith	"In all matters moderation is desirable. If a thing is carried to excess, it will prove a source of evil." (Bahá'u'lláh, *Tablets of Bahá'u'lláh*)
Buddhism	"Whoever in this world overcomes his selfish cravings, his sorrow fall away from him, like drops of water from a lotus flower." (*Dhammapada*, 336)
Christianity	"No one can be the slave of two masters....You cannot be the slave both of God and money." (Matthew, 6:24)
Confucianism	"Excess and deficiency are equally at fault." (*Confucius*, XI.15)
Hinduism	"That person who lives completely free from desires, without longing...attains peace." (*Bhagavad Gita*, II.71)
Islam	"Eat and drink, but waste not by excess: He loves not the excessive." (*Qur'an*, 7.31)
Judaism	"Give me neither poverty nor riches." (Proverbs, 30:8)
Taoism	"He who knows he has enough is rich." (*Tao Te Ching*)

Source: See endnote 13.

faith groups have spiritual and moral tools that can address the spiritual roots of consumerism—including moral suasion, sacred writings, ritual, and liturgical practices—in addition to the environmental arguments used by secular groups. And local congregations, temples, parishes, and ashrams are often tight-knit communities that are potential models and support groups for members interested in changing their consumption patterns.[13]

Moreover, of the three drivers of environmental impact—population, affluence, and technology—affluence, a proxy for consumption, is the arena in which secular institutions have been least successful in promoting restraint. Personal consumption continues upward even in wealthy countries, and consumer lifestyles are spreading rapidly to newly prospering nations. Few institutions exist in most societies to promote simpler living, and those that do have little influence. So sustainability advocates have looked to religions for help, such as in the landmark 1990 statement "Preserving and Cherishing the Earth: An Appeal for Joint Commitment in Science and Religion" led by Carl Sagan and signed by 32 Nobel Laureates.[14]

Despite the logic for engagement, religious intervention on this issue is sporadic and rhetorical rather than sustained and programmatic. It is difficult to find religious initiatives that promote simpler living or that help congregants challenge the consumerist orientation of most modern economies. (Indeed, an extreme counterexample, the "gospel of prosperity," encourages Christians to see great wealth and consumption as signs of God's favor.) Simplicity and anti-consumerism are largely limited to teachings that get little sustained attention, such as Pope Benedict's July 2009 encyclical, *Charity in Truth*, a strong statement on the inequities engendered by capitalism and the harm inflicted on both people and the planet. Or simplicity is practiced by those who have taken religious vows, whose commitment to this lifestyle—while often respected by other people—is rarely put forth as a model for followers.[15]

Advocating a mindful approach to consumption could well alienate some of the faith-

ful in many traditions. But it would also address directly one of the greatest modern threats to religions and to spiritual health: the insidious message that the purpose of human life is to consume and that consumption is the path to happiness. Tackling these heresies could nudge many faiths back to their spiritual and scriptural roots—their true source of power and legitimacy—and arguably could attract more followers over the long run.

Contributions to a Culture of Sustainability

Most religious and spiritual traditions have a great deal to offer in creating cultures of sustainability.

Educate about the environment. As religious traditions embrace the importance of the natural environment, it makes sense to include ecological instruction in religious education—just as many Sunday Schools include a social justice dimension in their curricula. Teaching nature as "the book of Creation," and environmental degradation as a sin, for example—positions adopted by various denominations in recent years—is key to moving people beyond an instrumentalist understanding of the natural world.[16]

Educate about consumption. In an increasingly "full world" in which human numbers and appetites press against natural limits, introducing an ethic of limited consumption is an urgent task. Religions can make a difference here: University of Vermont scholar Stephanie Kaza reports, for example, that some 43 percent of Buddhists surveyed at Buddhist retreat centers were vegetarians, compared with 3 percent of Americans overall. Such ethical influence over consumption, extended to all wisdom traditions and over multiple realms in addition to food, could be pivotal in creating cultures of sustainability. (See Box 3.)[17]

Educate about investments. Many religious institutions avoid investments in weapons, cigarettes, or alcohol. Why not also steer funds toward sustainability initiatives, such as solar power and microfinance (the *via positiva*, in the words of the Archbishop of Canterbury)? This is what the International Interfaith Investment Group seeks to do with institutional religious investments. In addition, why not stress the need for personal portfolios (not just institutional ones) to be guided ethically as well? In the United States alone the value of investment portfolios under professional management was more than $24 trillion in 2007, only 11 percent of which was socially responsible investment.[18]

Express the sacredness of the natural world in liturgies and rituals. The most important assets of a faith tradition are arguably the intangible ones. Rituals, customs, and liturgical expressions speak to the heart in a profound way that cognitive knowledge cannot. Consider the power of the Taoist yin and yang framing of climate change, or of Christian "carbon fasts" at Lent, or of the Buddhist, Hindu, and Jain understanding of *ahimsa* (non-harming) as a rationale for vegetarianism. How else might religious and spiritual traditions express sustainability concerns ritualistically and liturgically?

Reclaim forgotten assets. Religious traditions have a long list of little-emphasized economic teachings that could be helpful for building sustainable economies. These include prohibitions against the overuse of farmland and pursuit of wealth as an end in itself, advocacy of broad risk-sharing, critiques of consumption, and economies designed to serve the common good. (See Table 6.) Much of this wisdom would be especially helpful now, as economies are being restructured and as people seem open to new rules of economic action and a new understanding of ecological economics.[19]

Coming Home

Often painted as conservative and unchanging institutions, many religions are in fact rapidly embracing the modern cause of environmen-

Box 3. A Global Ecological Ethic

The modern global ecocrisis is a strong signal that "environmentally at least, all established ethics are inadequate," in the words of ethicists Richard Sylvan and David Bennett. Most ethical systems today are indifferent to the steady degradation of natural systems and need to be reformed or replaced. Ecological ethics is a complementary ethical system that gives the natural world a voice in ethical discourse.

A specifically ecological ethic is "ecocentric" (perceiving and protecting value in all of nature), not "anthropocentric" (restricting value to humanity alone). It recognizes that humans are only a part of life on Earth, that humans need the rest of the planet and its inhabitants vastly more than they need humans, and that there is an ethical dimension to all human relationships with the planet. Indeed, a truly ecocentric ethic recognizes that in certain situations, the needs or rights of Earth or its other inhabitants take precedence over purely or narrowly human ones.

An ecological ethic is distinct from ethics rooted in enlightened human self-interest, the basis for virtually all ethical philosophies until now. Anthropocentric ethics encourages rather than counters the human inclination toward short-termism, greed, and limited sympathies. It also denies any responsibility for the effects of human behavior on the millions of other species and living individuals on this planet.

Suppose, for example, that a company wants to cut down a forest of old-growth hardwood trees and convert them into paper products. Company officials argue that local jobs depend on the logging, that the public needs the logs for paper and wood products, that the old-growth trees can be replaced by purpose-grown ones that are just as good, and so on. This is anthropocentric ethics at work.

An argument based on ecological ethics would assert that undisturbed trees are more useful to society because of their ecological value—they stabilize the climate, air, and soil upon which people ultimately depend. Furthermore, it would show that an old-growth forest is vastly richer (in terms of biodiversity) than a planted monoculture and can never, as such, be replaced; that it has value in and of itself regardless of its use-value to humans; and that its conversion into, say, cardboard and toilet paper would be despicable or even mad. When this full toolbox of arguments is given standing, the ecological point of view has a decent chance of prevailing. The paradox is that ecological ethics, though infused with nonhuman dimensions, greatly increases the likelihood of humanity's survival.

The prospects for institutionalizing ecological ethics may be growing as humanity recognizes its radical dependence on the environment. To advance the cause will require work on many fronts. To begin, it will be necessary to replace the sense of self as consumer with a sense of self as green citizen. This implies developing some limits to consumption—fewer disposable items, for example.

It will also require appreciating and adopting many of the principles emerging from "traditional ecological knowledge"—local or bioregional ecological wisdom, spiritual values, ritual practices, and ethics—that has sustained traditional peoples for millennia. Where such knowledge survives, it must be protected and encouraged; where it does not, it must be rediscovered and re-embodied in "invented traditions" that re-root humans in the natural world.

Finally, developing an ecological ethics will require the help of the world's spiritual and religious traditions, which are highly influential in shaping the ethical sensibilities of a large share of humanity.

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Source: See endnote 17.

Table 6. Economic Precepts of Selected Religious and Spiritual Traditions

Economic Teaching or Principle	Description
Buddhist economics	Whereas market economies aim to produce the highest levels of production and consumption, "Buddhist economics" as espoused by E. F. Schumacher focuses on a spiritual goal: to achieve enlightenment. This requires freedom from desire, a core driver of consumerist economies but for Buddhists the source of all suffering. From this perspective, consumption for its own sake is irrational. In fact, the rational person aims to achieve the highest level of well-being with the least consumption. In this view, collecting material goods, generating mountains of refuse, and designing goods to wear out—all characteristics of a consumer economy—are absurd inefficiencies.
Catholic economic teachings	At least a half-dozen papal encyclicals and countless bishops' documents argue that economies should be designed to serve the common good and are critical of unrestrained capitalism that emphasizes profit at any cost. The July 2009 encyclical *Charity in Truth* is a good recent example.
Indigenous economic practices	Because indigenous peoples' interactions with nature are relational rather than instrumental, resource use is something done with the world rather than to the world. So indigenous economic activities are typically characterized by interdependence, reciprocity, and responsibility. For example, the Tlingit people of southern Alaska, before harvesting the bark of cedar trees (a key economic resource), make a ritual apology to the spirits of the trees and promise to use only as much as needed. This approach creates a mindful and minimalist ethic of resource consumption.
Islamic finance	Islamic finance is guided by rules designed to promote the social good. Because money is intrinsically unproductive, Islamic finance deems it ethically wrong to earn money from money (that is, to charge interest), which places greater economic emphasis on the "real" economy of goods and services. Islamic finance reduces investment risk—and promotes financial stability—by pooling risk broadly and sharing rewards broadly. And it prohibits investment in casinos, pornography, and weapons of mass destruction.
Sabbath economics	The biblical books of Deuteronomy and Exodus declare that every seventh ("Sabbath") year, debts are to be forgiven, prisoners set free, and cropland fallowed as a way to give a fresh start to the poor and the imprisoned and to depleted land. Underlying these economic, social, and environmental obligations are three principles: extremes of consumption should be avoided; surplus wealth should circulate, not concentrate; and believers should rest regularly and thank God for their blessings.

Source: See endnote 19.

tal protection. Yet consumerism—the opposite side of the environmental coin, and traditionally an area of religious strength—has received relatively little attention thus far. Ironically, the greatest contribution the world's religions could make to the sustainability challenge may be to take seriously their own ancient wisdom on materialism. Their special gift—the millennia-old paradoxical insight that happiness is found in self-emptying, that satisfaction is found more in relationships than in things, and that simplicity can lead to a fuller life—is urgently needed today. Combined with the newfound passion of many religions for healing the environment, this ancient wisdom could help create new and sustainable civilizations.

Education's New Assignment: Sustainability

For a shift away from consumerism to occur, every aspect of education—from lunchtime and recess to class work and even the walk home—will need to be oriented on sustainability. Habits, values, preferences—all are shaped to a large degree in childhood. And throughout life, education can have a transformative effect on learners. Thus, harnessing this powerful institution will be essential in redirecting humanity toward cultures of sustainability.

No educational system is value-neutral, but all teach and are shaped by a certain set of ideas, values, and behaviors, whether that be consumerism, communism, religious beliefs, or sustainability. As UNESCO states, "Education is not an end in itself. It is a key instrument for bringing about the changes in the knowledge, values, behaviours and lifestyles required to achieve sustainability and stability within and among countries, democracy, human security and peace. Hence it must be a high priority to reorient educational systems and curricula towards these needs. Education at all levels and in all its forms constitutes a vital tool for addressing virtually all global problems relevant for sustainable development."[1]

The more sustainability can be integrated into existing school systems—whether at a Catholic school, a private university, or a public elementary school or through less-formal educational institutions such as museums, zoos, and libraries—the more people will internalize teachings of sustainability from an early age, and these ideas, values, and habits will become "natural." If education can be harnessed, it will be a powerful tool in bringing about sustainable human societies.

This section investigates a sampling of what is happening around the world as educators work to shift from a cultural pattern of consumerism to one of sustainability. Ingrid Pramling Samuelsson of Gothenburg University and Yoshie Kaga of UNESCO describe the formative role that early education can play in teaching children to live sustainably when effectively incorporating key environmental lessons into curricula. Susan Linn of the Campaign for a Commercial-Free Childhood focuses on how important it will be to reclaim childhood from marketers and provide children with unstructured and creative playtime that does not stimulate consumerist values or desires.

Kevin Morgan and Roberta Sonnino of the University of Cardiff explain that school meals are a particularly important part of the school day that could be better used to teach environmental awareness, while helping establish dietary norms that are healthy and sustainable. And David Orr of Oberlin College con-

siders the two important roles that universities play in reorienting learning on sustainability: teaching environmental thinking to students and modeling sustainability both for students and surrounding communities.

