

Radical Premises in Sustainability Reform

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Abstract: To most individuals, sustainability means environmentalism. This unfortunate approach to the current global crisis has ignored a more realistic systems approach, that sustainability includes social, cultural, economic, individual, and technical components. Even more tragic is our inability to align our very admirable values related to sustainability with our demonstrated and often unenlightened self-interest and partisan selfishness, for it is individual behavior that creates the foundation for action in all other contexts in sustainability and potentially guides our ability to work with one another to make life-affirming decisions. This paper addresses the tragic gap between what we profess to value and the collective behaviors we demonstrate.

I. Introduction

We are a civilization in decline. Let's stop fooling ourselves about creating a sustainable world; we are simply past that point. As much as we prefer a rosier reality, our life support systems—air, water, and soil—are beyond critical mass, and we cannot rely on technology or human effort, spontaneous accord among nations, or the dissolution of corporate capitalism to recapture an earlier environmental state. While there are countless innovative developments afoot, there are no quantitative indicators that we are on our way to a sustainable planet: Our population grows unabated, our non-renewable resources are increasingly consumed, and our individual consumption increases yearly at an alarming rate. We will not change human nature; the human desire for profit, power, and pleasure; or benign intent in the next decade, a time period often stated as our last chance to “save the planet” [1]. We are not willing (or able) to make the individual or collective sacrifices necessary to even attempt a reasonable level of sustainability. We may, quite clearly, simply be working to extend our presence on the planet by a few decades, rather than to maintain indefinitely the quality of life we now experience. In short, we are in denial about our future, and we need to stop “idolizing the future” (p. 5, [2]).

I discuss in this paper sustainability topics no one wants to talk about...and they are, in some ways, witness to our apparent grave indifference to future generations. These are the sustainability topics that require personal responsibility, and the active demonstration of the more admirable values we individually and collectively express, even as we daily fail to demonstrate them to any, but a symbolic, degree. My approach is aggressive and solution oriented, most specifically to inspire personal change. This paper is not the author venting frustrations...it is an appeal to human conscience and action on the most primal level: survival.

You are the problem. We are the problem. That is, unless you are a part of a very few who continue to adopt rather extensive sustainable behaviors across individual, social, economic, and environmental sustainability contexts. We are our own worst enemy, the cliché goes. We are unwilling or unable to change our largely narcissistic behaviors in order to secure livable communities for those who will follow us. Will strict laws be necessary to prevent us from getting fat, using energy as if it were limitless, and fomenting conflict with most anyone who does not believe in our god or practice free market economics? Quite frankly, the central purpose of this paper is to make the reader uncomfortable—most centrally to encourage behavioral change. More passive approaches, many of us have found, simply do not work (you've heard most all of them). While so many of us agree wholeheartedly in our sustainability values, very few of us reflect these values to any great degree in our behaviors. (I do not suggest for a moment that my own behaviors could not continue to be improved.)

It is important to note here the approach to sustainability expressed in this article, that is, that sustainability exists in the following five contexts: *individual*, *social*, *economic*, *environmental*, and *technical*. Our prevalent error in considering sustainability simply environmentalism ignores the systems nature of the subject, and diverts focus from the most important contexts, individual and social [3], for it is our individual behavior and collective accord that provide a foundation for successful environmental efforts. The last 40 years of largely failed environmental efforts are a

testament to the inadequacy of a single context approach. Brief definitions of the five contexts in sustainability follow:

A) Individual Sustainability concerns a person's ability to live a lifestyle that includes creating harmony, interconnection, and relatively high levels of awareness in one's values, thoughts, and behaviors as well as maintaining an increasing control over one's physical, emotional, social, philosophical/spiritual, and intellectual life.

B) Social and Cultural Sustainability include the role of individuals; relationships among social groups; the family; collective behavior; social class, race and ethnicity; medicine; education; and the role of institutions in society that tend to promote harmony among people.

C) Economic Sustainability pertains to profit-making policies and strategies related to the design and development of a process, product, or service. Additionally, economic sustainability addresses factors that influence the economic health and profile of communities, including the standard of living, the business climate, employment, and the productive role of the corporation in the life of a community.

D) Environmental Sustainability addresses the engineering of processes, products, and structures which has, indefinitely, a less negative, a neutral, or a benign effect on all environmental systems and the Natural World.

E) Technical Sustainability addresses a wide variety of factors related to the design and manufacture of products, especially the 1) scientific research and appropriate technology supporting product design, function, and development; 2) ease and efficiency of durable construction and use; 3) maintenance and functioning capabilities that meet the objective for which a product is designed; 4) material selection; and 5) reduction, recovery, reuse, or disposal of parts and unused materials.

Further, I offer the following description of a sustainable society:

A sustainable society possesses the ability to survive and prosper, not just with respect to environmental resources, but also with respect to quality of life as it pertains to the values and conditions that promote continued individual and collective human prosperity and growth (e.g., opportunity, economy, privacy, community, the arts, education, and health). A sustainable society meets these needs simultaneously, and in the context of human respect and the ability to negotiate differences without military, social, religious, or economic violence. [4]

There are some academicians who have noted problems with our current single context approach to sustainability. Bartlett maintains we have failed to understand the exponential function, whether it be applied to oil and coal, or population growth [5]. Our limited material resources simply cannot support unlimited growth; it is a matter of mathematics. Advances in alternative energy sources, clean energy production, recycling, and waste disposal make it appear that "sustainable development" might be a reality, and not, as Bartlett claims, an oxymoron [6]. Hopwood, Mellor, O'Brien explain: "At some point, economic growth with ever more use of resources and production of waste is unsustainable" (p. 40, [7]). Increasing numbers of scientists and academicians now admit we have passed the point of no return as far as envisioning a future

characterized by the conditions under which we now live, especially those with respect to the Natural World [8-11].

