
The Profound Conversation for Our Time

Review by John D. Liu

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DANIEL CHRISTIAN WAHL *Designing Regenerative Cultures*

Triarchy Press: Axminster, England.
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ACOGENT INTELLECTUAL contribution on the meaning of life is not the easiest thing to accomplish. For a youngish sentient species trying to make sense of it all, wisdom can be elusive. If we accept the assumptions of the past, of our institutions, of our nationalities, of our ethnicities, of our class or of our religions, we are relinquishing sovereignty over our own minds. It is only when we go beyond dogma and ignore the ever-present noise of the material world shouting at us to forget about profundity and just go shopping, that we begin to participate and contribute in defining the way forward.

Designing Regenerative Cultures by Daniel Christian Wahl, is a symphony of many of the most important ideas that are swirling in public discourse at this time. We are required to join the orchestra, each of us taking an instrument, playing the score for the age. In Daniel's ambitious work are puzzle pieces that when assembled, let us look at our lives, with feelings of recognition and flashes of insight. This is a prodigious document of enormous breadth presented with gentle respect for existential concepts that will be pondered for all time.

Ours is a challenging fate. We live in a time that demands transformational change. This book seeks to connect the dots by highlighting the contributions of scores of people past and present whose thoughts help light the way. Daniel challenges us to grapple with the fundamental issues we are facing as individuals and as a species on a planetary scale.

Quoting Einstein, Daniel notes that if we fail to state the question correctly we

will never be able to come to the correct solution, but if we get the question right then we are very near the answer.

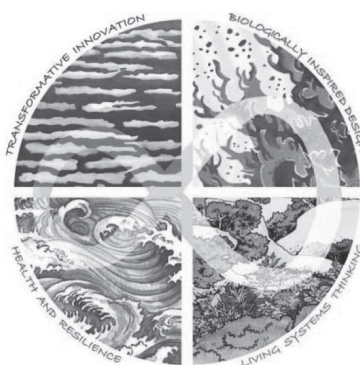
Designing Regenerative Cultures comes at an important moment in human history. The logic of burning hundreds of millions of years of fossil energy in a little over a hundred years cannot stand up to rigorous intellectual consideration. Making selfish, wasteful, and toxic decisions leads to predictable catastrophic outcomes. We are forced to face the

potential of restoration. Looking through human history, evolutionary and geologic time puts one's own life into a cosmic perspective. We are here and have a place in the universe. Our place may be much less important than our egos project, but it may also be much more significant than we rationally perceive. I'm honored that Daniel found my work interesting enough to be referenced. While it is nice to be recognized, it is much more important that the thoughts being discussed are understood and acted upon.

In China's Loess Plateau, I saw and documented that it is possible to rehabilitate large-scale degraded ecosystems. We know that, over 4 billion years ago, the new Earth was a hot and not very welcoming place. Over geologic time, the original materials weathered, creating sedimentary layers that can be seen, analyzed, and measured. Over evolutionary time, three primary trends asserted themselves to transform the earth into a beautiful garden. The first of these trends was the total colonization of the planet by biological life. The second trend was the differentiation and speciation leading to infinite potential variety in genetics, and the third was the constant accumulation of organic matter as each generation of life died and gave up its body to nurture the next generation.

These primary trends engender and

DESIGNING REGENERATIVE CULTURES



Daniel Christian Wahl

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accumulated results of choices made by generations of those who came before us, to see how we became complicit and to adjust our own behavior. As each of us realizes that we are part of an eternal continuum and are simply passing through, we are called to analyze the past, the present, and the future, and to do our best. It is not our fault, but it is our responsibility.

Regeneration of the Earth's natural ecological systems has been a defining driver of my life. I've traveled far studying and documenting how ancient civilizations destroyed their ecosystems, and I have learned much about the

are fueled by a photo-reactive, biochemical process that takes sunlight, water, and minerals and converts them to living matter. Photosynthesis is the basis of carbon sequestration and oxygen release, which has generated the fragile oxygenated atmosphere. This is also the basis of respiration, which has naturally created, filtered, and renewed the hydrologic cycle. These trends have created the living, fertile, organic soils in which microbial communities have built their habitat. These primary producers participate in the cycle of life by making minerals from geologic materials available for plants

and animals and recycling nutrients as each generation of life gives up its body to nurture the next. These trends have been continuous throughout evolutionary time and cannot be stopped... only delayed or altered by our actions.

Understanding this is at the heart of the concept of regeneration.

