

Surviving Nature's Dark Side

*When ocean-clouds over inland hills
Sweep storming in late autumn brown,
And horror the sodden valley fills,
And the spire falls crashing in the town,
I muse upon my country's ills –
The tempest bursting from the waste of Time
On the world's fairest hope linked within man's foulest crime.
Nature's dark side is heeded now . . .*

Herman Melville, 1860, "Misgivings"¹

Humankind has flaunted Nature's laws and now the rampant consumerism party is over. Growth has limits, and the penalties for exceeding them are appalling. Nature's dark side is starvation, disease, tornados, drought, and death. Discussing, or even mentioning, the extinction of *Homo sapiens* may be politically incorrect, but no "correctness" will keep it from happening. Deniers, politicians, lobbyists, corporate executives, billionaires, and the very poor will all suffer together — the universal laws of biology, chemistry, and physics apply equally to all. Global warming is not a hoax — it, like gravity, is a consequence of these universal laws, which are not a delusion. Pretending that humans need not obey these laws is the delusion.

Why is humankind clinging to an economic system that is destroying Earth's biospheric life support system?

We need an economy for the twenty-first century, one that is in sync with the earth and its natural support systems, not one that is destroying them. The fossil-fuel based, automobile-centered, throwaway economy that evolved in western industrial societies is no longer a viable model — not for the countries that shaped it or for those that are emulating them. In short, we need to build a new economy, one powered with carbon-free sources of energy — wind, solar, and geothermal — one that has a diversified transport system and that reuses and recycles everything. We can change course and move onto a path of sustainable progress, but it will take a massive mobilization — at wartime speed (Brown 2011).

In his State of the Union Address on January 6, 1942, one month after the attack on Pearl Harbor, US President Franklin D. Roosevelt expressed his intent to change the US economy from consumer orientation to wartime orientation at once. He did not set a goal of change for a given year, but NOW. Energy and food were rationed, young men were drafted, and the entire country was expected to make personal sacrifices. Most did. A change, just as vital, needs to be made NOW in current unsustainable lifestyles and the economy so that *Homo sapiens* has a future.

What would motivate humans to make an all-out commitment to carbon-free, alternative energy sources and move to a path of sustainable use of the planet? Again, Roosevelt asked for an all-out mobilization of US industries and citizens after the attack on Pearl Harbor, which resulted in a military victory in 3½ years. The United States, which had resisted involvement in World War II (WWII), swiftly became united in a common cause. Even though this example shows that all-out commitment can be achieved, some important differences exist between War World II dynamics and the necessity of a carbon-free, alternative energy source and sustainable living.

(1) After the attack on Pearl Harbor, the United States was strongly united and had a common goal. (2) During WWII, US cities and infrastructures were not devastated by bombing, shelling, and occupation by foreign military forces (as were Paris and Leningrad).

¹ I am indebted to Karen Cairns for calling this poem to my attention.

- (3) Although WWII started badly for the United States, the Battle of Midway on 4-7 June 1942 caused a huge loss of aircraft carriers for the Japanese, and the Battle of Guadalcanal, which began on 7 August 1942 and lasted six months, marked the first recapture of territory in the Pacific from the Japanese. Less than a year after the war began, a steady series of victories began for the United States.
- (4) In short, after less a year, the United States clearly was winning, and with less percentage loss in military casualties than expected.
- (5) A draft during WWII registered 6,000,000 US citizens. Many more people enlisted before they were drafted, which made the forces a truly citizens military. People feel differently about a war when their children's futures are at risk.
- (6) In addition to their taxes, citizens bought war bonds to finance the war.
- (7) The wealthy people did not flaunt their wealth and political leaders and their families served in combat units (e.g., President Roosevelt had four sons in the military).
- (8) Even so, after two years of war, some citizens were becoming restless and tired of war.

In 2011, the situation is dramatically different when the call is being made to think about future generations by living sustainably.

- (1) Even with a strong citizen commitment, which does not yet exist, to non-carbon sources of energy and sustainability, the effort will probably take half a century or more. The United States is highly polarized by conflicting ideologies.
- (2) Many citizens and their political representatives are hostile to scientists and their evidence on global crises (e.g., global warming).
- (3) A strong, well financed campaign is being waged against scientists and their science (e.g., Oreskes and Conway 2011).
- (4) Because most natural systems are non-linear, events typically move much faster than expected (Ritter and Hanly 2011). As a consequence, humankind fails to take precautionary measures in time.
- (5) The public is continually told something is "safe" (e.g., nuclear power) when it is highly risky because of "unexpected events." Life in general is risky and the better policy is to state the risks rather than indicate no risk — i.e., "safe."

Nature does indeed have a "dark side," but it is only displayed when the habitat of a species or biotic community changes so that it is no longer suitable for the present species that could not adapt to the new circumstances. The new conditions are the result of the universal laws of biology, chemistry, and physics. The failure to adapt may merely be the result of the rate of change, appearance of a more competitive species or biotic system, or a variety of other factors, many of which are yet to be discovered by science.

Humankind is totally dependent upon nature (the Biosphere) for resources that run the human economy and make survival possible. Humans cannot eliminate seeing nature's dark side, but can substantially reduce risks by using effectively the information provided by science. However, science cannot flourish in a hostile environment.

. . . a committee of the US Congress was poised to pass legislation that would overturn a scientific finding on the dangers of global warming. . . [the] bill is intended to prevent the US Environmental Protection Agency (EPA) from regulating greenhouse-gas emissions, which the agency declared a threat to public welfare in 2009. That assessment serves as the EPA's legal basis for regulation, so repealing the 'endangerment finding' would eliminate its authority over greenhouse gases. That this finding is scientifically sound had no bearing on the decision to push the legislation and . . . [the] energy and commerce committee have [has] made clear their disdain for climate science. . . anger and distrust were directed at scientists and respected scientific societies. Misinformation was presented as fact, truth was twisted and nobody showed any inclination to listen to scientists, let alone learn from them. It has been an embarrassing display . . . the legislation is fundamentally anti-science, just as the rhetoric that supports it is grounded in willful ignorance" (Editorial 2011).

Such actions are a perfect recipe for ensuring that humans see the dark side of nature, which can be accomplished by denigrating both scientists and their evidence, willfully ignoring the universal laws of science, and using rhetoric and legislation in a useless attempt to avoid the consequences of humankind's actions. This very short-term, inappropriate "solution" will result in long-term catastrophe.

Acknowledgments. I am indebted to Darla Donald for transcribing the handwritten draft and for editorial assistance in preparation for publication and Paul Ehrlich and Paula Kullberg for calling useful references to my attention.

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