We recognize that climate change has progressed at a far greater pace than models predicted 30 years ago [12]. The fact that we have reached the limits of growth, however, is an idea meeting with some resistance. In *Plan B: 3.0*, Brown suggests that, if we can make dramatic changes in our global lifestyle, politics, social structure, economics, and science by 2020, true sustainability will be possible [13]. The author cites the dramatic build up that produced a World War II victory for the Allies as an example of how we might undertake such an apparently impossible task. While this is an illegitimate comparison for quite a few obvious reasons (*scale* and *motivation* being the most apparent), we find ourselves on the brink of what some describe as an apocalypse. In a similar vein, Simon and Kahn and Dollar and Kraay believe our free market system will eventually produce a world which will be environmentally stable...resulting in greater wealth for all [14-15]. Haughton frames sustainable development in five principles mostly focused on intergenerational justice and a symbiotic relationship between the Natural World and human equity [16]. In general, however, “the sustainable development discourse at present is dominated by the managerial outlook” (p. 48, [17]). Most articles and books on sustainability appear to take for granted that our stay on the planet will be indefinite if we engage in environmental practices. Whether these authors are expressing naïve hope and optimism, or a 100th monkey philosophy, the objective measures of environmental, social, and economic sustainability quite clearly contradict rosy pictures of the future.

We are at the limits of expansion on literally all major global fronts—economic, environmental, social, and spiritual. Most all major biological systems that support life on the planet are at or beyond renewable limits [18-21], and the very positive and hopeful advances combatting our demise have not been embraced to a satisfactory degree by those in government and corporate sectors. Robbins notes the world-wide inequality of resources as a result of corporate capitalism and predicts increasing violence among nations and religions, growing social and economic inequality, environmental destruction, mass starvation, and social unrest [22]. Eventually, economic growth will stop, according to Costanza, mostly due to our inability to provide for fundamental increases in energy demand [23]. Haass characterizes the U.S. economic position in the world in “an absolute decline in influence and independence” (p. 2, [24]). According to the Pew Global Survey (2002), the majority of those surveyed cited both the availability of jobs and the growing gap between the rich and poor as worsening, creating increasing social unrest and discord among and within nations [25]. We have experienced times like this before but not to such a global extent with respect to resources and social civility.

A 2005 Food and Agriculture Organization of the United Nations (FAO) study reported a projected loss of 11% of arable land in 65 developing countries due to climate change by 2080 [26]. Considering current population growth projections, increasing climate change, invasive species, as well as inefficient food distribution, famine, social unrest, and disease, this condition may occur well before 2080.

Devetak and Higgott consider the chances for global social justice almost unimaginable, and conclude: “...the prospects for a satisfactory synthesis of a liberal economic theory of globalisation, a normative political theory of the global public domain, and a new social bond are

remote” (p. 1, [27]). Brundtland summarizes the global dilemma we face, suggesting that a free market economy will not bring prosperity to impoverished countries and suggests that only peaceful global collective action will determine “whether we succeed or fail in our efforts to advance global development, growth, security, and peace” (p. 156, [28]). She notes further:

Today, in an interconnected world, bacteria and viruses travel almost as fast as e-mail and financial flows. Globalization has connected Bujumbura to Bombay and Bangkok to Boston. There are no health sanctuaries. No impregnable walls exist between a world that is healthy, well-fed, and well-off and another that is sick, malnourished, and impoverished. Globalization has shrunk distances, broken down old barriers, and linked people. Problems halfway around the world become everyone's problem. Like a stone thrown on the waters, a difficult social or economic situation in one community can ripple and reverberate around the world (p. 149, [29]).

As far back as 1987, Brundtland noted that “the present disturbing trends and developments cannot continue. We believe that humanity has reached a crossroads in its relationship with nature” (p. 4, [30]).

Without the hoped for massive and immediate transformation, or any significant indication that such a change is imminent or in progress, we have become subject to evolution, that we may simply have been “wired” to evolve out of existence (It has been suggested that the human brain, still biologically prehistoric, cannot process the ethical complexities of advanced technology). Thomas Malthus was, perhaps, the first to imagine the end of human existence, but suggested famine as a potential check to overpopulation [31]. In 1848, John Stuart Mill warned that population might well outstrip our material resources [32]. That famine and disease would tend to balance our global population, and thus reduce the stress on our resources, is no longer a realistic theory. For such events to control world population, at least according to population experts like Malthus and Mill, we would have to refrain from sending food and aid to nations in distress. When we do save lives, ironically, we disturb the natural forces overpopulation, famine, and natural disaster serve.

Others have noted that we may survive as a species, but in some dramatically, and perhaps dire, form. From Rachel Carson’s somber 1962 prediction in *Silent Spring*, to Paul Ehrlich’s 1968 *The Population Bomb*, and Philip Wylie’s 1971 *The End of the Dream*, we find warnings and predictions of astounding population growth and shrinking natural resources. While these authors miscalculated the time at which these changes would take place (Carson, especially), these works are, nevertheless, prescient. Denial is an issue here; Buell suggests we have moved from predictions of apocalypse to environmentalism as way of life in the United States—*Hope* has become the by-word of the environmental movement [33].