Restoring ecological function to long degraded ecosystems is a fundamental responsibility for all who are living at this time. The fact that this knowledge contains the most effective way forward to mitigate and adapt to climate change, to restore hydrological and weather regulation, to ensure food security, and to provide meaningful employment for everyone on Earth has still not been fully realized. That the physical reality remains at the fringes of our consciousness further separates us from the fact that restoring ecological function is also the best way to ensure peace and equality.

slippery rocks at the source. The scene was unforgettable. The sound of the clear water was like gentle laughter as it flowed naturally out of the earth. The stream swirled around rocks, causing delicate mosses to dance in the current. Beautiful orchids exuding an intoxicating fragrance streamed from the trees, while hundreds of delicate butterflies fluttered about.

We need to consider what it means when walking five minutes into the jungle can bring one to Eden in a country where a decade before hundreds of thousands of people had been murdered in 100 days of genocidal madness. It is perhaps no coincidence that this example is so stark because what we are seeing is a continuation of the human drama played out again and again. It matters what we choose. We can be swept away in passions of hatred and violence, or we can marvel at the miracle of life, and we can do this in the very same spot. This is true whoever we

lutionary standpoint you could say that original sin was the reduction of biodiversity, leading to the reduction of biomass, leading to the reduction in the accumulation of organic matter. These mistakes taken over time have altered carbon uptake during photosynthesis, reduced the natural fertility of the soil, and massively changed the infiltration and retention of water in the soil and below the vegetative canopy, disrupting the natural regulation of weather, temperature, and climate.

In nature, we can see the potential of a symbiotic complexity, but all too often we just aren't that interested. We've been distracted from life by the petty rituals of our society and our economy, that brazenly suggest they are more important than the air we breathe or the water we drink. For the most part, we acquiesce, accepting the superficial in our inability to comprehend the profound. Ultimately, we all must face the limited nature of our short stay on Earth and realize that time will march on after we have left the scene. We will know more then, but why wait? There are mysteries that are better savored over a lifetime than swallowed whole when we are about to die. The more we contemplate and process the meaning of our lives, the better able we are to live them.

Abiotic systems of human creation are always flawed. The arrogance that drives us to pretend that we are different or better than others needs to be recognized as a serious mistake. This spurs some to believe that if we destroy the earth, we can simply fly off to another planet and plunder that one. We can also see this in the desire of some to build grand follies, which will stand as monuments to hubris long after the builder has left this life. The unconscious legacies that the egotist does not envision are the massive impact of extraction and energy use and the ensuing pollution and degradation. The shiny objects seen in finite time are the rubble strewn through the trash heap of our history, and over evolutionary time the reduction of the very processes we depend on for life.

When we reach this level of contemplation, we are standing at the nexus of the material, the spiritual, and the moral. From this plateau, the human intellect perceives the universe; while we can continuously grow our knowledge, the wise

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Essentially, we are discussing the paradigm shift that determines whether our current civilization survives and becomes sustainable or whether it follows earlier civilizations that destroyed the earth's ecological function and failed. This time is different, however, because now we all face this together on a planetary scale.

My field studies have taken me all over the world and have revealed much. In 2006, a vehicle I was riding in rounded a corner on a road in the Rwandan highlands, revealing a small stream emerging from the forest. Asking the driver to stop, I got out of the jeep and heard the insistent sound of water flowing. My young companions were not moved by the scene and protested that we should continue to the capital, but I was older, willful, and nominally in charge, so I ignored them. While they loitered along the road, I pushed aside the vines and began to follow the stream into the forest. Without a path, it was not easy going, but in a short while I was balancing on the

are and wherever we are. This is true now and forever.

After prodigious time, human beings arrived on the scene on an earth that has a nurturing atmosphere, is fully vegetated, with a wonderful and nurturing hydrologic system, and with tasty, abundant, and nutritious food growing in rich fertile soils. It is possible to conclude from evolutionary theory that human beings emerged in paradise. This is also what it says in the Judeo-Christian-Islamic cosmology. Almost all indigenous people's cosmologies state that all life is sacred—that life is a representation of the divine. I find it fascinating that our cosmologies and science are saying the same thing. The next part of the cosmology says that human beings sinned and were expelled from paradise. We need to consider this very carefully.

While individuals involved over history made many selfish, ignorant, hateful, and destructive choices, that Western religion interpreted as sin, from an evo-

will realize that we stand at the edge of cosmic mystery. While there are mysteries we will not solve with our intellect, we now know enough to restore as much ecological function as we can by massively increasing biodiversity, biomass, and accumulated organic matter on a planetary scale.