Included within these articles are several shorter discussions of other important developments: the benefits of getting children and adults back into nature, toy libraries that have started up in dozens of countries, the effort of one museum to become a center of sustainability education, the role of professional schools in cultivating a sustainability ethic, and the proposed Millennium Assessment of Human Behavior, which could be used to mobilize the academic community to investigate how best to shift human cultures.

Incorporating sustainability education into teacher training and school curricula and providing lifelong opportunities to learn about sustainability will be essential in cultivating societies that will thrive long into the future. The key now will be to expand programs like the ones described here and embed them deeply into leading educational institutions. This will help transform education's role from one that too often reinforces unsustainable consumer behaviors to one that helps to cultivate the knowledge essential to living sustainable lives.

—Erik Assadourian

Rethinking School Food: The Power of the Public Plate

Kevin Morgan and Roberta Sonnino

For the vast majority of children in industrial countries, school food is something that has to be endured rather than enjoyed—a rite of passage to an adult world where healthy eating is the exception, rather than the norm, as evidenced by the burgeoning problems of diet-related diseases. Millions of children in developing countries have to endure something far worse, of course, because school food is still conspicuous by its absence in many cases.

In parts of Europe, North America, and Africa, things are changing today. People have moved beyond debates on whether public bodies are capable of delivering a healthier school food service. The jury is in: it is indeed possible—because public bodies are already doing it. When properly deployed, public procurement—the power of purchase—can fashion a sustainable school food service that delivers social, economic, and environmental dividends while also promoting a culture of sustainability. Healthy school food is also generally associated with behavioral improvements, especially in terms of children's concentration levels and learning capacity.[1]

Although the power of purchase has been deployed to great effect to meet strategic priorities—most notably, to create military technologies in the United States or nuclear energy in France—it is rarely used for such prosaic things as fresh food for schools, hospitals, and extended care facilities. Fortunately, more and more people are beginning to realize that healthy eating must in itself be a strategic priority in order to truly value human health, social justice, and environmental integrity—the key principles of sustainable development.

The school food service is a litmus test of a society's political commitment to sustainable development because it caters to young and vulnerable people whose physical tastes and habits of thought are still being formed. But delivering a sustainable school food service is more challenging than it appears. Indeed, despite the stereotype of being a simple service, school food is part of a quite complex ecology in which many variables have to be synchronized. To be effective, school food reform requires changes throughout the system, given the interdependencies involved in the process that brings food from farm to fork.

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Creating New Generations of Knowledgeable Consumers

Being part and parcel of their communities, schools cannot solve societal problems on their own, especially when it comes to something as complex as people's dietary habits. In virtually every society where it has been broadcast, the "healthy eating" message has faced two formidable obstacles: it has been overwhelmed by the "junk food" message, which dwarfs it in terms of advertising spending, and the public health community has naively assumed that getting the right information to the public would be sufficient to induce cultural change.

A disposition for healthy eating is a socially acquired facility, the result of learning with family and friends at home and at school. A "whole-school" approach—one that embeds the healthy eating message into a wider educational package that stresses the positive links between food, fitness, health, and both physical and mental well-being—can have a positive influence on what children eat in and outside of school, and to that extent it plays a key role in fostering the demand for healthier food in schools.

Dylan Oliphant

Room for improvement: a high school cafeteria lunch in the U.S.

Crucially, though, the healthy eating ethos has to inform every aspect of the school environment—the classroom, the dining room, the vending machine, even the school grounds—to ensure that the landscape and the mind-set of the school are compatible and mutually reinforcing. Where it is fun, stimulating, and enabling, the whole-school approach can deliver handsome dividends even in the most challenging social environments, creating the single most important ingredient of a sustainable school food service: knowledgeable consumers who care about the origin of their food.

Fashioning Sustainable Food Chains through School Food Reform

Whereas the role of school meals in forging new generations of informed consumers is immediately evident, people do not necessarily think of schools as markets for quality food producers. Yet many countries are using school food reform as a tool to develop new supply chains that set a high premium on the use of "quality" food, which is generally equated with fresh, locally produced food.[2]

In the United States, securing food from local suppliers is one of the hallmarks of the Farm-to-School movement, which has been helping schools to reconnect with local food producers. So far more than 1,000 schools in 38 states are buying fresh products from local farms. "Home-grown school feeding" has also become a priority in many developing countries, where the World Food Programme of the United Nations has been trying to replace food imports (on which conventional school feeding programs were based) with locally grown foods. The chief aim of this revolutionary initiative, which has been especially successful in Brazil

and Ghana, is to create markets for local producers in the process of promoting the health and education of the children involved.[3]

Sustainable food systems are not wholly synonymous with local food systems. Although there is no reason to assume that locally produced food is inherently better than imports, there is no doubt that the demand for healthier school food creates important opportunities for economic development if local suppliers have the appropriate produce and the infrastructure to distribute it. Thus school food reform has an important role to play in creating new opportunities for small producers who have too often been marginalized, if not displaced, by globalization of the food system.[4]

Tapping the Power of Purchase

Public procurement is the most powerful instrument for creating a sustainable school food service, but its potential has been stymied in some countries by narrow interpretations of what constitutes "value for money." In cost-based contracting cultures, like those of the United Kingdom and the United States, the biggest barrier to sustainable procurement has been a systemic tendency for low cost to masquerade as best value—a tendency that procurement officers and catering managers often justify by referring to the wider regulatory context of their work. In Italy, in contrast, as described later, best value embodies cultural as well as financial attributes, allowing local authorities to take account of the qualitative features of the service when awarding contracts.

In the United Kingdom, European public procurement regulations have often been seen as a barrier to school food reform. But when the U.K. approach is compared with that traditionally adopted in Italy, which is subject to the same European Union (EU) regulations, it is clear that the problem is one of interpretation. Where the United Kingdom was conservative, Italy was bold; where the United Kingdom stressed value for money in the narrow economic sense, Italy sought values in the broadest sense of the term. The explanation for these divergent interpretations is to be found in the interplay of cultural values and political willpower, which in Italy's case sets a high premium on the creative procurement of produce that is strongly associated with seasonality and territoriality. In short, EU procurement rules are not barriers if public bodies have the competence and confidence to deploy the power of purchase within these rules.[5]

In the United States, too, procurement rules have been interpreted as a barrier, preventing school districts from purchasing locally produced food in the school lunch program. The U.S. Department of Agriculture interprets the rules very conservatively, claiming that school districts are not allowed to specify local geographic preferences when they issue their tenders—an interpretation that is fiercely contested by other legal experts. Nothing will do more to promote the cause of local school food procurement in the United States than a clarification of the regulations so that local sourcing is positively and explicitly encouraged by federal and state legislation.[6]

Pioneers of the School Food Revolution

Each of the reforms just described—the whole-school approach, the creation of sustainable food chains, and creative public procurement—is a major challenge in itself. But the biggest challenge of all is to synchronize the reforms so that they have a mutually reinforcing, synergistic effect. This is what the pioneers of school food reform have in common: they all recognize the ecological and interdependent character of the school food service.

Even though all over the world people are becoming increasingly aware of the role of

school food in promoting the objectives of sustainable development, two countries can be considered pioneers of the school food revolution: Scotland and Italy. Indeed, in these countries all three fundamental aspects of the school reform process have been taken into account, reflecting a new vision of the service that is beginning to transform cultural values at all stages of the school food chain—among children and their parents, school staff, procurement officers, suppliers, and policymakers.

Scotland pioneered the British school food revolution long before *Jamie's School Dinners*, a popular TV series that in 2006 widely exposed the general public to the problems of the British school meal service. By then Scotland had just ended the first stage of its school food reform, which included an investment of £63.5 million (some $104 million) to redesign the school meal service. This process started in 2002 with the publication of *Hungry for Success*, a report commissioned by the Scottish government that explicitly promoted the whole-school approach. In addition to emphasizing the need to echo the message of the classroom in the dining room, this seminal report introduced new nutrient-based standards to improve the quality of food served in schools and suggested that the school meal service was closer to a health rather than a commercial service.[7]

The rural county of East Ayrshire, in central Scotland, has gone farthest in implementing the government's recommendations. Making the most of the power of purchase gained through *Hungry for Success*, in 2004 East Ayrshire introduced a pilot scheme in one of its primary schools based on the use of fresh, organic, and local food. The initiative was so successful among children, parents, and the catering staff that one year later the Council decided to extend the reform to another 10 primary schools. Today, all primary schools in the county are involved in the program.[8]

Central to the process was the adoption of a creative procurement approach that aimed to help organic and small suppliers become involved in the school meal system. For example, some of the "straightness" guidelines for Class 1 vegetables were made more flexible to attract organic suppliers; the contract was divided into smaller lots to help smaller suppliers cope with the scale of the order; and award criteria were equally based on price and quality. At the same time, the Council actively worked to create a shared commitment to the ideals of the reform all across the food chain. Specifically, training sessions on nutrition and healthy eating were organized for catering managers and cooks. Farmers were invited into the classroom to explain where and how they produce food. Parents were also taken on board through a series of "healthy cooking tips demonstrations."[9]

In East Ayrshire, school food reform has delivered important outcomes from a sustainable development perspective. As a result of the Council's sourcing approach, food miles have been reduced by 70 percent and packaging waste has decreased. Small local suppliers have been provided with new market opportunities, while users' satisfaction with the service has increased significantly. A recent survey found that 67 percent of children think that school meals taste better, 88 percent of them like fresh food, and 77 percent of the parents believe that the scheme is a good use of the local council's money. Even more important perhaps, the school food revolution in this deprived rural county has created a new shared vision of sustainable development that is cutting across the realms of consumption, production, and procurement, challenging widespread misconceptions about the potential for procuring quality food.[10]

In Italy, the whole-school approach is traditionally embedded in the school meal service, which is considered an integral part of citizens' right to education and health. As a result, as noted earlier, best value there is not at all syn-

onymous with low cost; in fact, the qualitative characteristics of the service and its compatibility with the curriculum (specifically, local traditions) are always taken into account in the tendering process. Not surprisingly, then, Italian schools have been sourcing locally for decades, often complementing their emphasis on local products with a wide range of educational initiatives for children and their parents that emphasize the values of seasonality and territoriality. Unlike what happens in most other countries, these strategies are supported by the national government, which enacted a law in 1999 that explicitly promotes "the use of organic, typical and traditional products" in school and hospital canteens.[11]

When this law was passed, the city of Rome was governed by a Green Party administration that, like many others in Italy, was interested in the potential of organic catering in schools. What made the situation in Rome different from other cities was the size. Some 150,000 children who eat at school in Rome consume approximately 150 tons of food per day. To avoid the shock that such massive demand would have created on the organic food market, the city chose a progressive procurement approach. In the beginning, catering companies were required to supply only organic fruit and vegetables, but an incentive system was created for them to increase the range of organic products for schools. At the same time, award criteria were designed to stimulate bidders to improve the socio-environmental quality of the products and services offered—including, for example, criteria that reward initiatives to improve the eating environment for children or to provide products certified as Fair Trade (which are used as a tool to teach children the value of solidarity with developing countries).[12]

Like East Ayrshire, Rome understood the importance of creating a new collective culture of sustainability around school food. Contracted suppliers have been ensured a constant dialogue with city authorities through the creation of a permanent round table, which aims to foster "a shared willingness of going in a certain direction," as the director of one catering company explained. At the same time, they have been asked to introduce food education initiatives among service users, who have been given the opportunity to participate in the reform through Canteen Commissions. These consist of two parents who can inspect the school premises and provide feedback on children's reaction to the changes being introduced.[13]

Peiling Tan

Doing a better job? A high school lunch in Grenoble, France.

After years of efforts and continuous improvement, Rome is in the vanguard of the school food revolution. Today, 67.5 percent of the food served in the city's schools is organic, 44 percent comes from "bio-dedicated" food chains that focus exclusively on organic prod-

ucts, 26 percent is local, 14 percent is certified as Fair Trade, and 2 percent comes from social cooperatives that employ former prisoners or that work land confiscated from the Mafia. As the reform process continues to unfold, a new type of quality-based food system is beginning to emerge—and with it new cultural values that are educating civil society to the values and meanings of sustainability.[14]

From School Food to Community Food

The examples of Scotland and Italy demonstrate that properly designed and delivered school food reform can play a crucial role in creating new forms of "ecological citizenship" that lead people to think more critically about their interactions with the environment, engage practically with collective problems, and assume responsibility for their conduct. In simple terms, school food reform is creating new generations of knowledgeable consumer-citizens.[15]

Much more could be achieved if the power of purchase were to be harnessed across the entire spectrum of the public sector—in hospitals, nursing homes, colleges, universities, prisons, government offices, and the like. In the context of climate change and food security, extending the benefits of school food reform to larger, more significant social and spatial scales is more and more an imperative, not just an option.

Many cities around the world are beginning to move in this direction through the development of a range of food strategies that are designed to ensure access to healthy food for all citizens. As planners and policymakers begin to redesign the urban foodscape of cities like New York, London, Belo Horizonte, and Dar es Salaam, among others, new challenges continue to arise in the realms of infrastructural development, transport, land use, and citizens' education, to name just a few.[16]

In this context, one fundamental lesson can be learned from school food reform. If sufficient political will could be mustered for a new "ethic of care" that has a global as well as a local reach, as has happened in Rome and East Ayrshire, community food planning could play an invaluable role in promoting human health, social justice, and environmental integration—the hallmarks of sustainable development.