Much of this is difficult to predict, but any one of our economic, social, or environmental problems could result in global disaster, the type of which we cannot yet imagine. These may be “doomsday” scenarios few care to entertain, but such predictions are certainly not without merit if one reads a newspaper. Perhaps it is our basic inability or lack of desire to share our resources, but one thing is certain, our problems are human in origin—our inability to settle our differences without violence, whether it be military, economic, or religious.

Michael Pollan suggests that sustainability “is at its very bottom, a crisis of lifestyle—of character, even” (p.171, [34]), echoing Wendell Berry’s 1970 proclamation that the environmental crisis, in all its forms, is a crisis of human character [35]. Many of us can see this in our own behavior—why we find it so difficult to align our behavior with our values, whether it be related to social, economic, or environmental issues...or even more personal matters. If we agree that individual values in any form, maybe even those of Freudian primal self-preservation (which he later, at least to a degree, questioned), are at the center of all human behavior, we cannot blame our institutions, policy decisions, legislation, or other people for our sustainability problems, as much as we would like to do so. Quite clearly, we have always been responsible for our own fate.

We live in what some believe to be a value-free society, where unenlightened self-interest is generally the norm while personal responsibility, integrity, and benevolence towards others are considered altruistic acts. Our drive, at least in the West, and appetite for consumption, are nearly limitless, and our collective values do not chastise such behavior; most often, the possession of material goods and leisure time, and influence over others, are considered desirable goals for which many of us strive. This is not revelatory. Our personal failure in adopting and demonstrating sustainable collective values has become institutionalized (or maybe it is simply outside our nature to care about it). Writers throughout our short history, from Franklin, Emerson, and Thoreau to Maslow, Rogers, Howard Gardner, Dewey, and Capra have focused on the role of individual values and behavior as means to solve collective problems. It is quite clear we must begin to consider our collective needs first.

Goodland suggests that even “sustainable development” initiatives are largely characterized by resource consumption and increased production—our efforts still focused on economic growth; instead, the priority for development should focus on human well-being [36]. While this topic pervades political speeches and our publically expressed values, it does not characterize our behavior, nor does it demand a significant portion of our financial or social resources.

In 1980, Carl Rogers wrote of our post-industrialist society reaching its limit, citing Stavrianos’ *The Promise of the Coming Dark Age*, which suggested the need for a “transfiguration of our values and motives” (p.330, [37]) if we were to survive. Further, Rogers notes the failures in our society brought on by an increasing maldistribution of wealth, a lack of unified purpose and goals in our industrial sector, rapidly accelerating technology, and our increasing reliance on the profit motive of multi-national corporations [38]. Our reliance on science and technology (or business practices and legislation) to solve these problems has produced little lasting change.

Perhaps this is where readers will become defensive (and likely not for the first time), suggesting that pessimism or defeatism characterizes these observations. Agreeing that we have failed as a species is not something that offers the hope that evidently sustains our current lack of action or increasing denial. Quite clearly, we have missed the point that human sustainability is greatly advanced by aligning our behaviors with our expressed values.

If we are simply attempting to extend our fruitful stay on the planet, we appear to have been going about it wrong. We look to policy and law, or others, to make the changes we need to

preserve our environmental, social, and economic resources. What this indicates, according to Leonard, is a “fundamental shift...that would-be leaders seem afraid to discuss” (p. 240, [39]). While many preach individual action to live more in concert with efforts that will promote sustainability, few of us have taken this seriously, at least not enough to make any measurable difference. Sadly, looking to free market economies to assist measurably with changes that fundamentally require individual change and growth have proven futile.

This article (the first of three on the topic) addresses topics few want to talk about, perhaps since they are the result of underdeveloped or misguided human values, or more so, the result of the slow evolution of values, especially those that motivate life-affirming collective behavior. We must recognize how the Natural World constitutes a system dependent upon balance, and without which, will eventually result in more uncontrolled and unpredictable changes, many of which we are already experiencing and show no signs of improving. We cannot simply re-freeze the ice caps, create more (non-renewable) natural resources, “produce” topsoil, stop religious wars, or prevent the global government and corporate corruption we have come to accept (or explain away for fear of having to do something about it). And were these miracles to be possible, we have likely passed the window of opportunity in which they could be successfully employed worldwide. Even the hopes of employing innovations in alternative energy will fail until they are embraced wholeheartedly and enthusiastically by government and corporate interests. For example, there are few or no signs that the global petroleum industry is likely to abandon their own interests and profits in favor of alternative energy. Even in the highly unlikely transformation in values essential for such an unprecedented and dramatic change, just this one transition, of the many required for survival, *if started tomorrow* globally, would simply take far too long to be effective, or offset the rapid and continuing decline in other indicators.

The radical premises introduced here are conditions that are the result of our *ability* to express sustainable collective values and our *inability* to demonstrate them to any substantive degree. Adopting sustainable values, as opposed to sustainable economic development or governmental policies, requires serious individual self-development and change, a process too few of us appear to engage seriously. Few would argue that most meaningful societal change starts with individual change. We may not require such behaviors of others because we do not want to be subject to them ourselves, which is, perhaps, why we are so tolerant and forgiving of others who exhibit unsustainable individual or collective behavior. A case in point: Virtually all Americans, conservative and progressive alike, were outraged by the British Petroleum (BP) oil spill in 2010. From Fox News to MSNBC to National Public Radio, scathing editorials emerged day-after-day. We collectively damned BP’s flaunting of safety regulations, lying to the public, and evading clean up. So, why is BP still in business? Are our values such that it is too much effort to drive an additional 500 feet to another gas station? Would we not want to put all other oil companies “on notice” for safety compliance by forcing one of them out of business? By the way, profits are up for BP in 2011. In a dramatically similar event, the 1989 Exxon Valdez spill was not much more than a temporary inconvenience to the corporate giant, nor did many of us retaliate economically. The State and Federally sponsored Exxon Valdez Oil Spill Trustee Council monitoring over the last ten years has reported that “Exxon Valdez oil persists in the environment and in places, and is nearly as toxic as it was the first few weeks after the spill” (p. 3, [40]). Exxon Mobile remains largest publically traded corporation on the planet.

