**CES Musings**

*Chronicling the Transition from Economic-Industrial To Ecological-Cultural Societies*  
*(May-June 2016)*

**www.ecozoicsocieties.org**

**AT A GLANCE**

- **EVENTS**
  - *Bringing Hope to the Climate Crisis Through Faith & Action*
    - June 4, 10 a.m. – 12 noon, United Church of Chapel Hill
  - **Salvatore Gencarelle** – June 9, 7:00 – 8:30 p.m. Carr Mill Mall, Carrboro, NC
  - June 10-12 “Introduction to Life Within,” Off Turkey Farm Road, Durham, NC
    - *Support the Center for Education, Imagination and the Natural World*

- **The Chronicle**
  - **Climate**—Crossing 2°C and 400ppm
  - **Inequality**—In the voting booth

- **CES**
  - **A Wider and Deeper Association**
  - **CES News**

- **OPINION**
  - Herman Greene  
    - *Does the US Presidential Election Matter in the Big Picture?*

- **ARTICLES**
  - Richard Norgaard  
    - *The Church of Economism and Its Discontents*
  - Herman Greene  
    - *New Nonprofit: Toward Ecological Civilization*
  - Dirk Kelder  
    - *Introduction to Quantum Polarity*
    - On Stillness (A Message from the Tree of Life)
    - A New Response
    - A New Reality

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April 2016 was the warmest April on record for the planet, and the seventh month in a row to have broken global temperature records. According to data released on May 14 by NASA’s Goddard Institute for Space Studies, the global temperature departure in April was 1.11 degrees Celsius above the 1951-1980 average. This topped the previous April record set in 2010 by 0.24 degrees Celsius. “Defeating a previous record by a few tenths of a degree may not sound overwhelming, but in the world of climate statistics, computed from worldwide temperatures, this is yet another record-shattering figure.”

For the first time in recorded history, the temperature across the northern hemisphere climbed above two degrees Celsius higher than “normal.” The rise occurred on March 3, 2016, and lasted only a short time, but the escalation is in line with other temperature reports. During the January-April 2016 period, the average temperature for the contiguous United States was 4.0 degrees F above the 20th-century average.

In its annual climate report issued on March 22, 2016, the World Meteorological Organization (WMO) predicted the future would be increases: increased temperature, increased ocean heat content, and increased loss of ice. “Hotter, Drier, Wetter. Face the Future” was the theme for World Meteorological Day on March 23, when United Nations Secretary-General Ban Ki-moon issued a rallying call for decision-makers and all actors in society to “face the future now.” The WMO predicts warmer weather around the world, accompanied by pockets of both drier and wetter conditions, depending on the region.

In an area where CO₂ concentrations do not fluctuate, levels are nearing 400 parts per million (ppm), it was reported in early May 2016. The atmospheric measuring station at Cape Grim, Australia, is on the verge of showing 400ppm, and once that level is reached, it won’t come down for a long, long time. The first 400ppm milestone was reached in 2013 when a station on the Hawaiian volcano of Mauna Loa registered a monthly average of 400ppm. But since the northern hemisphere has a seasonal cycle, increasing in summer but decreasing in winter, each year since then it has dipped back below 400ppm. David Etheridge, an atmospheric scientist from the Commonwealth Scientific and Industrial Research Organisation (CSIRO), which runs the Cape Grim station commented, “No matter what the world’s emissions are now, we can decrease growth but we can’t decrease the concentration.” The Guardian report called the reading a “grave marker.”
analyzing this phenomenon, see “Fate of fossil fuel CO₂ in geologic time” geosci.uchicago.edu/~archer, which begins, “The idea that anthropogenic CO₂ release may affect the climate of Earth for hundreds of thousands of years has not reached general public awareness.”

**Once the sea rises due to the warming, that, too, will be a long-term situation.** “Once the ocean warms up, the ice will not be able to recover until the oceans cool back down,” said the co-author of a sea level rise study published in the scientific journal *Nature* on March 31, 2016. Rob DeConto, a geoscientist at the University of Massachusetts Amherst, with David Pollard, a paleoclimatologist at Pennsylvania State University in University Park, developed a program that for the first time accurately models past sea levels. The ability to reproduce past events is considered a stringent test of the merits of any geological model. DeConto and Pollard wanted to account for the high sea levels before the last ice age—twenty feet higher than they are now—when temperatures were not much higher than at present. When they factored in erosion on the underside of the Antarctic ice sheet, caused by warming ocean currents, in addition to rising atmospheric temperatures that melt it from above, the model duplicated that history. Such melting would leave towering cliffs of ice exposed to the sea, which could make Antarctica’s ice vulnerable to rapid collapse. Active physical processes are well-known ways of breaking up ice sheets but had not before been included in complex 3D models of the Antarctic ice sheet. The model predicts more than a meter rise by 2100 and more than 15 meters by 2500. DeConto’s statement to one reporter included this dubious assurance of hope: “If emissions were quickly slashed to zero, however, the rise in sea level from Antarctic ice could be reduced to almost nothing.” nature.com, climatecentral.org, and theguardian.com

