



## **SUSTAINABILITY AS A FOUNDING PRINCIPLE OF THE UNITED STATES**

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In the summer of 1787, two watershed processes in world history were in their earliest stages of development. First, the industrial revolution was gathering momentum in Europe and ultimately exerting its impact on the burgeoning American economy. Second, at this same pivotal moment, the nascent Republic known as the United States was just completing its earliest aspirational blueprint, the Constitution. The coincidence of these revolutionary processes and products, one economic and the other political, is significant because however defining for future generations, both are in one sense only the result of merely incremental progress in human consciousness, and both represent crude and inchoate forms of social and economic redesign that could have been inestimably more successful had the processes of redesign been undertaken with some awareness of the context and content of the natural world.

The American Constitution is an extraordinary articulation of the design of a state that at once establishes democratic governance, liberty, and justice, as well as other core personal and social aspirations intended to be realized around bedrock political institutions. The industrial revolution, resulting from the evolution of fundamental principles of capitalism and cultural reorganization, consolidated the formats and structures through which society could be reorganized around new kinds of economic institutions.

In neither the Constitution nor the basic principles of capitalism, as best represented by Adam Smith in the *Wealth of Nations*, is there evidence of any meaningful awareness of the fact that the natural systems of the earth and our designs as humans must advance in sustainable ways. An appreciation of the interrelationship between natural processes and human design is a prerequisite for any adequate conception of sustainability. This hybrid concept can be summarily defined as the stewardship of natural capital for future generations, but its implications are far broader than any of these terms, embracing not only the environment and economic development, but also healthcare, urbanization, energy, materials, agriculture, business practices, social services, and government. While sustainable development means balancing wealth generation with continuously enhanced environmental quality and social well-being, it is a concept of a complexity, richness, and significance comparable to other guiding principles of modern societies, such as human rights, justice, liberty, capital, property, governance, and equality.

While even this list of the implications of sustainability is incomplete on its face, any such tally is the product of hindsight derived from our twenty-first century intellectual culture. Any

notion regarding our responsibility to maintain natural capital for future generations or to advance economic and technological progress with a sense of stewardship was not present in the eighteenth-century designs we are considering. While we may parse the deliberations and discussions of the era for evidence of some incipient appreciation of our predicament, we only know with certainty that the understandings we derive from John Muir, Aldo Leopold, and Rachel Carson had yet to be formulated. At the time we were still held captive by a millennia-old Malthusian-style constraint model in which each advance in population resulted in a series of negative constraints that greatly limited our collective quality of life by constantly cycling in ways in which personal income could not be enhanced. Not surprisingly, then, the new economic order of the eighteenth century and the new political order being realized in the United States at the same time were so powerful in their transformative effect that only now can we look back in both awe and fear at what these revolutions have wrought.

Two-hundred-plus years into this new political and economic order, for all its vicissitudes the world has advanced in many positive and constructive ways. The pre-industrial revolution economies of subsistence agriculture and the long-term persistence of poverty endured by all but an elite handful have largely passed from the social order. The voiceless masses, formerly without any political power, now speak loudly and often and can be heard in many new settings. Yet at the same time we sit on the edge of a precipice of a significant failing. Because neither our economic nor our political models have factored in the natural limits of the earth, and because the Constitution outlines neither aspirations nor outcomes relative to man's relationship with the natural world, we are as we speak on a path toward a condition where the natural rights of man and national laws of economics collide with the natural systems of the earth, to the ruinous long-term detriment of us all.

As vigorous and dynamic a modern society as we are, and as hard working and productive as we have been, one would expect our nation to have exerted an impact on the environment. Yet it is surprising to me that in only two-hundred-and-fifty years we have actually altered the natural patterns of the atmosphere and both land and ocean ecosystems to the extent that future natural capital inputs for our long-term well-being are actually at risk. It is almost beyond comprehension that the political and economic designs that have allowed most of us to leave behind the brutish world of our ancestors are the same designs that have brought us to the brink of environmental collapse.

Both our economic and political designs are at once too limited and simplistic to address the complex problems intrinsic to the discourse of sustainability, such as intergenerational equity, biodesign, adaptive management, industrial ecology, and natural capital conservation – new principles for organizing knowledge production and application. These inherent limitations are a consequence not only of the relative immaturity of our economic and political tools, but especially the implicit “aspiration of self” that the Constitution endorses. We all operate out of self-interest, which is entirely rational, but the parameters that our foundational national document establishes are possibly just too simplistic and in many ways simply constitute a justification for us to indulge in selfish, or let us say at least nakedly self-interested, pursuits to

be a completely successful design for long-term societal success. As a consequence of our economic and political system, the individual perspective has inevitably outweighed the collective with the result that adequate protection for the collective has lost out. In part because of the inevitable limitations of a document drafted in the eighteenth century, however brilliant and visionary, efforts to advance the long-term interests of the whole by controlling the short-term behavior of the individual are doomed to failure.

While we have pursued our aspirations of self, roughly 20 percent of the planet's bird species have been driven into extinction, 50 percent of all freshwater runoff has come to be consumed, 70,000 synthetic chemicals have been introduced into the environment, the sediment load of rivers has increased fivefold, and more than two-thirds of the major marine fisheries on the planet have been fully exploited or depleted. What right do we have to eliminate the fishing stock of the oceans for generations or to alter the atmosphere of the planet? What rights of man or pursuit of happiness grants us the power to condemn future generations to the impact of human-induced sea level rise? Of course, the answer is we have no such rights. Likewise, what logic permits the extraction of such quantities of natural capital from the earth in the ten to fifteen generations that will have presided between 1850 and 2150, leaving future generations with only a diminished basis to use the natural systems from which we have greatly benefited? No such logic can be found.

In an effort to redeem ourselves, let us at last reconsider our design, derived from the framers of the Constitution in the eighteenth century. However belatedly, it is at long last time to add one more value to the concept of the self as expressed by the Constitution. To provide for the common good we cannot only consider justice for those of us present, we must conceptualize and enact into law provisions for justice for future generations. To ensure the equitable pursuit of happiness we cannot look only at the forty or fifty years ahead of or behind us, individually we must come to terms with the realization that decisions made during the past two-hundred-fifty years have put humanity during the next several thousand years at potential risk.

It is time for America to take yet another first step, just as we took a first step in 1789. In the twenty-first century we must at last declare sustainability a core aspirational value of the American people, on the same level as liberty and justice and equality. With such a declaration we would see changes in law, changes in behavior, changes in teaching and learning, and yes, even changes in economics. With such a declaration we would fulfill the expectations of the visionary framers of the Constitution of the United States of America.

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