The objective of this article is to stress that our behavior related to sustainability is not aligned with our values on these issues. Without such alignment, we will continue to fail in our efforts to

sustain life on the planet as we know it. Consider this: The goals of the most recent Earth Day celebration were almost identical to those we presented during the first Earth Day celebration in 1970. One would think that over 40 years of awareness would have led to some serious quantifiable advances in environmental sustainability.

II. Radical Premises in Sustainability

The first three radical premises are as follows: 1) You Can't Eat More than Your Share; 2) You are Responsible for Everything You Buy; and 3) The Possession of Material Wealth or Political Power Does Not Confer the Right to Consume More than One's Share of the Planet's Natural Resources, or to Control the Fate of Others. In general, these premises demonstrate our inability to live in concert with the natural, social, and biological forces on the planet, and the human behaviors they demand.

A) You Can't Eat More than Your Share

The number of overweight and obese Americans is well-documented, but even more disturbing is the rate at which it has been increasing. During the past 20 years, there has been a dramatic increase in obesity in the United States. In 1985, only eight states had obesity rates (defined by a Body Mass Index, BMI, of over 30) between 15-19% of the population; by 2010, no states had obesity rates lower than 20-24%, and 12 states had obesity rates of over 30% [41]. If we include overweight people (25-29.9 BMI), the percentage is almost two-thirds.

According to the Centers for Disease Control and Prevention, about one-third of U.S. adults (33.8%) are obese, and approximately 17% (or 12.5 million) of children and adolescents aged 2-19 years are obese [42]. By contrast, the Food and Agriculture Organization of the United Nations reports Japan's obesity rate is 3.2% while Mexico's is 6.3% [43]. Projections indicate that, by 2015, 75% of U.S. adults will be overweight or obese, and 41% will be obese [44]. The Mayo Clinic Children's Health Report notes that obese children are more likely to experience health problems which include diabetes, poor self-esteem, cardiovascular disorders, high blood cholesterol, and more [45]. Considering the rapidly increasing rates of childhood (overweight and) obesity rates, our future may be characterized by a generation of seriously unhealthy people and a staggering health care budget. The United States, the most affluent nation on the planet, is also the fattest.

The diet industry in the U.S. will reach 59.7 billion by 2014 according to a CNBC diet industry report [46]. In 1999, annual medical costs in the U.S. related to obesity were 70 billion [47]; three years later, in 2002, the costs were 100 billion [48]. According to the National Diabetes Information Clearinghouse (NDIC), diabetes (mostly Type 2) affects almost 26 million Americans, 8.3 percent of the U.S. population—18.8 million diagnosed and seven million undiagnosed [49]. In addition, the NDIC reports 215,000 individuals under 20 have been diagnosed with Type 2 diabetes, a dramatic increase over the past decade [50]. In 2007, the direct and indirect costs of just this one easily preventable or reversible disease was 174 billion a year [51]. Statistics for other diseases of food overconsumption, including heart disease, stroke, various cancers (breast, liver, prostate, stomach, lung, respiratory, colon, esophagus, kidney,

bone, and others), and conditions (hypertension, osteoarthritis, stress disorders) are similarly disturbing, considering that most can be prevented and many reversed [52].

According to Wright, Kennedy-Stephenson, Wang, McDowell, and Johnson, in the period 1971–2000, the average daily number of calories consumed by women in the United States increased by 335 calories per day (1542 calories in 1971 to 1877 calories in 2000); for men, the average increase was 168 calories per day (2450 calories in 1971 to 2618 calories in 2000) [53]. Most of these calories have come from increased consumption of carbohydrates and sugar, rather than fat [54]. The USDA reports the typical American’s dietary intake of calories in 2000 at just under 2,700 calorie per day, an increase of almost 25% (or 530 calories) since 1970 [55]. The FDA recommended calorie intake per day for men is 2000-2500; for women, 1800-2300, depending upon body size and activity level. The American Cancer Society suggests 2618 calories per day for men and 1877 for women [56].

Consider the fact that even an increase of only 100 calories a day, unburned, will result in weight gain of almost a pound a month. We are eating more food than we need or can burn. We are literally eating ourselves to death with fat, sugar, cholesterol, and excesses in animal-based protein, while at the same time becoming increasingly sedentary.

More than 60% of Americans do not achieve the recommended modest amount of physical activity to obtain health benefits, and 24% are not active at all [57]. In other research, The Centers for Disease Control (CDC) Health Report 2010 reports the following for 2009: 47% of adults over 18 met the Physical Activity Guidelines for aerobic physical activity; 22% met the criteria for muscle strengthening activities, and only 19% met the criteria for both [58]. These criteria are based on the exercise necessary to preserve one’s existing state of physical health. Other research on this matter is even more disheartening: The *Journal of the American College of Sports Medicine* reports that “Physical activity declines dramatically across age groups between childhood and adolescence, and continues to decline with age. For example, 42% of children ages 6-11 years obtain the recommended 60 minutes a day of physical activity, whereas only 8% of adolescents achieve this goal. Among adults, adherence to the recommendation to obtain 30 minutes per day of physical activity is less than 5%” (p. 184, [59]).