We can do this if we get our priorities right. We know that the purpose of life is not to extract materials and manufacture things, or buy and sell things, and it is certainly not speculation or interest-

bearing debt, which are simply corrupt ideas that someone thought of to enrich themselves while condemning others to poverty. The purpose of life is not to dominate and force one's will on another. The purpose of life is to live. If we live well and love deeply, we have done our best.

The great accomplishment of *Designing Regenerative Cultures* is the recognition that it will not be sufficient to individually answer the questions posed. The solutions require not simply individ-

ual understanding but a shared vision. We need to have a profound conversation that engages everyone and this book is extremely useful in framing the discussion. These are the issues being discussed in the most thoughtful salons on Earth. You can read *Designing Regenerative Cultures* as if the future depended on our understanding this because the future of human civilization will be decided by whether we can transform this profound discussion into collective human consciousness and collective human action. △

Blueprint for Warmth Review by Peter Bane

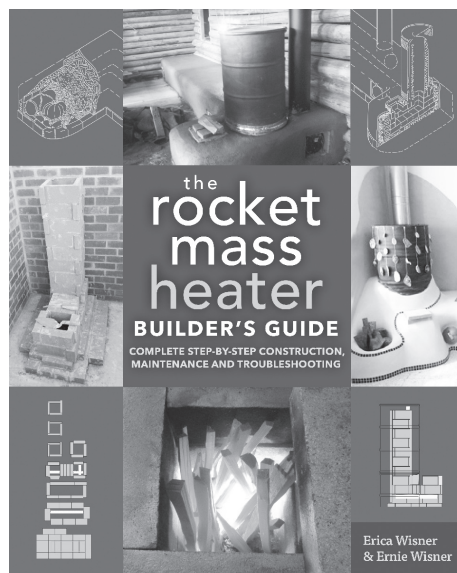
ERICA WISNER & ERNIE WISNER

***The Rocket Mass Heater
Builder's Guide*
Complete step-by-step
construction, maintenance, and
troubleshooting**

New Society. Gabriola Isl. BC. 2016.
277 pp. paper. illustrated. \$39.95.

I'M CONTEMPLATING a mass heater for a new home in Michigan, so this book immediately captured my attention when it arrived. Well and carefully written, it does not yield to casual thumbing. There are some small sections that address the lay reader's curiosity, chiefly the introduction and a helpful chapter in the middle answering Frequently Asked Questions. Much of the rest is exactly what the title and subtitle indicate: this is a builder's guide and a very comprehensive one at that.

The Rocket Mass Heater, developed over the past four decades by Ianto Evans and subsequent experimenters, occupies an intermediate position between woodstoves of conventional cast-iron manufacture, and custom-built masonry heaters which depend on specialized parts to create a complex internal architecture. Like masonry heaters, the RMH is significantly more efficient than a woodstove, however well designed, because the long exhaust



temperature combustion eliminates almost all ash and waste gases such as creosote, making the use of a long flue both possible and safe.

Masonry heaters, because their internal parts are precast or of special manufacture, tend to be more compact in shape than RMH. This and sophisticated shapes and adjunct functions constitute the chief advantages of the former. Masonry heaters are also more expensive to assemble and may require the assistance of a professional, at least as a consultant. Both types of mass heater are custom-made on site, distinguishing them from manufactured iron stoves, but the RMH offers the determined and skillful builder the opportunity to use relatively

These are the energy efficiency secrets of mass heating.

channel transfers significant heat to a mass of earth (or masonry) usually formed into a seating or sleeping bench in the living space. This allows the exhaust gases to leave the dwelling at a much lower temperature (200°F vs. 350°F for a stove), meaning less combustion energy is lost to the outside. The mass also recycles much of what would be waste heat in a conventional stove chimney into radiant heat within the house. What the RMH and masonry heaters have in common are the long flue, or exhaust channel, and a firebox designed for very high temperatures. These are the energy efficiency secrets of mass heating. High

common, low-cost materials to achieve a similar efficiency and level of comfort to that provided by the more traditional and refined masonry heaters at a cost comparable to woodstoves.

The RMH is characterized by a heat riser of 3'-6' (1-2 m) above a high-temperature firebox in the form of a J-channel that counter-intuitively requires downward feeding of small wood into the flames. Thermosiphoning of flue gases draws room air through the J-channel into the riser, which is insulated and sheathed with a large barrel,