Business and Economy: Management Priorities

Business is not just a central component of the global economy, it is a leading driver of societies, cultures, and even the human imagination. And while today business is primarily shaping a cultural vision centered on consumerism, this vision could as readily be centered on sustainability—given new management priorities.

Priority number one will be to gain a better understanding of what the economy is for and whether perpetual growth is possible or even desirable. As environmentalist and entrepreneur Paul Hawken explains, "At present we are stealing the future, selling it in the present, and calling it gross domestic product. We can just as easily have an economy that is based on healing the future instead of stealing it."[1]

In this section, Robert Costanza, Joshua Farley, and Ida Kubiszewski of the Gund Institute for Ecological Economics first describe how redirecting the global economy is possible through a variety of means such as creating new sustainable economic metrics, expanding the commons sector, and mobilizing leading economic and governmental institutions.

Another key economic shift will be the better distribution of work and working hours among the global workforce, as Juliet Schor of Boston College describes. Right now, many people work excessive hours earning more money and converting that income into increased consumption—even as others search for work. Dividing work hours in a better way will not only address unemployment and provide more people with the means for a basic standard of living, it will free up time to enjoy life outside of the workplace. And it will reduce the amount of discretionary income people have, which at the moment encourages them to consume more than necessary.

Another priority will be to reassess the role of corporations. Consider their vast power and reach: in 2006, the largest 100 transnational corporations employed 15.4 million people and had sales of $7 trillion—the equivalent of 15 percent of the gross world product. A sustainable economic system will depend on convincing corporations, through an array of strategies, that conducting business sustainably is their primary fiduciary responsibility.[2]

Ray Anderson of Interface, Inc., Mona Amodeo of idgroup, and Jim Hartzfeld of InterfaceRAISE note that some corporations have already figured out the importance of a thriving Earth to their business and are working to put sustainability at the heart of their corporate cultures. Understanding how to shift business cultures and finding the resolve to do so will be an essential step in creating a

sustainable economic model.

Beyond the corporate system, there are opportunities to completely reinvent the purpose and design of business, also a key priority. Johanna Mair and Kate Ganly of IESE Business School describe social enterprises that are turning the mission of business upside down. Business does not have to be only or even primarily about profit, but profit can provide a means to finance a broader social mission. Social enterprises worldwide are addressing pressing social problems, from poverty to ecological decline, and are doing so profitably.

Local businesses are also starting to crop up, like pioneer species in disturbed ecosystems. As most corporations fail to respond to increasing concern for social and environmental injustices, people are creating local alternatives—from grocery stores and restaurants to farms and renewable energy utilities. Michael Shuman of the Business Alliance for Living Local Economies notes that these local enterprises can have improved environmental performance, treat workers better, provide healthier and more diverse products, and—in worst-case scenarios—provide a layer of resilience to global disruptions by being rooted locally. Moreover, the rise of social enterprises and local businesses should provide additional pressure to stimulate change within corporate cultures.

Throughout the section, Boxes describe other sustainable business innovations, such as redesigning manufacturing to be "cradle to cradle," a new corporate charter that integrates social responsibility directly into the legal code, and a carbon index for the financial market. There is also a Box that examines the absurdity of the concept of infinite economic growth.

Business is a powerful institution that will play a central role in our future—whether that future is an era of sustainability or an age of reacting to accelerating ecological decline. With a combination of reform of current interests and the growth of new socially oriented business models, the global economy can help avert catastrophe and instead usher in a sustainable golden age.

—Erik Assadourian

Changing Business Cultures from Within

Ray Anderson, Mona Amodeo, and Jim Hartzfeld

The current Industrial Age was born out of the Enlightenment and the unfolding understanding of humanity's ability to tap the power and expansiveness of nature. The mindset that was developed early in the Age was well adapted to its time, when there were relatively few people and nature seemed limitless. Unfortunately, this mindset is poorly adapted to the current reality of nearly 7 billion people and badly stressed ecosystems. A new, better-adapted worldview and global economy are being born today from a greater understanding of how to thrive within the frail limits of nature.

Vital to the transition of the economy is the very institution that serves as its primary engine: business and industry. To lead this shift, business must delve much deeper than just the array of eco or clean technologies that are in vogue, to the core beliefs that drive actions. While a few visionary companies have been founded on the principles of sustainability, most businesses will require radical change. In the coming decades, business models and mindsets must be fundamentally transformed to sustain companies' value to their customers, shareholders, and other stakeholders.

More and more organizations are turning to sustainability as a source of competitive advantage. Yet many companies are trapped and frustrated by their limited understanding of this challenge; many see it only as a set of technical problems to solve or a clever marketing campaign to organize. Perhaps the greatest danger is that these superficial approaches give companies a false sense of progress, which in the long run will very likely lead to their demise.

On the other hand, businesses that are willing to address change at the deeper cultural level have the opportunity to embrace a new paradigm built on the values of sustainability. Those willing to lead the way will reap the "first-mover" benefits, while supporting and accelerating the fundamental societal shifts that are becoming increasingly apparent. Every company's sustainability journey will be unique, but a basic road map, using what has been learned from pioneering companies and researchers, can help those that are interested in the journey to travel at a faster pace.[1]

Ray Anderson is founder and chairman of Interface, Inc. **Mona Amodeo** is president of idgroup, a consulting and creative firm on branding, organization change, and sustainability. **Jim Hartzfeld** is founder and managing director of InterfaceRAISE.

The Need for Transformational Change

At the societal, business, and personal levels, the understanding and adoption of sustainability practices is limited less by technical innovation than by people's inability to challenge outdated mindsets and change cultural norms. Paraphrasing Edwin Land, physicist Amory Lovins has observed that "invention is the sudden cessation of stupidity...[that is,] that people who seem to have had a new idea often have just stopped having an old idea."[2]

A company's rate of adoption of new ideas, and therefore business opportunities, can be increased significantly by understanding the stages of change and the strategic decisions needed to support the evolving belief systems necessary for culture change. Personal change of this magnitude rarely occurs overnight, and changing an organization is often an even longer process.

Much can be learned from businesses that have moved beyond surface-level change to fully embrace sustainability and in doing so have created deep changes within their organizational culture. Experience suggests that sustainability derives its greatest power and effect in organizations when it is deeply embraced as a set of core values that genuinely integrate economic prosperity, environmental stewardship, and social responsibility: profit, planet, and people.[3]

To achieve this degree of change, leaders must put forth bold visions—so bold that they take the breath away—and they must engage their organizations in different, deeper conversations about the purpose and responsibility of business to provide true value to both customers and society. Moreover, the whole enterprise must be proactively engaged in such a systemwide way that mental models become explicit, multiple stakeholder perspectives are incorporated into the process, and collective interaction yields new knowledge, structures, processes, practices, and stories that can drive the organization forward.

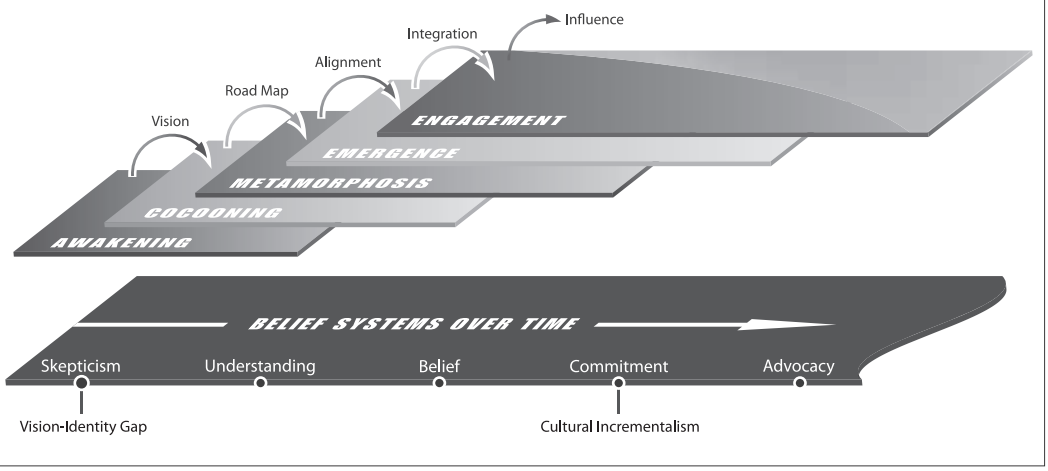
When organizations embrace sustainability in this way, it is fully woven into every facet of the enterprise. Sustainability becomes definitional, revealing itself in every decision—a strategic and emotional journey that enhances the entire enterprise. After all, can anyone really make "green" products in a "brown" company?[4]

A Framework for Culture Change

The U.S.-based global carpet manufacturer Interface, Inc. offers a valuable case study of a company that has embraced and achieved transformational change toward sustainability. Interface reports being only about 60 percent of the way toward achieving its Mission Zero 2020 goals, but the company has come far in its 15-year journey to sustainability. It has reduced net greenhouse gas emissions by 71 percent, water intensity by 74 percent, landfill waste by 67 percent, and total energy intensity by 44 percent. It has diverted 175 million pounds of old carpet from landfills, invented new carpet recycling technology, and sold 83 square kilometers of third-party certified, climate-neutral carpet. In the process, Interface has generated substantial business value in its brand and reputation, cost savings of $405 million, attraction and alignment of talent, and industry-leading product innovation.[5]

Interface's sustainability leadership has been recognized internationally in multiple Globescan surveys of "global sustainability experts," receiving the number one ranking in 2009. But the company's transition was not choreographed in advance. During the first decade of the journey, Interface went through five developmental phases of change, driven by key levers that propelled its progress. (See Figure 5.) Deep changes in the identity, values, and assumptions about "how we do things here" moved the company to a new view of purpose, performance, and profitability within the larger con-

Figure 5. Culture Change Model



text of environmental and social responsibility.[6]

The Interface model of cultural change represents a journey of the head and heart, facilitated by strategic decisions and deepening connections to the values of sustainability. These interacting factors closed the initial gap between the vision—a future sustainable company—and the actual unsustainable existing company, by incrementally transforming the culture through successive phases along a time continuum. As the company went through the phases of transformative change (awakening, cocooning, metamorphosis, emergence, and engagement), an evolution of belief systems also occurred, moving from skepticism to understanding, belief, commitment, and advocacy. This psychological progression worked in tandem with strategic decisions (vision, road map, alignment, integration, and influence) to create deep culture change.

Over time, the transformation can be envisioned as a dynamic process where new and ongoing connections, relationships, and networks come into being and flourish through an infusion of knowledge, wisdom, and grassroots experience. Early skepticism gives way to understanding as an organization confirms the validity of the values of sustainability, which in time comes through successes actually experienced. As the collective identity of the organization changes, new behaviors associated with these values are reinforced and become more embedded in the culture. Understanding is augmented by belief and commitment.

New ways of thinking, believing, and doing emerge incrementally as strategic decisions are confirmed, and sustainability becomes fully embraced as "the way we do things around here." This shifting paradigm produces innovations in technologies, sustainable business practices, and new leadership capacity, as well as a sense of pride, purpose, and commitment on the part of those associated with the organization. Externally, the organization realizes increasingly strong connections and levels of trust with its marketplace.

The Stages of Change

Awakening: defining the vision. To allow change to occur, a company must first be open to sensing and considering aberrant signals that may suggest or uncover new challenges or opportunities. The source of the signal can

be internal or external, subtle or cacophonous. Likewise, a company's awareness of the need to address sustainability can be stimulated in many ways, including inspired leadership, a grassroots internal uprising, a technical or physical challenge, or an unanticipated shock in the cost or availability of key resource inputs. At some point the magnitude of the emerging risks or opportunities become "real" enough to cause the organization to begin to seek more information and direction.

At Interface, the persistent and aggressive voice of a single customer caught the ear of the founder, Ray Anderson. At Walmart, the impetus was inspired leadership stimulated by a barrage of external challenges on multiple fronts. At Nike, it was the outrage sparked by a 1996 *LIFE* magazine article about child labor in Pakistan, which featured a photo of a 12-year-old boy surrounded by Nike-brand soccer balls he had been stitching. Other examples of external stimuli for increased sustainability awareness include Greenpeace's pressure on Electrolux and the Rainforest Action Network's pressure on Mitsubishi.[7]

Once a general direction is suggested, a small group of innovators or "scouts" may explore the magnitude of the problem and what it means to the organization and then propose a potential vision of the future. During this stage, it is important to suspend skepticism and engage the top leadership in a deep and honest exploration of the facets of sustainability—what it means to each person as well as to the organization. Investing the time, energy, and effort in individual and organizational reflection will establish the necessary tension to propel change and determine the level of commitment needed to move forward.

A natural sense of curiosity and the persistent ability to resist the pressures of the dominant paradigms (and existing structures) is important to allow new and unusual signals to penetrate and to overcome the natural response of defending the status quo. At this point, the leadership makes a go/no-go decision. A clear vision is created, and the process of expanding the engagement of others in the organization begins—with the leadership acting as the messenger, evangelist, teacher, and cheerleader.