The World Health Organization reports the following: One-third of the Earth’s human population is starving, another third is under-fed, and one-third is well-fed. In the last five minutes, at least 200 people died of starvation [60]. In the United States, reports the non-profit Feeding America, one in six people struggles with hunger [61]; 49 million Americans, including 16.7 million children—live in food insecure households [62]. At the same time, according to Jones, 14% of food purchased for a U.S. family of four is tossed out (about \$590 per year per household or \$43 billion annually) [63]. Compounding the problem is the increase in the consumption of fast food. In 2006, fast-food restaurants made up roughly 30% of all restaurants, up from 17% in 1997, an increase of 71% [64].

The United Nations Department of Economic and Social Affairs has projected a world population of eight billion by 2025, nine billion by 2043, and ten billion by 2083 [65]. Over 900 million of the Earth’s population are chronically malnourished (some report higher rates)—16% of world population [66]. Gilliland notes that less developed countries will soon be importing an increasing amount of food from developed countries, a practice they can hardly afford [67]. Little of this information is encouraging, and there are reasons why.

Two central issues emerge here, one practical and one values-related. We simply cannot afford an even greater health care crisis than we are now experiencing. While our nation is in decline, financing overconsumption is clearly unwise, especially considering myriad other national needs. The U.S. healthcare budget for 2011 was 882 billion (projected 2016 costs are 1.2 trillion); by comparison, the defense budget is 965 billion, and the education budget is 130 billion [68]. The second issue is more controversial: As a nation, we are eating ourselves to death—almost literally—and spend valuable resources (money, human energy, innovation) on addressing the countless lifestyle diseases caused by overeating. Considering there are shortages of food, not only in the U.S., but world wide, do we have the human right, quite literally, to engage in this practice, one that lowers our productivity, produces a health care and diet industry reeling out of financial control, while all these resources are in dire need elsewhere? The issue, whatever the case, is what we eat and how much we eat. Our agricultural capacity, already overburdened by the production of meat, is often guided by our choices, and it is clear that we consume too few calories of essential nutrients and too many unhealthy calories. Overconsumption, in this perspective, is purely an individual issue.

B) You are Responsible for Everything You Buy

Personal consumption expenditures in the U.S. have doubled since 1988, according to the Department of Labor [69]. Among the countless items consumed, the astronomical increase in the sale and use of electronic devices, personal computers, and more recently, hand-held electronic gadgets are consuming the planet's non-renewable resources at an increasingly unsustainable rate. Beyond being a resource drain, these purchases are having a dramatic effect on our culture and health. A recent Kaiser Family Foundation study found that young people between the ages of 8 and 18 years old spent an average of 53 hours a week (7 hours 38 minutes per day) using electronics, 77% of this time spent watching television and using hand-held devices and computers [70]. Aside from the documented behavioral issues (ADD, ADHD, stress, anxiety), health issues (obesity, addiction, sedentary lifestyle) and lower academic performance related to such activities, the demand for electronics is still increasing [71]. Statistics for adults 18-65 indicate that, on average, an individual spends over eight and a half hours each day watching television, talking on the phone, working on the computer, texting, e-mailing, playing video games, etc. [72].

Apart from electronic devices, individual consumption on the planet is increasing rapidly. As far back as 2004, the State of the World Report noted that 12 percent of the global population, all living in North America and Western Europe, account for 60 percent of the personal global consumption [73]. Our overconsumption is not making us as happy as we might believe. The Happy Planet Index measures how happy a country is by comparing resource consumption, well-being, and life expectancy. In 2009, the United States ranked 114 out of 143 countries surveyed [74].

Perhaps even more importantly, most of our electronic devices, and countless other products not produced in the United States, are mined and manufactured by individuals who live in dire poverty, in toxic environments, and too often work under conditions we might well consider slavery. Paramount among these conditions is exposure to toxic compounds (including dioxin)

and living in communities with no adequate toxic waste disposal, inadequate food and water supplies, and limited or no health care. For example, the production of silicon chips for computers, produced almost entirely in Third World countries, exposes workers to the toxic elements antimony, arsenic, boron, and phosphorus, all needed to make chips conduct electricity [75]. According to the World Health Organization, working with silicon alone is responsible for thousands of deaths a year [76]. In Guiyu, China, unprotected workers processing obsolete computers are exposed to barium, cadmium, and lead on a daily basis, making exposure to consumer product toxins a potential world health problem [77]. Singer and Erickson report that “a long list of potentially harmful substances, including chlorinated solvents, bromated flame retardants, PVCs, heavy metals, plastics, and various gasses are used to manufacture electronic products and their components” (p. 521, [78]) for U.S. markets.

The Third World workers who produce many of our consumer goods work for what might be considered slave wages. For example, Haitian sweatshop workers producing clothing for the Disney Corporation earn a wage of \$15 per week for a six day, eight hour per day week under grueling circumstances, harassment, and unsafe conditions [79]. In 2009, the Haitian government instituted a minimum wage of \$3.75 per day [80]. While this hard fought, minimal increase did little to change Haitian workers’ standard of living, the International Labor Organization of the United Nations reports that due to the global financial crisis, wage growth was cut by half in 2008 and 2009 [81].