At Interface, Ray Anderson was inspired to declare his vision of sustainability for the company after reading the groundbreaking 1993 book *The Ecology of Commerce*, which proposed a culture of business in which the natural world is allowed to flourish. Jeff Mezger, CEO of U.S. home construction company KB Home, recently directed his leadership team to explore what goals and commitments they should make toward sustainability, even in the teeth of the industry's historic downturn. In July 2008, he communicated this vision in the company's first sustainability report.[8]

At Walmart, CEO Lee Scott and members of his leadership team took a year to personally explore, challenge, read, and tour settings around the world, from the ecologically crippled state of Montana described in Jared Diamond's book *Collapse* to cotton fields in Turkey and an Interface carpet mill in Georgia. Only after that year of exploration did Scott announce the company's direction in a landmark speech in October 2005, "21st Century Leadership." Even while stating ambitious goals for Walmart—"to be supplied by 100 percent renewable energy, to create zero waste, and to sell products that sustain our resources and environment"—Scott admitted that he was not sure how to achieve them.[9]

Cocooning: creating the road map. With a vision defined, a company must then determine how to translate the vision into action. In addition to deeper planning and early prototypes, the learning of the awakening phase is taken deeper and shared more widely across the organization and beyond. The result is a road map of action that normally includes goals, timelines, resource allocation, and—most important—metrics.

During this stage, the company is engaged

in activities that further "awaken" people in the organization to sustainability—the problems, challenges, and opportunities—with the view that people will typically only defend and support that which they help build and create. Frequently, an organization's "whole" cannot be changed until the collective is assembled to work together to shape a new potential future. It is important at this point to tap into the organization's creative intelligence and its stakeholders through dialogue, collaborative inquiry, community building, and cutting-edge methods of change that support new ways of thinking and transforming.[10]

At Interface, Ray Anderson sought to simultaneously engage a wide range of his internal leadership team, who were already associated with the company's QUEST waste initiative, as well as the most visionary collection of external experts he could find, eventually named the EcoDream Team. Through an intense 18-month process, Interface's Seven Fronts initiative (later renamed Seven Faces of Mt. Sustainability) was identified and published in the company's first sustainability report in November 1996. The document laid out the sustainability challenge and proposed solutions in detail, with supporting metrics that outlined an extensive list of everything the company "takes, makes and wastes."

Nike, following the media storm created by the 1996 *LIFE* article, went rapidly into cocooning with its internal staff and external experts and commissioned various university studies—taking nearly two years to develop a code of conduct for labor and environmental practices. CEO Phil Knight unveiled the code at a widely publicized 1998 speech at the National Press Club in Washington, D.C.[11]

An extreme example of externally engaged cocooning is Walmart's Sustainable Value Networks and quarterly Milestone Meetings. Announced in December 2005, Walmart created 14 teams to address major product categories and cross-cutting issues such as waste, packaging, and transportation. A stunning facet of this period was the extent to which Walmart proactively engaged environmental groups and its suppliers. As evidence of the company's key words for the era, "collaborate and innovate," Walmart convened collective learning opportunities for the entire network. One early meeting included 800 attendees and began with Interface's "Global Village Exercise," where Ray Anderson and Jim Hartzfeld facilitated an interactive session highlighting global environmental and social conditions. In another meeting, Al Gore appeared at the screening of his film "An Inconvenient Truth," and U.S. evangelical leader Jim Ball spoke on the alignment of scripture and concern for the environment.[12]

Metamorphosis: aligning the organization. Once a well-defined road map and early prototypes are established, the hard process of driving widespread change in the company begins. As with a caterpillar's metamorphosis, the process will likely require the creative destruction of entrenched mindsets and processes. Sustainability cannot be a program confined to a specific grouping of staff. Instead, it must be broadly aligned, integrated, and institutionalized into corporate systems, structures, and processes.

This is a period of intense learning and experimentation. During this often messy time, it is important for the leadership to continually and consistently remind the organization of the vision, while at the same time meeting people where they are. Leaders should be prepared to support the push toward new innovations while maintaining a high tolerance for the associated risk of failure. Permission to fail is essential to empowering people to innovate at their best.[13]

Structures and programs that support organizational learning by rewarding and celebrating success will reinforce the organization's commitment and provide the motivation needed to keep people going. Providing the necessary

resources, both financial and human, is of paramount importance. And while there can be great power in telling the sustainability story to internal and external audiences, it is also critical that the story be authentic—not to let the "talk" get in front of the "walk." Outspoken commitment serves as a strong reinforcing mechanism for organizational members—a source of pride and pressure. Incorporating the sustainability story into marketing communications programs also creates increased marketplace recognition, trust, and connection.

At Interface, this process extended to all functions and regions of the company, including cascading dialogue with employees about dominant corporate values, as well as incentives and rewards. At Walmart, "metamorphosis" began with the creation in 2007 of the Personal Sustainability Project, designed to eventually engage all 1.8 million employees by connecting the company's sustainability journey to the personal lives of its employees. Taking it one step further, Walmart created a supplier "packaging" score card that gave clear direction to its more than 60,000 suppliers that the company sought to engage everyone it was connected with, and not just the few early innovators, in its sustainability journey.[14]

During this stage, companies often falter after gathering the low-hanging fruit associated with technical changes. But the metamorphosis stage can also reveal the payoff of the "consciousness-raising" work done during the cocooning stage. If individuals in the organization move beyond understanding to belief, the organization will progress beyond minor improvements or adjustments that have little impact on the core of the organization. As a result, new innovations will begin to emerge as members begin to dismantle existing paradigms by asking new questions.

Emergence: ongoing integration. As the metamorphosis reaches critical mass, engaging more people and demonstrating success, the momentum is accelerated by the positive energy of the process. Early successes drive learning, which stirs further innovation. Good metrics inform positive feedback loops of learn, do, measure, recognize—reinforcing the values and belief systems. At some point, the company's identity must be fully invested in sustainability, and the associated beliefs and behaviors must become ingrained into the DNA, or cultural assumptions, of the organization. If this level of cultural integration is not achieved, the organization will never really achieve liftoff.

Engagement: influencing others. Even many years into a company's sustainability journey, engagement is a continuing effort. Each level of success reveals new questions and challenges. This ongoing search for answers spirals to new levels of understanding about what is possible. Relative to the model presented, the stages of the process are continuous and recursive with deeper learning and innovation at every new loop in the spiral.

As an organization becomes more committed to sustainability, educating and influencing others becomes an important part of the change process. This advocacy role is beneficial to both the company and to the larger societal cause. In addition to helping others along in their journey and building the company's image, additional learning and expanding knowledge come through collaboration and teaching others. Interface, for example, formed a consulting subsidiary, InterfaceRAISE, to help other companies move more quickly up the learning curve and through the phases of their journey. The company also developed an extensive speakers' bureau consisting of Interface associates for general public and business education.[15]

Conclusion

Business and society are in a period of crisis as well as potential. Doing the same things a little differently, better, or faster will not bring about the transformational changes needed

to address today's challenges or grasp new opportunities. The Industrial Age can be supplanted by a new age of evolving human wisdom and emergent innovations, but only if businesses are willing to challenge existing paradigms and proactively discover new answers through collective inspiration. (See Box 13.)[16]

Business and industry—the most dominant institutions on the planet in both size and influence—can bring about organizational awakening that can catalyze more sweeping societal change. If business models are grounded in the values of sustainability, the people who work in those firms will also likely accept and adopt the behaviors associated with sustainability as the "way things are and should be." This offers business and industry a unique opportunity to accelerate the tipping point needed to correct society's current trajectory. To achieve this shift, companies must explore new worldviews and discard the old flawed views by encouraging personal reflection and new dialogue about the purpose and responsibility of business.

Box 13. Upgrading the Corporate Charter

Many U.S. businesses are redesigning their corporate charters to incorporate the interests of all stakeholders—customers, employees, communities, and the planet—rather than just those of their shareholders. Since 2007 the nonprofit organization B Labs has had a thoroughgoing certification process that identifies and validates precisely these types of businesses as B Corporations (the B stands for "benefit").

By expanding legal responsibility, B Corporation certification allows businesses to alleviate the pressure to pursue nothing but the exclusively profit-centered "bottom line." In addition, the designation helps to distinguish the corporations that are truly committed to socially valuable and environmentally sustainable practices from those just wanting to "greenwash" their operations. A B Corporation can also use the rigorous standard by which it is certified to monitor its own sustainability performance—a useful tool for companies that genuinely want to have a positive impact on society and the environment.

In order to be certified as a B Corporation, a company must submit responses to an extensive survey, which is then reviewed by B Labs. The company is subsequently audited in order to validate compliance with the B Ratings System. A minimum passing score of 80 indicates that the organization is eligible for certification, at which point it is obligated to submit a new corporate charter amended with the B Corps Legal Framework.

The B Corporation brand has already certified more than 190 companies spread across 31 industries with revenues totaling over $1 billion. Although its financial depth is admittedly a drop in the bucket compared with the roughly $14-trillion U.S. economy, this innovative tool could have lasting impact as corporations strive to reach B Corporation standards and, in so doing, acknowledge their increasing responsibility to pursue social and environmental benefits that extend beyond the traditional constraints of the profit motive.

—Kevin Green and Erik Assadourian

Source: See endnote 16.

Government's Role in Design

In a sustainable society, eco-friendly choices should not be difficult to make. The sustainable choice in any situation, whether it be buying a new lightbulb or designing a suburban development, should be the default choice, the path of least resistance, even natural. This section confirms that governments—which set laws, create societal priorities, and design the cities and towns where people live—will be central players in nurturing such a culture of sustainability.

An important role of governments—one that is almost invisible when it is done well—is that of "choice editing." Michael Maniates of Allegheny College notes that editing citizens' options through laws, taxes, subsidies, and so on has been a long-standing role of governments. What is new today is that choice editing is now being used to make the sustainable choice the default one by design. From a plastic bag ban in Rwanda and the phaseout of incandescent bulbs in Canada to sweeping carbon taxes in Sweden and subsidies on solar power in China, many governments around the world are starting to try to make it effortless for people to live sustainable lives.[1]

Another concept that sorely needs to be reconsidered is national security. As human activities disrupt a growing number of ecological systems, it will become increasingly clear that the biggest threats to national security are not foreign armies or terrorist groups but the weakened state of the planet. Michael Renner of Worldwatch describes how to take the almost $1.5 trillion spent each year on militaries around the world and use it instead to heal environmental and social problems. This shift will do more to protect people than the largest nuclear arsenal ever could, and in the process it will create additional economic opportunities and new openings to improve diplomatic relations between countries.[2]

Where people live will also need to be redesigned in order to make it easy to live sustainably. Peter Newman of Curtin University of Technology outlines how and where this is happening already, so that cities and towns have smaller ecological footprints or even no footprint at all. Cities could become free of cars and could generate a significant portion of their energy and even their food by harnessing their rooftops and green spaces for solar arrays, wind turbines, and gardens. And by tapping into community networks, city dwellers can be mobilized as active participants in accelerating the shift to sustainable urban design.

Key social services like health care need to be overhauled as well, as Walter Bortz of the Stanford University School of Medicine notes. In many societies today, health care is focused

too much on treating symptoms instead of on preventing disease and encouraging healthy and sustainable living. By shifting from "sick care" to health care, governments can prevent millions of unnecessary deaths and improve the lives of millions more. They can also save billions of dollars and, by reducing the need for resource-intensive treatments, cut the ecological impacts of keeping people healthy.

One other key redesign needed is that of the very system of law. Cormac Cullinan, an environmental attorney in Cape Town, describes how legal systems today fail to integrate the rights of Earth's systems and how this in turn allows the shortsighted conversion of ecosystems into resources at the expense of both human communities and the Earth community. Recognizing Earth's rights in law will help make it natural to consider the broader tradeoffs of development choices made today and will give citizens legal recourse when ecological degradation masquerades as economic development.

Within these articles there are also two Boxes: one on how other social services could be redesigned to provide more for less and in ecologically restorative ways and another on the international community's role in making global consumption and production patterns sustainable through the Marrakech Process of the United Nations.

The importance of government's role in creating sustainable societies cannot be overstated. If policymakers make sustainability their priority, bolstered by citizens' support, vast societal transformations can occur so that one day living sustainable lives will become natural—by design.

—Erik Assadourian

Editing Out Unsustainable Behavior

Michael Maniates

By late 2010, Australians are going to have a hard time finding an incandescent bulb for their nightstand lamps or desk lights. The Australian government, troubled by potential electricity shortages and global climate change, is the first to "ban the bulb" in favor of energy-sipping compact fluorescent lamps (CFLs) and LEDs. The impact will be significant: 4 million fewer tons of greenhouse gas emissions each year by 2012, together with sizable economic savings. And Australia is not alone. The European Union is slowly phasing out incandescents by 2012. Canada, Indonesia, and even the United States are next in line.[1]

Environmental analysts like Lester Brown of the Earth Policy Institute are delighted. Brown says that if everyone followed Australia's lead "the worldwide drop in electricity use would permit the closing of more than 270 coal-fired (500 megawatt) power plants. For the United States, this bulb switch would facilitate shutting down 80 coal-fired plants." But others are not so sure. Reports abound of people hoarding incandescent bulbs in Australia and Germany, among other countries, and some experts wonder if incandescents are being forced out too quickly. And then there is the prickly philosophical question at the heart of it all: Should products be removed from the menu of consumer choice because of their environmental or other socially objectionable qualities? Who decides what stays on the shelves and what goes? Shouldn't the consumer be allowed to choose freely? Is "lightbulb fascism" intruding into the marketplace?[2]

Choice Editing Is Nothing New

Welcome to the world of "choice editing," where the tussle over lightbulbs is but the opening salvo in a larger struggle to crowd out environmentally negative products in favor of more benign choices. Choice editing for sustainability is more than simply deleting what does not work. In the words of the U.K. Sustainable Development Council, it "is about shifting the field of choice for mainstream consumers: cutting out unnecessarily damaging products and getting real sustainable choices on the shelves." (See Box 16 for some initiatives on sustainable consumption at the international level.)[3]

Choice editors remove environmentally offensive products from commercial consid-

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Box 16. The U.N. Marrakech Process on Sustainable Consumption and Production

In recognition of their disproportionate share of global consumption and the resulting impact on sustainability and equality, industrial countries agreed in 2002 to take the lead in accelerating the shift toward sustainable patterns of consumption and production.

To achieve this, a global informal multi-stakeholder expert process was launched in 2003 in Marrakech, Morocco, to support regional and national initiatives to accelerate the shift to sustainable consumption and production (SCP) and to elaborate a 10-year framework of programs on SCP, which will begin after its structure and content are negotiated at the U.N. Commission on Sustainable Development meeting in May 2011.

A key element of the Marrakech Process is its seven Task Forces, which are voluntary initiatives led by governments in cooperation with various partners:

- ***Sustainable Lifestyles*** (Sweden). Identifies and compares grassroots social innovations for sustainability from around the world, finds promising examples, and diffuses them. Develops train-the-trainer tools for sustainable consumption in youth, CD-roms on sustainability in marketing, and on-line galleries of sustainability communication. Projects implemented in more than 30 countries with materials in over 10 languages.
- ***Cooperation with Africa*** (Germany). Affirms Africa's own 10-year framework on SCP (the first region to have developed and launched such a program) by supporting an All Africa Eco-Labeling scheme, the establishment of a network of Life-Cycle Assessment experts in Africa, and initiatives to "leapfrog" straight into clean energy sources.
- ***Sustainable Public Procurement*** (Switzerland). Develops analysis and Web-based Status Assessment tools to support public-sector organizations' attempts to justify, develop, and gauge the success of sustainable procurement programs.
- ***Sustainable Products*** (United Kingdom). Catalyzes networks of experts in key product areas to upwardly revise standards, develop labels, work together on policy roadmaps,

eration, like smog-producing charcoal lighter fluid in Los Angeles or leaded gasoline in Europe and North America. Or they make such products expensive to use, like Ireland's levy on plastic shopping bags, which has reduced plastic bag use by 90 percent. But like any good editor, choice editors cannot just chop. They must offer options or, at the very least—in the words of environmental reporter Leo Hickman—a sufficiently compelling illusion of choice. In Los Angeles, backyard cooks denied their lighter fluid had the choice of chimney or electric briquette fire starters. In Ireland, shoppers can purchase any number of cloth bags, some trendy or stylish. And in Australia and the growing number of other countries looking to edit out incandescents, consumers will see more choice among CFLs, LEDs, and other innovative lighting technologies.[4]

If the idea of governmental choice editing rankles, perhaps because it sounds manipulative or too "Big Brother," remember that choice editing is neither new nor novel. Government has long been at it, in ways both obvious and obscure. (See Table 8.) Safety and performance standards for everything from the food people eat to the cars they drive constrain and shape choice. The same holds true for tax, tariff, and subsidy policies that heighten the desirability of some products while making others unattractive or unavailable. More subtly, government decisions about where to build roads and rail lines, what schools and hospitals are constructed or closed, and which research and development initiatives are supported or

Box 16. *continued*

and collaborate on compliance. Three product areas identified so far: lighting, home entertainment products, and electric motors.

- ***Sustainable Tourism*** (France). Creates demand for greener travel offerings with the *Green Passport Program* for citizens, fosters industry supply with the revised *Environmental and Sustainable Tourism Teaching Pack for the Hospitality Industry*, and encourages investment by convening a Sustainable Investment and Finance in Tourism Network.
- ***Sustainable Buildings and Construction*** (Finland). Works to move green building standards beyond the realm of the voluntary by developing policy recommendations and working in partnership with national governments and private firms participating in the U.N. Sustainable Buildings and Climate Initiative.
- ***Education for Sustainable Consumption*** (Italy). Focuses on integrating sustainable consumption into core curriculum in the Mediterranean region, while working with the UNESCO Associate Schools Network Project (a global network of 8,500 educational institutions in 179 countries founded in 1953) to disseminate best practices in sustainability education to teachers around the world.

By bringing consumption into the global dialogue on sustainability, the Marrakech Process raises questions of lifestyle, values, and progress, creating a unique space within national governments and regional forums for reforming the cultures and institutions at the basis of all socioeconomic systems, while bringing a suite of tools to the table for policymakers who are serious about greening the economy and improving human well-being.

Clearly more could be done with greater leverage and resources. Unfortunately, the low profile of the Marrakech Process means the effort suffers from a lack of serious attention by senior decisionmakers. In the run-up to the negotiations in May 2011, this fledgling but transformative U.N. process could be helped by the greater involvement of governments, the private sector, and the public.

—Stefanie Bowles

Source: See endnote 3.

starved converge to write the menu for housing, education, and jobs from which everyone must choose.

The real worry is not that government engages in choice editing. Rather, it is that for decades such editing has aided and abetted an especially narrow view of progress, one that imagines mass consumption as the foundation of human happiness, egalitarianism, and even democracy itself. As prize-winning historian Lizabeth Cohen writes in *Consumers' Republic*, "A strategy…emerged after the Second World War for reconstructing the [U.S.] economy and reaffirming its democratic values through promoting the expansion of mass consumption." A central plank of this strategy was to make energy-intensive, resource-depleting, mass-consuming choices appear natural and inevitable: witness the single-family, detached home to be filled with products, a family car to get to it, and dispersed and abundant shopping outlets. Other, more environmentally sustainable consumption options and patterns—efficient streetcar and intercity rails systems, for instance, or a returnable-bottle network for milk, soda, and other products—were cast as backward, were made more difficult to find or rely upon, and subsequently disappeared.[5]

Cohen's incisive gaze rests on the United States, but similar stories hold true for much of the industrial world, and parallel tales are now being told in developing countries, most notably India and China. They all point to a provocative question: if the rise of fundamen-

Table 8. Examples and Features of Choice Editing

Types of Choice Editing	Examples	Important Features
Eliminate offending choices	• Montreal Protocol and CFCs • Shift away from leaded petrol in the North America and Europe • Ban on incandescent bulbs in Australia • Compressed natural gas for public transportation in India • Walmart's decision to carry only MSC-certified wild-caught fresh and frozen fish	• Strong legislation, often supported by business interests • Requires new choices to offset the loss of previous choices • Demands a "phase-in" period that allows for adjustment
Slowly trim away the worst products and practices	• Japan's "top runner" program for energy efficiency • LEED building requirements in the United States, which gradually increase the standards for certifying a new building as "green" or "sustainable"	• The use of labeling to identify, over time, the most offending practices and products • Clear standards and methods of evaluation • Collaborations among government, industry, and consumer groups
Make offending choices less attractive or increasingly difficult	• Ireland's levy on plastic shopping bags • Shifting fatty and processed foods from eye level to higher or lower shelves	• Two primary instruments: taxation and product placement and positioning • Wide range of choice is retained, but incentives and positioning privilege sustainable choices over unsustainable ones
Change context for choices; alter "choice architecture"	• Creative use of defaults (for instance, consumers are subscribed to renewable forms of electricity and must intentionally refuse this option) • Focused changes to material flows; for university and corporate composting programs, for example, shift to all compostable dining ware (plates and utensils) in cafeterias to eliminate mixing of compostable and non-compostable waste by consumers • Embedded cues and drivers that encourage reduced consumption (for example, when trays in university cafeterias are removed, students take only what they need, reducing food waste, water use, and energy consumption) • Create real choice for trading leisure for income: four fifths work for four fifths pay as a viable work option	• Enduring question: How can consumer experience be structured so that doing the right thing is natural and requires little or no thought while doing the wrong thing is difficult and requires conscious thought and focused intent • Building a choice architecture to oppose consumerism often involves reintroducing meaningful choice: choices among varied transportation options, for example, or about work time and leisure

tally unsustainable consumer cultures was facilitated by choice editing—by an elite who intently shifted the field of choice for mainstream consumers—will transforming consumerism into something more sustainable require a similar degree of determination and sophistication by government and business?

The answer appears to be yes. In 2006, for example, the Sustainable Development Roundtable (SDR)—a project of the Sustainable Development Commission and the National Consumer Council in the United Kingdom—released an analysis of 19 promising transformations in consumer cultures, ranging from sustainable forestry products to fair-trade and organic food product lines. SDR concluded that "historically, the green consumer has not been the tipping point in driving green innovation. Instead, choice editing for quality and sustainability by government and business has been the critical driver in the majority of cases. Manufacturers, retailers and regulators have made decisions to edit out less sustainable products on behalf of consumers, raising the standard for all."[6]

A classic example of this is the Montreal Protocol's phaseout of ozone-destroying chlorofluorocarbons (CFCs). "Powerful economic, political, and technical factors combined to facilitate the phase-out of CFCs," write James Maxwell and Sanford Weiner of the Massachusetts Institute of Technology. They note that a critical factor was DuPont's desire to create new consumer demand for its CFC substitute while establishing a competitive advantage over its major global competitor, which had no such substitutes. The ozone layer is healthier today because consumers shifted to more ozone-friendly substitutes, but this shift came about largely because of methodical choice editing that pushed consumers in that direction.[7]

Of course, consumers still have an important role to play as they vote for sustainability with their purchases. But Tim Lang of City University London, who coined the idea of "food miles," speaks for many analysts of sustainable consumption when he asks "why should the consumer be the one left in the supermarket aisle to agonize over complex issues such as animal welfare, carbon footprints, workers' rights and excessive packaging, often without any meaningful data on the label to inform their decision-making?" Why, in other words, don't producers and governments shift their current choice-editing practices so that consumers choose only among a range of environmentally "good" products? That way, making the right choice is—as businessman and environmental writer Paul Hawken puts it—as "easy as falling off a log."[8]

One answer is that the favored alternative—labeling products as environmentally "good" or "bad" and letting consumers decide—is sometimes thought to be less controversial. Product labeling is an important component in the transformation of consumer societies to sustainable ones. Yet experience suggests that when product information is made available, perhaps as part of ecolabeling schemes, it influences no more than a minority of shoppers—and not nearly enough, not fast enough, and not consistently enough to drive the transformation of consumer life required by a planet under stress.[9]

At least three factors limit the effectiveness of labeling: the varying degree of environmental commitment among the general population; the complexity of consumer-choice decisions, which are structured by intricate sets of social processes and cultural influences; and a corrosive "choice architecture"—the potent context within which people make decisions. Nutrition labeling, for example, does not stand much of a chance in most supermarkets, given that products are positioned (or hidden) on shelves and at end-of-aisle displays to foster impulse purchases of fatty, sweet, and processed foods and that sugary products are shelved at a child's eye

level. It is no surprise, then, that the Sustainable Development Commission found that information about the environmental and economic benefits of less environmentally destructive products "failed to get more than a minority of people buying" the best products. But the Commission also found that when labeling and other information efforts were part of choice-editing efforts by government, producers, and retailers, consumer practices changed across the board.[10]

N-O-M-A-D

New Delhi traffic jam: less pollution may be only half the battle.