In an expansive study of thirteen countries that produce consumer goods for U.S. markets, Banerjee and Duflo reported that the mean per capita consumption was between \$62 and \$359, with the average of \$134 [82]. In these countries, 92% of the population earn less than \$10 a day [83]. Even beloved (and highly eulogized) Steve Jobs ignored his factories in Shenzhen, China, a mammoth facility producing Apple Computers, where job-related suicide claimed at least 12 lives in 2010; employees work in totalitarian-style production line conditions 12 or more hours a day (30+ hour shifts are not unusual); injured workers are fired; workers are housed in overcrowded dormitories; children as young as 12 are employed; and 70+ hour work weeks are often the only way to earn a basic living wage [84].

Perhaps the most frightening fact here is that while our global population is growing at over 80 million per year to a estimated population of 8.9 billion by 2050 [85], our non-renewable resources are diminishing quickly, and per capita consumption in most all countries is increasing. Much of this growth will take place in Third World countries, regions already resource stressed by population growth and severe health conditions, and declining agricultural yield. So, far no one has a plan, or can agree on one, to address this 200 year old problem, especially with free market economies and self-serving values working against us.

We, *as individuals*, are responsible for everything we buy, especially the conditions under which the products and devices we purchase are made, from mining to construction to retailing to disposal. This unpopular leveling of responsibility (or some would say guilt) on the individual is unavoidable. If we, as individuals, purchase products voluntarily, we are responsible for the conditions under which the workers live and work, as well as the natural resources consumed and the effects on our environment.

C) The Possession of Material Wealth or Political Power Does Not Confer the Right to Consume More than One’s Share of the Planet’s Natural Resources, or to Control the Fate of Others.

Throughout history it has been assumed that material wealth conferred the rights of possession or control of resources, which has and does, at times, include human beings (human capital). This is largely true today, even if the control appears more subtle at times. Most of the resources on the planet are in the possession of a very small minority of people, mostly Westerners, mostly white, mostly men. The rest of us are at fault, as well.

Forbes reported 946 billionaires world-wide (and growing yearly); each had a average individual net worth of 3.6 billion (\$3.5 trillion combined) [86]. Twelve percent of the world's population (mostly living in North America and Western Europe) is responsible for 60% of global consumption [87]. This statistic is reflective of the fact that half the world's population exists on less than \$2.50 a day [88].

Regardless of how one feels about the morality of these statistics and the human misery they indicate, it has proven to be characteristic of an unsustainable global economic system. The world's wealth continues to be concentrated in the hands of fewer and fewer individuals, and income disparity is growing yearly; this is not news since it has been reported for over two decades that the middle class is disappearing [89]. We have grown far away from DeToqueville's view of the United States as embracing general equality. Quite clearly, wealth continues to be the determinant of power, consumption, and influence. We can see this competition escalating among multi-national corporations and world governments, where conflict over the control of resources will soon be second only to conflict among religions. The inevitable inequalities that result from unregulated corporate capitalism have been noted by academics over the past 200 years, from Malthus and Marx to Veblen and Keynes. What is new, however, is 1) middle class income is decreasing; 2) many essential global non-renewable resources are at, or beyond, critical mass; 3) global climate change is well under way, resulting in effects few can deny and increasing populations experience; 4) economic institutions and systems (and perhaps, countries) world-wide are failing; 5) the super wealthy continue to concentrate wealth and have been insensitive to calls for equity, even in quite relative terms; 6) consumption among all socio-economic classes is increasing; and 7) conflict and social unrest are increasing world-wide.

Even beyond the super wealthy, affluent populations in wealthy countries consume far more than their share, as noted above. The United States, home to less than 5% of the global population, yearly consumes nearly 25% of the world's fossil fuel resources—25% of the coal, 26% of the oil, and 27% of the natural gas [90]. Over the last century, non-fossil fuel or food raw material consumption rose 5.1 times more than our population [91]. Total U.S. fuel and material consumption rose 57% from 1970 to 2000, which was 51% higher than the European average [92]. Raw material resource use in the U.S. increased by more than one third from 1992-2001 [93]. The increase in the use of non-renewable resources (by weight) increased from 59% to 95% over the last century (adjusted for population growth), much of this increase due to construction materials [94]. According to the National Association of Home Builders, the average new home size in the United States rose from 1,400 square feet in 1970 to 2,700 square feet in 2009 [95].

Continued resource consumption and energy use in Western countries are far overreaching our desire for socially desirable goods and services, and the overuse of non-renewable resources is resulting in dramatic environmental impacts including climate change, pollution, altered biogeochemical cycles, and reduced biodiversity. The U.S. “Primary Energy Consumption” increased from 40 quadrillion BTU in 1950 to 100 quadrillion BTU in 2001 [96]. In order for us to support the projected nine billion global population for 2050 at the current U.S. lifestyle standards “would require about 268 terawatts, 16 times the current global energy use” (p. 22, [97]). As untenable as this fact sounds, consider that U.S. consumption levels are increasing yearly, as are the levels of most nations, especially China and India. If we are to believe Bartlett, we have failed to recognize the complications of population growth being exponential, so predicted resource consumption over the next 40 years may well be greater than we might now imagine [98].

Nineteenth Century German chemist, Justus von Leibig, advanced his *Law of the Minimum*, which posited that growth is determined by the scarcest resource available, rather than by the total amount of resources available [99]. We can only manufacture products based on the availability of the scarcest component. While there are a good number of non-renewable resources left on the planet, we are consuming them at an almost unimaginable rate, and some we rely upon heavily are running out. The World Wildlife Fund predicts that at the current rate humans are consuming resources, we will have entirely exhausted many of our essential natural resources by 2050, and for most, we will have no alternatives [100]. Even our renewable resources are no longer replacing themselves to meet increasing demand, and while such resources will never truly disappear, their practical use may be severely restricted by a diminished replacement rate, increased consumption, and growing population.

These facts are just a very few examples of a society that consumers far more than it needs to be comfortable, content, and productive. Much of our national income is spent on conveniences— toys some would say— simply to make life easier or distract us, or as William James (1910) suggested, to establish “a pleasure economy” (p. 8, [101]). Between 1946 and 1991, per capita real income in the U.S. rose by a factor of 2.5 (from approximately \$11,000 to \$27,000 in 1996 dollars); in the same time period, however, our levels of happiness, on average, did not change [102]. France, Britain, Germany, and Japan display a similar situation in different time periods [103-104]. The British *New Economics Foundation* think tank, founded in 1985, ranked the happiness of countries since 2006 using a variety of indicators— especially sustainability—a measure not employed by other older global happiness indices. According to the 2006 survey, the U.S. ranked 150 of 178 countries surveyed. As noted earlier, in 2011, the *New Economics Foundation* ranked U.S. happiness at 114 of 143 countries surveyed [105].

A natural question emerges: Why do we consume so much when it appears it makes us no happier? And further: Is it ethical to consume as much as we do, simply because we have the financial resources? Perhaps 20 or 30 years ago we could claim we had not educated ourselves fully, or that the data on these issues were simply not available. This is no longer the case.

Is it unenlightened self-interest driving us to marginalize the almost 17 million American children living in poverty, 21% of all U.S. children, as well as three million seniors, almost 4% [106], while our individual priorities are elsewhere? These facts may, unfortunately, say much about our national priorities and about us as human beings. The cost of feeding these 17 million children a healthy school breakfast is \$3.6 billion a year [107] (not much, considering the war in

Iraq was costing U.S. taxpayers that amount every ten days), which would go far to reducing the \$28 billion per year it costs because poorly nourished children perform poorly in school and require significantly greater long-term health care spending than their well-fed counterparts [108].

Being rich or powerful does not confer the right to consume unlimited energy or materials (or human energy). Or to create misery. Still, this is, in one perspective, not only a moral issue, but a practical one. How we have been living up to this time in history is simply not sustainable...for the global poor and increasingly for all others.

III. Discussion / Conclusion

Before my reader interprets this treatise as simple doomsday philosophy, consider these further observations. In all the indicators noted above, there seems to be little or no evidence indicating a reversal in any of the conditions that characterize our increasingly dire global situation. While readers of the several drafts of this paper have noted my apparent fatalism with some emphasis, I have not succumbed to that position. I have reported observations here that clearly describe general planetary trends. And while acts of kindness, astounding creativity, and remarkable technology are improving conditions for some populations (such as increasing clean water worldwide and a slight increase in food production in Third World countries), these are simply not enough to tip the balance of our future to predictions of human cooperation, peace, and a reasonable relationship with the Natural World. I simply cannot resort to *hoping* these encouraging acts will soon be the norm, and as much as I do sometimes hope for miracles in human intent and behavior, the indicators described in this paper are tending to get worse, and some at great speed. I truly wish the facts were more encouraging.

While too many of us may have forgotten what we learned in kindergarten related to sharing, it is a lesson conveniently ignored when it comes to enjoying the benefits of wealth, consumption, and pleasure. Sadly enough, we, including the powerless, have come to accept greed as acceptable behavior for the human species, although it usually presented in more genial terms (“competition”). We find even religions, perpetually in conflict over who has the right god, but ostensibly bastions of peace, are ever again at war across the planet. The same is true for governments, for countless reasons we really cannot justify beyond having a self-serving “right” philosophy— but also couched in more generous and expansive terms. Our global war budget is 1.5 trillion each year [109], 43% of which is attributable to the U.S. [110]. Much of this activity is simply serving to consume environmental, social, and economic resources and shorten our productive existence on the planet. We might best be guided by more collective ideals, even for *the common sense reason that such an approach most always works more effectively for all involved*. We know this, but still we appear to be motivated by our more instinctual and primal characteristics, ones we might have expected to diminish once we developed our cognitive processes and humanistic values. It is always disappointing to realize we are not well-guided by the values we profess to our children (nor, then, are we always good role models), preferring to explain away our selfish behavior as required by circumstances beyond our control, or simply “that’s the way things are, you can’t change them.” Few of us would openly admit to the “crimes” of selfishness we demonstrate, but Bigda Peyton suggests they may be psychological in

nature, and less savory than simply due to the cultural norms supporting our drive to use up and throw out: “Harmful overconsumption occurs when psychic structures dominated by destructive instincts succeed in overpowering life-sustaining impulses” (p. 265, [111]). Yes, it may be risky getting Freud into the conversation again, but self-destructive drives may offer as reasonable an answer to this dilemma as any social or economic explanation. Clearly, we have reached a point at which no reasonable explanation for our behavior can be disregarded.