Editing for Sustainability

If the goal is to move consumers toward less environmentally damaging patterns of consumption, contemporary experience says that choice editing delivers. At a growing number of colleges and universities across the United States, for instance, fair-trade coffee and renewably generated electricity are increasingly on the menu—and are often the only choice available on campus.[11]

In California, consumers can choose from a variety of electricity generation options, and the most environmentally dedicated customers can opt for rooftop solar arrays where site conditions and the ability to pay permit. Regardless of their preferences, 20 percent of their electricity will flow from renewable sources by 2010 due to Renewable Portfolio Standards imposed on electric utilities by the state government. These are driving the development of renewables faster than uncoordinated consumer demand ever could. California's proportion of renewable electricity will slowly grow, and 38 other states are following suit.[12]

In 2003, London implemented Europe's first "congestion pricing" program for its city core: drivers pay a fee to operate their car in central city areas during peak periods, with the revenue going to boost bus service and fund subway renovations. Initially treated with skepticism, the program now enjoys growing public support and is a model for major cities worldwide. And in India, in response to a Supreme Court public health order, the government has required all buses, taxis, and auto-rickshaws in major cities to switch from dirty fuels to cleaner burning compressed natural gas. Despite some initial protests, New Delhi has led the way, and commuters are now part of an ambitious effort to curb air pollution. These examples, and others like them, demonstrate the effectiveness and political viability of choice editing.[13]

Business offers its own set of examples, though whether these practices will endure and expand absent government regulation or persistent pressure by citizens' groups remains to be seen. Reacting to pressure from environmental groups, since 1999 Home Depot—the largest home improvement retailer in the United States—has sold lumber certified and labeled by the Forest Stewardship Council. But it also has quietly altered significant aspects of its wood-product supply chain; it is consequently harder today than 10 years ago for any-

one to purchase environmentally "bad" lumber at Home Depot.[14]

B&Q, Home Depot's counterpart in the United Kingdom, pursued a similar strategy and has perhaps the most robust commercial system in place for certifying the sources of its timber supply, easily outpacing U.S. retailers. Interviewed in the late 1990s, Allen Knight, then Environmental Policy Coordinator for the company, explained that B&Q embarked on sustainable wood "even though there was no indication of consumer demand for certified products." He observed that "customers do not ask for certified products because they are unaware of them: Raising awareness and creating markets are the retailer's role."[15]

Not to be outdone, in early 2006 Walmart pledged to source all its wild-caught fresh and frozen fish from suppliers certified as sustainably harvested by the Marine Stewardship Council (MSC). Moreover, it required its suppliers to expand renewable fisheries rather than jockey for access to or ownership of existing suppliers. The blue MSC ecolabel figures prominently on Walmart wild-caught fish, but unlike other labeling schemes the certification is not meant to persuade buyers to choose sustainable wild-caught fish over less sustainable options, as the company has edited those out completely.[16]

Also in early 2006 Hannaford Supermarkets in the United States implemented its "guiding star" program in 270 stores, in which products identified as especially healthy or nutritious are given one to three stars. Some 28 percent of items in the stores receive the rating, with the remainder not being good enough to get a star at all. Dan Goleman, author of *Ecological Intelligence*, reports that "poorly rated brands dropped as much as 5 percent in sales," while sales of some three-star brands went up by 7 percent. "Brand managers started contacting Hannaford to ask what they needed to do to get higher ratings," Goleman noted.[17]

Hannaford's apparent success comes because they understood their program as more than a simple labeling exercise. It was about changing critical components of the "choice architecture" at its stores. "It includes signs, shelf tags, an advertising campaign, collateral materials, training materials, a web site, and community outreach, among other elements," explains Hannaford spokesperson Michael Norton. And it meant changing product placement and shelving strategies to reinforce healthier shopping habits.[18]

Obstacles to Change

There remains immense potential for choice editing to drive fundamental changes in consumption. But at least two obstacles stand in the way. One is the persistent belief that product labeling alone can drive necessary change. Even when logical and clear, labeling places the burden on consumers to drive needed social change with their purchasing decisions. It also reinforces what Thomas Princen at the University of Michigan calls one of the most disabling myths about political life: the notion of consumer sovereignty, which says that the decisions that producers and marketers make about what to produce and what to sell is driven solely by independent, uninfluenced consumer choices. The consumer decides, in other words, and the producer responds. This idea denies the power that government and business have over the menu and architecture of consumer choice. In doing so, it undermines the very rationale for choice editing.[19]

Japan has pioneered a better use of labeling, one that could move consumer cultures toward an ethos of sustainability. Since 1998 the government has divided products up into similar categories and classes, and then graded and labeled them on a 1–5 scale for energy efficiency. Tiers one and two are the standard set by the best-performing products—and it is the standard that the entire industry must meet within five years. As these "top runners"

improve, the overall standard shifts upward, placing ongoing pressure on manufacturers to improve their product lines or face a ban on their products. In the short run, energy-conscious consumers are empowered: the top-runner label offers important information about the overall energy costs of a consumer choice. In the longer run, the field of choice changes: the label provides a regulatory platform for driving constant product innovation, increasing the range of choice among the higher-performing categories and editing out the worst products. Germany is considering a similar program. Advocates of choice editing hope that Walmart's recent commitment to environmental labeling will incorporate this "top runner policy."[20]

A second impediment to the power of choice editing is its prevailing focus on "consumption shifting" rather than "consumption reducing." Most choice editing has been about moving consumers to less environmentally damaging products. But genuinely sustainable patterns of consumption must also involve reductions in overall consumption. How can the context within which everyday people make consumption decisions be edited to encourage that? John de Graaf suggests one answer: make it attractive for people to trade work for leisure in ways that would lead to a voluntary reduction in income (but not health and other important benefits) for more free time, which in turn has known environmental benefits.[21]

Cornell economist Robert Frank offers another solution: shift taxes toward luxury consumption, reduce or eliminate taxes on income diverted to savings, and invest more government resources in public uses—parks, inviting pedestrian walkways, mass transit—that would reduce individual pressures to consume (thus supporting de Graaf's agenda for less work, less income, but more life satisfaction).[22]

In *Nudge*, economist Richard Thaler and legal scholar Cass Sunstein provide a suite of additional ideas for altering the "choice architecture" in service of sustainable consumption. These include the pervasive use of defaults to "nudge" consumers in environmentally appropriate directions. A person could opt out of these defaults, but the burden rests on the individual to choose the wrong behavior over the right one. Examples include automatic and certified carbon-offsets for all travel bookings, default savings plans, and pricier renewable energy automatically included in residential energy bills (so a customer would have to say explicitly "I want to use dirty, polluting coal to save a small amount of money").[23]

Choice editing has been with us a great long while, and it is here to stay. If that seems far-fetched, just bring an especially critical eye to the layout of products and displays in a supermarket. Which products draw customers' eyes? Which are easily reached? The question now is this: Will a primary focus on the promise of product labeling alone (and underlying notions of consumer sovereignty) continue to shape policy for sustainable consumption? Or will more-realistic assessments emerge about how and why people make consumer choices? Government and business, operating from a view that mass consumption means mass prosperity, have tightly held the reins of choice editing for too long. Now is the time for a more nuanced, more sustainable vision of choice and choice architecture to prevail.

Media: Broadcasting Sustainability

The media can be a highly effective tool to shape cultures—painting pictures of how people live, broadcasting social norms, modeling behaviors, acting as a vehicle of marketing, and distributing news and information. These important roles can be used to spread either a cultural pattern of consumerism or one that questions consumerism and promotes sustainability. Although the vast majority of media today reinforce the former—through advertising, product placement, and much of the content—there are efforts worldwide to tap media's vast reach and power to promote sustainable cultures, as described in this section.

Considering the commanding role that marketing plays in stimulating consumerism, redirecting it to promote sustainable behaviors will be essential. Jonah Sachs and Susan Finkelpearl of Free Range Studios describe "social marketing"—marketing to encourage socially positive behaviors like avoiding smoking, wearing seatbelts, practicing safe sex, or consuming less stuff—which can play an important role in redirecting how people live. Granted, at the moment just a tiny percentage of marketing budgets promotes such social goods.

While social marketing is encouraged, governments will need to limit or tax overall marketing pressures. A few governments are working to tackle advertising directly, such as the Spanish government, which voted to ban commercials on its public television stations starting in 2010. Yet with advertisers' influence over policymakers, these efforts have been few and far between. Robin Andersen and Pamela Miller of Fordham University point out that media literacy can help limit the effectiveness of the romantic visions of consumption created by marketing—and unlike regulation, it can be easier to introduce across societies.[1]

Beyond the mass media, the arts also play an important part in inspiring people to better understand the effects of consumerism and to live sustainably. For example, the cover of *State of the World 2010* by artist Chris Jordan is a recreation of a famous woodprint by Japanese artist Katsushika Hokusai—except Jordan's version is made out of 1.2 million bits of plastic trash. This vast number, representing the pounds of plastic that enter the world's oceans every hour, has a visual power that can represent the destructive nature of consumerism far better than yet another statistic would. Music, as Amy Han of Worldwatch describes, can also be a useful educational tool, inspiring people to live more sustainably and mobilizing them to join political efforts to help drive change.[2]

Two Boxes in this section expand on the

role of the arts: one describes the power of film and the other considers the potential for all individuals to become artists rather than consumers. Finally, a Box on the importance of journalism in effectively educating people about the environment and their role in it rounds out the section.

People spend significant portions of their lives interacting with media. Today they have the potential to create their own programming, music, art, films, and news and to distribute these farther than ever before—not just through formal channels but through YouTube, Facebook, local radio broadcasts, Web sites, even posters and self-published books. The more that this content can promote sustainability and redirect people away from consumerism, the more likely it is that humanity will avoid a future conjured up by movies like *Soylent Green* or *WALL-E* and instead create a future of high-quality lives for all.

—Erik Assadourian

From Selling Soap to Selling Sustainability: Social Marketing

Jonah Sachs and Susan Finkelpearl

Sixty years ago, Americans greeted the postwar era with a thrift-based value system that had gotten them through two decades of war and economic depression. Corporate industry, meanwhile, exited the war capable of producing more goods than ever. But with the soldiers they once supplied now back home, they needed a new customer base. If only industry could reverse the thrift-based values of the American people, then their ramped-up infrastructure could continue pumping out goods, which would be readily bought by willing consumers.

Enter Madison Avenue. Marketers responded to industry's challenge decisively, taking a dramatic leap forward in marketing sophistication. They rejected the typical fact-based approach of advertisements in favor of an identity-based, storytelling construct. The result? They created a radical reversal of thrift values and an explosion of consumerism that ignited in the United States in the 1950s and spread around the world. This became the era when people met the Marlboro man and came to believe that the cigarette someone smoked said a lot about who the person was. They embraced the idea of perceived obsolescence, accepting that owning this year's model television was a sign of virtue even if last year's model was still working perfectly well. Before long, even cultural resistance had requisite consumable products, such as the Volkswagen (VW) Beetle.

As is clear today, Madison Avenue's success has had deep, unintended consequences, and sophisticated story-based marketing continues to drive its relentless growth. Yet the seeds of the current consumption crisis may also contain powerful solutions. If marketers were able to motivate a massive reorientation of cultural values and behaviors in relatively little time 60 years ago, can they do it again? Could a revolution in social marketing, where marketing principles are used to change social behavior rather than sell a product, drive a new set of values that would lead to the lifestyles and political changes necessary to confront today's ecological crises?

Certainly, social marketing faces major hurdles. In 2008, spending on advertising was estimated at over $271 billion in the United States and $643 billion worldwide. Today approximately only one in every thousand marketing dollars is spent on broadcast pub-

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lic service announcements that market for the public good—and only a tiny fraction of that is spent on sustainability issues.[1]

But there are also enormous opportunities. Social marketing has a 40-year history of experience to draw upon, plus there are vast lessons to learn by observing traditional consumer marketing. The Internet has rapidly leveled the playing field in the media marketplace by reducing distribution costs and removing the barriers of traditional corporate gatekeepers who limited the broadcast of messages that ran counter to consumerism's values. And the emergence of social media has spawned a "viral" distribution model through which an inspiring message can move almost instantly and at nearly no cost through networks of mutual trust.

For social marketers to play a role in the transition from consumerism to sustainability, they will need to draw on the main lesson learned by consumer marketing in the 1950s: facts alone do not sell behavior change. Instead, people working to foster sustainable behavior must use storytelling to reach audiences on a human, personal scale.

Stories Change Behaviors

As social marketers craft a strategy for this critical next decade, understanding and harnessing the power of emotional storytelling may be their most important task. Table 10 outlines a few of the most successful product and social marketing efforts since the 1950s and describes how human-scale character and stories, as opposed to facts and product attributes, have built the most powerful brands and behavior change.[2]

Iconic, story-based campaigns do not simply shift the perception of a product or activity. To change behavior on the scale they do, such campaigns have to shift how millions of people see themselves and how they are defined by, for example, their choice of cigarette, car, computer, or social behavior. But is it storytelling per se that makes these campaigns so successful?

Writer and philosopher Joseph Campbell offers a compelling reason to believe that human-scale storytelling is key to opening people up to changing instinctive "tribal" identities and altering behavior. Campbell's views even imply that social marketing may have an advantage over product marketing in this arena.[3]

In his seminal work, *Hero with a Thousand Faces*, Campbell presents a survey of mythology across broad cultural contexts and millennia and finds strong commonalities. He hypothesizes that human beings are, in fact, genetically hardwired to see their world in terms of stories. And what's more, these stories are strikingly similar. They share certain archetypal characters like the hero, the nemesis, and the mentor, and they follow a plot of invitation to adventure, acceptance of that invitation, battle with the nemesis, and then return.[4]

What is of particular interest to social marketers about Campbell's theories is that the setting for these adventures is often a broken world in need of healing. What's more, the return involves the hero coming back to society with the wisdom to heal it. Seen through this lens, stories of a societal shift from consumerism to sustainability fit perfectly into humanity's pre-formed ideas of what a hero's journey is all about. A hero is someone who helps to heal society's ills.