It is attractive to offer some advice here on how we ought to live, but to repeat what everyone has heard, and likely expressed, seems futile. Perhaps our behavior is due to our inability to productively address the serious situation we have created and perpetuated on our planet. Maybe it is truly not our fault that we are beyond our abilities to successfully maintain human relations worldwide...as we have, throughout history, been unable to negotiate our differences without violence, at least not enough so to secure a sustainable future. The problem here is not *quality* of thought and action, but *quantity*. There are some among us quite willing and able to follow that kindergarten advice, but the actions and profound *hope* embraced by these few worldwide are simply not enough to transform predominant and overwhelming self-serving human behavior. We have found no suitable answers in our philosophies as to *how* humans should live together...that is, the behaviors that lead to some acceptable level of continued equity and balance. The public conversations that accompany this issue, usually expressed as hope and positive visions of the future, seem superficial and clichéd. Even Kierkegaard (2010) noted that “uncertainty is filled with hope” (p. 113, [112]). It appears we may not attempt to swim, hoping for the waters to recede, even when we are in imminent danger of drowning.

Explaining our difficulty living on the planet together is a complex and highly personal matter, but until we learn and practice the behaviors that lead to authentic individual well-being and personal integrity, we are unlikely to live well with others. We know what values promote cooperation and collective prosperity (we have some fine examples of them); we simply have not learned to practice them in our own lives well enough, or often enough, to sustain ourselves much further into the future. To a great degree, we must admit that our current trajectory simply will not work—this is common sense. So, even beyond our sacred philosophies and values that support human “freedoms,” it has proven to be an untenable and unsustainable path. Should we proceed as we have, we will find that increasingly conservative governments and legislation will forcibly restrict human behavior and consumption, and at the expense of the freedoms and choices many of us have learned to cherish. Is this the only method that will align our behaviors with some basic sustainability practices? Quite simply, we may well face a future that, if we are unwilling to curb our consumptive behaviors, we will be forced to do so by repressive governments. In such cases, of course, politicians and the very wealthy will continue to enjoy lavish lifestyles, with the middle and lower economic classes paying the bill. Some things never change. It may be the only way to survive if we are unwilling to practice individual behavior that supports sustainability. Human beings may have failed to responsibly exercise free will and provide for survival at the same time.

We are a species in decline. Our continuing social, economic, and environmental decline is a “species-level event”; that is, circumstances indicate that human evolution will be limited, largely due to behaviors leading to the destruction of our own habitat. While some have jokingly stated that humans are an endangered species, we do share the characteristics of this demise with other life forms, but at our own hands. If we have indeed passed the “point of no return” in our evolution, how do we face an uncertain future? In the past, humans have spent significant time

and energy on material gain, power, and leisure...desires that have produced the current unpleasant circumstances. Perhaps we will buy some additional decades by concentrating on human factors such as education, human rights, and health with the same vigor we have been accumulating wealth and power, and consuming.

While serious sustainability efforts continue to abound among some small populations, governments and industry tend to pay more attention to how we should *adjust* to the circumstances we have been unwilling to prevent. While governments, large corporations, and others who profit from the status quo make early preparations for upcoming resource wars [113] by purchasing and establishing Arctic shipping routes, and confronting rising sea levels and the continued dramatic loss of topsoil (among many others indicators)—and profitably—we may fail to recognize the similarities to individual behavior. Too often we accept and learn to live with personal medical or psychological conditions and lifestyle diseases we can remedy with behavioral changes, but prefer, perhaps, to consider viable remedies beyond our abilities. Again, we have failed to recognize that if we want to learn to live productively on the planet, we must first learn to live so with ourselves. This is not a new or profound idea.

All animals have a survival instinct. Human beings' survival instincts are primal, as one might expect, and it may be we are losing what instincts we have...or they have not evolved rapidly enough to include collective consciousness, values, and life-affirming behaviors as one would expect considering myriad learning experiences our species has been offered. Many philosophers, artists, and scientists throughout history have lamented the fact that we have not evolved enough to understand and act upon the terms under which we can continue to occupy the planet. Darwin especially notes our capabilities for employing "exalted mental powers" (p. 107, [114]) to direct our own evolution but warns that selfish people will be unable to work collectively. Most significantly, we have lost a principle survival skill—the ability to foster a balanced relationship with the Natural World (and beyond its use for resources or as a dump). While technology has provided some remedies to these problems, we have clearly reached our limits.

To state bluntly that our *faith* in technology has reached religious proportions, and has been the mitigating factor in our evolution and survival, is likely to irritate some, considering that current generations have quietly believed (at least tacitly) technology will solve all our individual and collective problems. It is clear, however, that no matter how revolutionary and promising and useful our inventions have been, our application of technology (some remarkable positive examples aside) has normally been employed to take advantage of others, either militarily, socially, politically, or economically. And all this time our behaviors never came close to matching our very admirable public pronouncements concerning how we should treat each other or how technology can improve human existence. Regardless of our slow progress in these matters, it appears we have not been swift enough to guarantee our survival for any extended period of time.

Perhaps we have not clearly understood the ethics and social repercussions of the growth of technology while we have pursued material rewards and the fascination with how technology can make lives easier. In acting on our faith in technology, we have failed to study the ethics of technology or be guided by those who have. Or, we have simply been mesmerized by our

sometimes miraculous gains. Or, maybe we have just been “too busy” to really care. How technology will affect us in the future has normally been characterized by loud exhortations of its benefits, rather than adequately noting the slippery slopes they may present, as well as the ones we are currently experiencing.

Despite the countless factors influencing the conditions under which we occupy the planet, there is no escaping the following fact: Our behaviors are indisputable indications of our values. Whatever our future holds, it will be little different than what we have experienced if we do not account for the often vast disparity between our stated values and our demonstrated behaviors. We will be held accountable for our own behavior.

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