Campbell's theories do not stop at saying that people respond to stories. He believed that stories motivate behavior and identity, which might explain the success of storytelling marketing efforts to change consumer activity. "The myth is the public dream and the dream is the private myth," wrote Campbell in describing how deeply people internalize stories and seek to place themselves as the heroes within them.[5]

In the field of public health, the power of

Table 10. Selected Successful Product and Social Marketing Campaigns

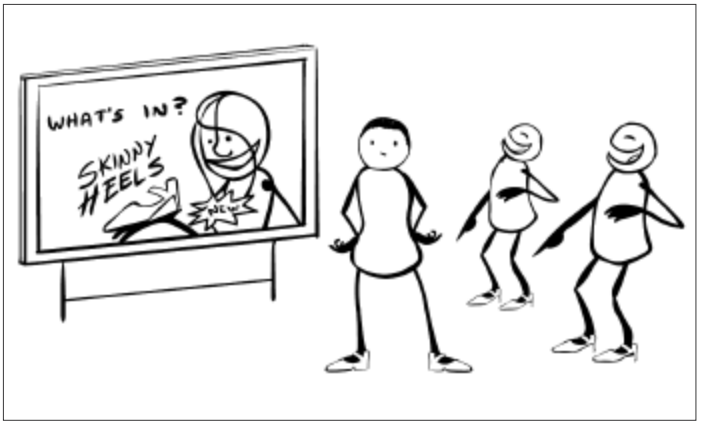
Product or Cause	Story-Based Campaign	Result
Marlboro cigarettes	In a series of windows into the life of a fictional American hero, the Marlboro Man, the campaign focuses on the man. The product is merely an accessory.	The Marlboro Man is one of the most familiar faces in the world and solidified Marlboro as the top cigarette brand for the past 40 years.
Volkswagen Beetle	A campaign that began in 1959 spoke frankly about consumer frustration with planned obsolescence and the Big Three car companies' branding puffery. Instead of targeting consumers' impulse to buy a car, it targeted their impulse for cultural resistance.	The campaign completely reversed Americans' perception of what had been seen as a "Nazi car." The VW beetle became the symbol of cultural resistance and 1960s culture. It is still one of the most analyzed and admired campaigns in advertising history.
Seat belt use	In 1985, the "You can learn a lot from a dummy" campaign introduced two charming crash-test dummies, Vince and Larry. The dummies showed viewers exactly what it looked and felt like to be in a car accident.	In 1986, 39 percent of drivers in 19 U.S. cities reported using their safety belts, compared with 23 percent in a 1985 study. The campaign was a significant factor among several that influenced this increase. The campaign also created political cover for mandatory seat belt legislation that eventually pushed compliance nationwide past 85 percent.
Apple computers	Apple's "1984" ad said nothing about computers and ran only once on television during the 1984 Super Bowl. It simply showed a lone rebel smashing through the Orwellian dominance of its PC competitor, laying the groundwork for Apple users to identify heavily with the brand.	*Adweek* called 1984 "the best ad ever created"; Apple II sales accounted for 15 percent of the market share in its first year. It was the beginning of a string of story-based campaigns that would make Apple one of the most identifiable lifestyle brands in history. Apple's more recent "Get a Mac" campaign has millions of Americans identifying so much with the brand that they repeat the mantra "I'm a Mac."
Raising awareness about over-consumption	*The Story of Stuff* took users into the 10-year journey of activist Annie Leonard as she explored where "stuff" comes from and where it winds up when it gets thrown away. Leonard's high-level analysis of the materials economy was boiled down to simple stories told on the human scale.	This movie, by Free Range Studios, quickly went "viral" on the Internet when it was released in 2007. Since then, it has been seen by more than 7 million people in 224 countries, translated into 10 languages, and featured in hundreds of U.S. classrooms.
Reduction in obesity in the United States	Morgan Sperlock's film *Supersize Me* showed viewers the disconcerting health and appearance effects on one man of eating nothing but McDonald's meals for 30 days.	The film was an enormous critical and commercial success. Shortly after the film's release, McDonald's removed the Supersize option from its menu.

Source: See endnote 2.

archetypal storytelling has gone well beyond theory and has proved to be effective worldwide. Beginning in the 1970s, Mexican television executive Miguel Sabido began to practice Entertainment-Education (E-E), which spread public health messages by embedding

them into soap operas. Sabido's shows influenced audiences by encoding health behaviors into the interpersonal dramas of three types of role models: positive, negative, and transitional. These models map closely to Campbell's archetypes of the mentor (the source of wise behavior), the nemesis (the antithesis of the mentor), and the hero (the initiate who must choose the correct behavior).[6]

Viewers of Sabido's E-E shows were expected to identify closely with a transitional character and, by seeing that person make good choices about sex, marriage, and family planning, believe that they too could make positive behavior changes.



Courtesy Free Range Studios

The online movie *The Story of Stuff* reminds viewers how marketers use emotion to sell their goods.

In the years since its launch, E-E has been adopted into radio plays, animations, reality dramas, and even mobile phone programming with consistently demonstrated success well above other forms of public health education. For example, in South Africa the weekly drama *Tsha-Tsha* drew an audience of 1.8 million. People exposed to the show and with good recall of its plot reported significantly higher rates of HIV prevention practices, such as abstinence and safe sex. And a study in Tanzania found that 40 percent of new family planning users at government clinics came in because of hearing the radio drama *Twende na Wakati*. Similar results have been documented in an analysis of 39 family planning communications worldwide between 1986 and 2001.[7]

Few Stories Address Climate Change

Although social marketers have had some stunning successes in harnessing the power of stories, when it comes to the most pressing environmental sustainability issues, the lesson has not been applied adequately.

A survey of the Web communications of the "environmental G8," the foremost international nongovernmental organizations (NGOs) addressing climate change, reveals an approach that is still heavily devoted to the facts of the climate crisis, its dire consequences, and current policy proposals to address it. Emotional appeals that aptly reflect the reality of visitors' lives and concerns, as well as the frames through which they receive and evaluate information about the crisis, are sorely lacking.[8]

A recent study by the Yale Project on Climate Change and George Mason University's Center for Climate Change Communication signals that the time for a fact-alone approach has past. Seventy percent of Americans already believe climate change is a problem and 51 percent view it as a serious problem. With the public recognizing the need to address climate change, NGOs must shift gears to inspire action, not merely persuade people that climate change exists through a barrage of facts.[9]

Moving beyond facts and information alone is critical because when it comes to taking action, humans tend not to be rational actors. In the wake of the 1970s energy crisis, researcher Scott Geller demonstrated this when

he exposed research participants to three hours of slide shows, lectures, and other educational materials about residential energy consumption. The result? Participants were more aware of energy issues, understood more about how they could save energy in their homes, but failed to change their behavior.[10]

Fortunately, there is a dawning realization among social marketers and the scientists whose work they support that facts alone are not enough. This was captured perfectly by activist Bill McKibben in describing the work of NASA scientist James Hansen: "I think [Hansen] thought, as did I, if we get this set of facts in front of everybody, they're so powerful—overwhelming—people will do what needs to be done," McKibben told the *New Yorker*. "Of course, that was naïve on both of our parts."[11]

Today, McKibben and Hansen are key evangelists of the Internet-savvy, story-based campaign known as 350.org, which seeks to cast the climate crisis in terms of the health of a single organism. As its Web site explains: "We're like the patient that goes to the doctor and learns he's overweight, or his cholesterol is too high. He doesn't die immediately—but until he changes his lifestyle and gets back down to the safe zone, he's at more risk for heart attack or stroke."[12]

Based on the patterns of success seen on Madison Avenue and Mexican soap operas and on the predictions of Joseph Campbell, this shift to campaigns like 350 is desperately needed in order to see the mass behavior shifts required for a sustainable future.

Social Marketing Meets Social Media

For most of the past 40 years, social marketing distribution has occurred in a uniform way. Whether messages were made available through radio, television, or print, the dominant approach until a decade ago was the one-to-many broadcast model.

Today that model is quickly being overtaken by a many-to-many "narrowcast" model that is made possible by the Internet. In this new world, messages travel through personalized social networks. As each audience member handles the message, he or she may comment on it or even alter it. Effective social marketing has become not just about creating great stories but about sparking great conversations out of which great social change stories can arise.

To understand how powerful social marketing efforts might move around in this new media landscape, it is important to first understand the basics of social media today:

- Social media refers to a new crop of Internet tools and content, where anyone with an Internet connection can publish text, images, and video easily through Web sites such as Facebook, Twitter, YouTube, and Flickr or with tools such as blogging and podcast software. Once published, others can interact with the content by commenting on it, integrating it with other content, sharing it, or rating it.[13]
- Social media tools and users are growing exponentially, so that today online forums are no longer only for ardent Internet users. Facebook alone boasts 250 million active users. About 70 percent of these individuals live outside the United States, and the fastest-growing Facebook demographic is people 35 or older.[14]
- Social media are redefining people's core social networks. A recent Pew study found that people's networks are more geographically dispersed, mobile, and varied thanks to the Internet. The study goes so far as to say that social media are changing the traditional orientation of human behavior.[15]
- Social media content is among the most trusted sources of information for Americans today. Sixty million Americans said information shared on the Internet has helped them make a major life decision, and 90 per-

cent say that they trust the recommendations of their networks over any other form of communication (such as advertising).[16]

What are the inherent opportunities here and how will this enhance or diminish the power of stories to create social change?

First, social media amplify the public's appetite for and access to human-scale stories. For instance, after the 2008 Sichuan earthquake and the 2009 Iranian presidential elections, Twitter allowed thousands of authentic individual stories to flood out of countries that previously would have repressed or controlled the message. In the past, China's government had buried stories of natural disaster, leaving little space for public response. After the Sichuan tragedy, the unfiltered stories of heartbreak generated 1.5 billion yuan ($208 million) in relief donations from Chinese citizens alone.[17]

Similarly, after the Iranian elections, marchers in Tehran were joined in solidarity around the world by demonstrators in Washington, London, Islamabad, Sydney, São Paulo, and dozens of other cities. These story-based social marketing efforts harnessed social media both to spontaneously disseminate key information and to create dramatic results that would not have been possible using the broadcast model.[18]

Second, social media do not remove the need for traditional "tribal" identities; they create an even deeper need for them. The Pew study showed that all this incredible new technology has not fundamentally changed the size of social networks. People still tend to interact in small "tribes" of about 35 "close ties." These close-knit communities, however, are no longer necessarily held together by geographic proximity or traditional markers of social status. Thus the tribes need new identity-forming concepts and behaviors to hold them together.[19]

The group 350.org has taken advantage of this by organizing a global protest at the micro-social network level. By early September 2009 its highly successful social marketing campaign had signed up over 1,700 groups in 79 countries to create actions before the Copenhagen climate talks at the end of the year. The organization did not provide top-down instructions for how these networks should behave. Instead, it offered a sort of social and identity glue that the networks eagerly embraced and used to further the organization's cause.[20]

Third, social media can offer a natural advantage to social marketing over product marketing. Because these networks are made up of permission-based communications, it is difficult for people to "advertise" to each other without breaching natural social taboos. On the other hand, social groups tend to welcome education and values-based messages. Thus, despite having smaller budgets, social marketing campaigns will likely move more quickly through social media.

Now Is the Time

Return for a moment to the 1950s, a turning point in the evolution of the consumer-based society. The marketing revolution that helped reverse cultural norms so swiftly can be seen as a small miracle—a miracle to learn from and perhaps repeat. It is true, of course, that the stakes are much greater and the hurdles to cross in terms of behavior and political change seem much higher. But this is not the 1950s, when television was new and a handful of players dominated the media landscape. This is 2010, a time of exponentially greater connectivity, free information flow, and dramatically lower distribution costs. By combining the key lessons of marketing's past with the opportunities of today's social media revolution, social marketers armed with the power of storytelling have the chance to create another great shift and move the world toward a sustainable future.

The Power of Social Movements

Throughout history, social movements have played a powerful part in stimulating rapid periods of cultural evolution, where new sets of ideas, values, policies, or norms are rapidly adopted by large groups of people and subsequently embedded firmly into a culture. From abolishing slavery and ensuring civil rights for all to securing women's suffrage and liberating states nonviolently from colonial rulers, social movements have dramatically redirected societal paths in just an eye blink of human history.

For sustainable societies to take root quickly in the decades to come, the power of social movements will need to be fully tapped. Already, interconnected environmental and social movements have emerged across the world that under the right circumstances could catalyze into just the force needed to accelerate this cultural shift. Yet it will be important to find ways to frame the sustainability movement to make it not just possible but attractive. This will increase the likelihood that the changes will spread beyond the pioneers and excite vast populations.[1]

This section looks at some ways this is happening already. John de Graaf of the Take Back Your Time movement describes one way to "sell" sustainability that is likely to appeal to many people: working fewer hours. Many employees are working longer hours even as gains in productivity would allow shorter workdays and longer vacations. Taking back time will help lower stress, allow healthier lifestyles, better distribute work, and even help the environment. This last effect will be due not just to less consumption thanks to lower discretionary incomes but also to people having enough free time to choose the more rewarding and often more sustainable choice—cooking at home with friends instead of eating fast food, for example, making more careful consumer decisions, even taking slower but more active and relaxing modes of transport.

Closely connected to Take Back Your Time is the voluntary simplicity movement, as Cecile Andrews, co-editor of *Less is More*, and Wanda Urbanska, producer and host of *Simple Living with Wanda Urbanska*, discuss. This encourages people to simplify their lives and focus on inner well-being instead of material wealth. It can help inspire people to shift away from the consumer dream and instead rebuild personal ties, spend more time with family and on leisure activities, and find space in their lives for being engaged citizens. Through educational efforts, storytelling, and community organizing, the benefits of the lost wisdom of living simply can be rediscovered and spread, transforming not just per-

sonal lifestyles but broader societal priorities.

A third movement that could help redirect broader cultural norms, traditions, and values is the fairly recent development of ecovillages. Sustainability educator Jonathan Dawson of the Findhorn ecovillage paints a picture of the exciting role that these are playing around the world. These sustainability incubators are reinventing what is natural and spreading these ideas to broader society—not just through modeling these new norms but through training and courses in ecovillage living, permaculture, and local economics. Similar ideas are also spreading through cohousing communities, Transition Towns, and even green commercial developments like Dockside Green in Canada and Hammarby Sjöstad in Sweden.[2]

Two Boxes in this section describe some other exciting initiatives. One provides an overview of a new political movement called *décroissance* (in English, "degrowth"), which is an important effort to remind people that not only can growth be detrimental, but sometimes a sustainable decline is actually optimal. And a Box on the Slow Food movement describes the succulent power of organizing people through their taste buds. Across cultures and time, food has played an important role in helping to define people's realities. Mobilizing food producers as well as consumers to clamor for healthy, fair, tasty, sustainable cuisines can be a shrewd strategy to shift food systems and, through them, broader social and economic systems.

These are just a few of the dozens and dozens of social movements that could have been examined. It is just our imaginations that limit how we can present sustainability in ways that inspire people to turn off their televisions and join the movement. Only then, with millions of people rallying to confront political and economic systems and working to shift perceptions of what should feel "natural" and what should not, will we be able to transform our cultures into something that will withstand the test of time.

—Erik Assadourian

Reducing Work Time as a Path to Sustainability

John de Graaf

There is a silver lining on the cloud of recession that hangs over the industrial world. Contrary to popular expectations, in some countries—particularly the United States—health outcomes are actually improving. Christopher Ruhm at the University of North Carolina finds a decline in mortality of half a percent for each 1 percent increase in U.S. unemployment. How is this happening? Many of the newly jobless suffer acute stress, and suicides are up. But some are using the time off to improve the rest of their lives—learning to save, finding time to exercise, bonding more closely to family and friends.[1]

More important, the crisis has meant a reduction in working hours for most Americans for the first time in decades. Some companies and public agencies have chosen to cut hours through shorter workweeks or furloughs instead of laying employees off. With more time and less money, people are smoking and drinking less, eating fewer calorie-laden restaurant meals, and walking or bicycling more. While auto sales have plunged, bicycle sales are on the upswing. As Americans drive less, they die less often in accidents—U.S. traffic deaths declined by 10 percent from 2007 to 2008. Air pollution from cars and factories (as they produce less) is also down, resulting in fewer deaths, especially among children.[2]

In time, workers may find that the increased family time, improved health, and other benefits of more leisure outweigh the income losses. This should inspire more efforts to trade productivity for time instead of greater purchasing power.

But we need to do this for another reason: preserving the biosphere for future generations.

The Need to Limit Consumption

Data from the Global Footprint Network suggest that if people in the developing world were to suddenly achieve American lifestyles, the world would need four more planets to provide the resources for their products and absorb their wastes. Already—and with half the world's people living in real poverty—Earth's carrying capacity is being overshot by some 40 percent.[3]

Some environmentalists suggest that the world can have its cake (expanded production) and eat it too simply by improving technologies and investing in clean energy. Too

John de Graaf is a documentary filmmaker, co-author of *Affluenza: The All-Consuming Epidemic*, and executive director of Take Back Your Time.

often, however, technological improvements such as greater fuel efficiency merely lead to greater consumption of a product—people drive more, for example. As Gus Speth, former dean of the Yale School of Forestry, puts it: "The eco-efficiency of the economy is improving through 'dematerialization,' the increased productivity of resource inputs, and the reduction of wastes discharged per unit of output. However, eco-efficiency is not improving fast enough to prevent impacts from rising."[4]

Speth spells out clearly the cost of current trends in resources, pollution, and equity: disappearing rainforests and fisheries, exhaustion of fossil fuels, increasing hunger, a rapidly widening gap between rich and poor. Despite the faith of many in "super" cars and order-of-magnitude technical advances, the burden of evidence is clearly on those who think the economy and human activities can continue to grow exponentially without increasingly severe environmental consequences.[5]

Industrial countries cannot deny the rights of developing nations to greater economic prosperity while others continue to consume at current levels. That would be asking them to sacrifice so that the rest of the world can binge awhile longer.

Is There an Answer?

The current situation cannot continue, but people in industrial countries are reluctant to reduce their "standard of living." Is there a solution to this stand-off? Yes: the rich nations of the world must immediately begin to trade advances in labor productivity for free time instead of additional purchasing power.

And people must understand that doing so will not be a sacrifice. Rather it will mean substantial improvements in the quality of life.

There is a simple economic law that might be called the growth imperative. Technical progress consistently makes it possible to produce more product per hour of labor expended. For example, hourly labor productivity in rich countries has more than doubled since 1970. The point is simple: to keep everyone employed at the current number of hours while productivity increases, it is necessary to simply produce and consume more. It is unlikely that scientific progress and increases in labor productivity are going to stop. Therefore in order to limit consumption to current levels (or lower), it will be necessary either to lay off a portion of the workforce or to reduce everyone's working hours.[6]

Since 1970, the United States has chosen to keep working hours stable—in fact, there is some evidence that U.S. working hours have even increased during the past 40 years. By contrast, most other industrial countries, especially in Europe, have used shorter workweeks, longer vacations, and other strategies to reduce working hours—sometimes significantly. Today, the average American puts in 200–300 more hours at work each year than the average European does. Europeans have made a better choice.[7]

The Benefits of Shorter Hours

Shorter working hours allow more time for connection with friends and family, exercise and healthy eating, citizen and community engagement, attention to hobbies and educational advancement, appreciation of the natural world, personal emotional and spiritual growth, conscientious consumer habits, and proper environmental stewardship. The positive impact of greater free time can be seen by comparing quality of life indices for European nations and the United States.

Since 1980, for example, the United States has fallen from eleventh place in life expectancy to fiftieth. West Europeans now live longer than Americans. On average—although this varies by country—they are also only a little more than half as likely to suffer from such chronic illnesses as heart disease, hyperten-

sion, and type 2 diabetes after the age of 50. The United States now lags behind Western Europe in virtually every health outcome, despite spending about twice as much per capita for health care. Moreover, Americans, with their more stressful and hurried lives, are nearly twice as likely to suffer from anxiety, depression, and other abnormalities of mental health.[8]

Happiness is also affected. While the United States ranks a respectable eleventh in the world in life satisfaction, a recent study found that the four happiest countries in the world—Denmark, the Netherlands, Finland, and Sweden—were all characterized by their remarkable attentiveness to "work-life balance."[9]

The environmental benefits of reduced work time are myriad and include:

- Less need for convenience products. Fast food, for example, is in part a response to an increasingly pressured way of life. Highly packaged and processed foods and other products, including throwaway products, also appeal to those who feel time is short.
- More time to reuse and recycle. Separating wastes into paper, plastics, metals, compost, or trash takes time. People often skip this if they are feeling rushed or overwhelmed.
- Time to make other behavioral choices, such as drying one's clothes on a clothesline rather than in a dryer. When pressed for time, "convenience" tends to take priority.
- Time to choose slower and more energy-friendly forms of transport, including walking, cycling, or public transit rather than driving, or to take trains rather than planes.
- Time to make careful consumer choices, including for certified products like Fair Trade, organic, and songbird-friendly coffee or Forest Stewardship Council lumber.

Seattle Municipal Archives Photograph Collection

Bored in Seattle: the production line of a bottle factory.

Moreover, reductions in work time translate rapidly into reductions in energy use, carbon footprints, and pollution (as already seen in the current recession). A study conducted by the Center for Economic and Policy Research, a prominent Washington think tank, concluded that if Americans were to reduce their working hours to European levels, they would almost automatically reduce their energy/carbon impacts by 20–30 percent.[10]

Rushing Through the Environment

Finally, for many people environmental awareness is enhanced by exposure to the natural world, particularly in childhood. From John Muir to Aldo Leopold to Rachel Carson to David Brower, prominent environmentalists have written of the impact of their experiences in natural settings on their later commitment to Earth. A love of nature often results in less desire for material things. Aware of this, Muir was one of the first to call for a law mandating vacation time; he called it a "law of rest." In 1876, on the one-hundredth anniversary of the Declaration of Independence, Muir argued for "Centennial Freedom" that would allow

everyone, rich or poor, of whatever race or origin, time to get out into nature. "We work too much and rest too little," Muir declared. "Compulsory education may be good; compulsory recreation may be better."[11]

All Europeans enjoy at least four weeks of paid vacation by law. So do citizens of many African and Latin American nations. Yet the United States still has no law providing vacation time, and half of all American workers now get only one week or less off each year. Consequently, children are now only half as likely to spend unstructured time outdoors as they were in 1970, and visitors to Yosemite National Park—which is more than 300,000 hectares in size—spend on average less than five hours there. People rush through, snapping quick photographs of the granite cliffs and waterfalls, checking their watches, answering their cell phones, and dashing on. There is no time to appreciate the rhythms of Earth or experience a connection to other species, no sense of loss as they pass into extinction, no quiet time to reflect on the wondrous world that now is threatened with humanity's insatiable material demands.[12]

Trading Stuff for Time

What might people do to begin trading gains in productivity for time instead of stuff? The organization Take Back Your Time has been exploring the possibilities of this for the past eight years, encouraged by such developments as the Hours Adjustment Act in the Netherlands and France's 35-hour week.[13]

Dutch working hours are among the shortest in the world, and the Netherlands has the highest percentage of part-time workers. In part, this is a direct response to policy initiatives. European Union law already requires pay and benefit parity for part-time workers who do the same work as full-timers. Moreover, in the Netherlands the Work and Care Act and the Hours Adjustment Act encourage parents to share 1.5 jobs, each working three-quarters time, by requiring that employers allow workers to reduce their hours while keeping the same hourly rate of pay and prorating the benefits. While the right is used primarily by parents of young children, it applies to all employees. Those who choose this option also commonly fall into lower tax brackets; thus the economic penalty for working less is further reduced.[14]

In other European countries, innovative laws allow for such things as regular sabbaticals, phased-in retirement, and guaranteed days of rest, while sharply restricting long hours and overtime work. Europeans would do well to resist calls by corporate leaders to drop restraints on work time and follow the Anglo-American model, as their shorter work time has brought them a higher quality of life than in the United States.

In the United States and other long-hours nations, change must start with a sober assessment of the costs of the higher production/higher consumption lifestyles—what some now call "affluenza." Americans have the farthest to go in this and therefore perhaps the best opportunity to make quick progress. The United States stands alone among industrial nations and most other countries in its lack of laws guaranteeing such rights to time as paid maternity or family leave, paid sick days, or paid vacations. Paid maternity leave, for example, is now guaranteed everywhere except the United States, Swaziland, Liberia, and Papua New Guinea. Many immigrants to the United States are shocked at how few protections American workers have, particularly where the right to time is concerned. Bills currently being considered in the United States Congress would correct some of these deficiencies, but powerful forces are arrayed against them. Business lobbies resolutely oppose all "mandates" that would restrict their absolute control of working hours.[15]

On the other hand, there is some reason for

optimism. The voluntary simplicity movement has helped many Americans choose time over money where the choice was actually theirs to make and not the sole prerogative of their employers. The leaders of that movement understand that making these changes is not only a matter of voluntary action, and it can be helped by progressive policies. Strong organizations that advocate a better work-life balance, like the 1-million member group MomsRising, have emerged in recent years. And the great debate over national health care offers a chance to make points about the health implications of shorter work time.[16]

Since 2002, the Take Back Your Time campaign has worked to increase American awareness of the benefits of shorter working hours. These efforts have included celebrations of Take Back Your Time Day (October 24th) in about 200 U.S. municipalities, coverage of the issue in hundreds of media outlets, and campaigns for legislation such as the Paid Vacation Act of 2009 introduced by Representative Alan Grayson of Florida. His proposed law is modest by international standards—offering only one to two weeks vacation time for workers in firms of 50 employees or more. But it would be a "down payment" on further improvements and would enhance exposure of the issue in the media. Discussion of paid vacation—the epitome of leisure legislation—can help raise the broader issue of Americans' time poverty and its social and ecological impacts.[17]

In his inaugural address, President Barack Obama honored workers who accepted shorter hours rather than see their colleagues fired. But more can be done. Economist Dean Baker proposes that any further government stimulus packages include tax credits for companies that reduce working hours through shorter workweeks, family or sick leave, or extended vacation time without commensurate reductions in workers' pay and benefits. While temporary, such transition funds, which reduce short-term economic sacrifice, would make it possible for workers to see the value of increased leisure and reduced work time.[18]

Re-Visioning the Future

Clearly the world is at a crossroads. For all the remarkable benefits that investments in "green jobs" and new energy technologies will surely provide, they are only part of what's needed for long-run sustainability—necessary change, but not sufficient. To survive and to let people in developing countries somehow achieve secure and modest comfort, material economic growth in rich nations simply must be limited. Yet this must be done without stopping the progress of science and the advance of productivity and without casting millions into the hell of unemployment.

Ultimately, it can only be done by trading gains in productivity for time, by reducing the hours of labor and sharing them equitably. All of this means limiting greed, understanding that a life less rich materially but more rich temporally is not a sacrifice, finding new indices of success to supplant the gross domestic product (which is more a measure of the churn of money in the economy than of true value), and providing real freedom to workers so that their choice to limit their hours of labor does not come at the cost of being fired and losing their livelihoods and health care. It is time to take stock of the "best practices" already being implemented in some countries, expanding them and applying them throughout the world. This way lies hope, sustainability, and greater joy as well.

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