The paper has received respectful comment by a number of other sea level rise researchers who work with climate models. NASA scientist Eric Rignot said the study was “absolutely realistic.” Rignot, James Hansen, and others authored a paper published March 22, 2016, in the European science journal *Atmospheric Chemistry and Physics* which did not receive as much support. The paper entitled “Ice melt, sea level rise and superstorms: evidence from paleoclimate data, climate modeling, and modern observations that 2°C global warming could be dangerous” presents what Rignot called “a worse-case scenario.” As with the DeConto-Pollard project, this research is influenced by the assumption that 120,000 years ago, when the temperature reached a level estimated to have been only slightly higher than today, large chunks of the polar ice disintegrated, with the result that sea level rose 20 to 30 feet. The Rignot-Hansen group concludes that even if warming is limited to 2°C, parts of the great ice sheets in Greenland and Antarctica could disintegrate rapidly due to fresh water pouring into the oceans from melting land ice. The melting could cause a feedback loop making possible a worst-case sea level rise of several feet over the next 50 years. While those claims may help explain puzzling episodes in Earth’s past when geological evidence suggests the climate underwent drastic shifts, Michael E. Mann, a climate scientist at Pennsylvania State University commented, “They conflict with the mainstream understanding of climate change to the point where the standard of proof is quite high.” Some of the discomfiture about the new paper may be due to Dr. Hansen’s dual roles as a publishing climate scientist and a political activist. Hansen argues that society is in such grave peril that he feels morally compelled to go beyond the
normal role played by a scientist. The *New York Times* report on the paper’s publication says, “Despite any reservations they might have about the new paper, virtually all climate scientists agree with Dr. Hansen’s group that society is not moving fast enough to reduce emissions of greenhouse gases.”  nytimes.com

**Another new study considers that prevailing computer models may be overestimating the cooling power of clouds.** Published in the journal *Science* on April 8, 2016, this paper focuses on what are known as mixed-phase clouds—found everywhere and containing both cooled water and ice crystals. The balance of water and ice in clouds would affect the impact that carbon dioxide levels have on atmospheric temperatures. Using data from instruments aboard the Calipso satellite, the researchers determined that mixed-phase clouds contain more water and less ice than hitherto assumed. Ivy Tan, an author and a graduate student at the department of geology and geophysics at Yale University, commented, “With less ice in the mix to start, there is less capacity for water to replace ice.” The result would be more warming. The research concerns the factor known as equilibrium climate sensitivity. A higher sensitivity would mean that carbon dioxide levels would cause more warming than previously thought. Another author, Trude Storelvmo, associate professor in the Yale department of geology and geophysics, said, “Unfortunately, it means staying below 2 degrees is going to be even harder.” Gavin A. Schmidt, the director of NASA’s Goddard Institute for Space Studies, said that the study was in line with other recent papers that find potential issues with models. “Generally speaking, these (concerns) lead to numbers that are on the higher end,” he said.  esciencenews.com

From many directions forewarnings are being issued regarding the perils of the warming that is underway.

- **Forest fires will become more prevalent and more intense with climate change.** The wildfire endangering Fort McMurray as well as the boreal forests of Alberta, Canada, is not a sudden flare-up, and will become more common with climate change. Researchers at the University of Montana, whose paper has been accepted for publication in the journal
Ecography: Pattern And Diversity in Ecology, have concluded that northern regions could experience four times the number of fires typical in recent decades. newseveryday.com
One of the explanations for the increase in fires seems to be an earlier melting of the spring snowpack across the Northern Hemisphere. When the melt leads to a drying of the landscape early in the fire season, the resinous trees of the boreal zone become more susceptible to fire, and lightning sets off intense fires that are nearly impossible to control. nytimes.com

- A reduction in the amount of oxygen dissolved in the oceans due to climate change will leave marine life like fish, crabs, squid, and sea stars struggling to breathe. The process is already discernible in some parts of the world and will become evident across large regions of Earth’s oceans between 2030 and 2040. This prediction comes from scientists at the National Center for Atmospheric Research (NCAR) and was published February 29, 2016, in the journal Global Biogeochemical Cycles. The entire ocean, from the depths to the shallows, gets its oxygen supply from the surface, either directly from the atmosphere or from phytoplankton, which release oxygen into the water through photosynthesis. Warming surface waters absorb less oxygen, and the oxygen that is absorbed has a more difficult time traveling deeper into the ocean because water expands as it heats up, and is less likely to sink. earthsky.org

- Climate change could kill more than 500,000 adults in 2050 worldwide due to changes in diets and bodyweight from reduced crop productivity. This warning comes from a modeling study led by Dr. Marco Springmann from the Oxford Martin Programme on the Future of Food at the University of Oxford, UK, and published in The Lancet. The research is the first of its kind to assess the impact of climate change on diet composition and bodyweight, and to estimate the number of deaths the deprivations will cause in 155 countries in 2050. reuters.com

- Future ozone-related human health impacts attributable to climate change are projected to lead to hundreds of thousands of premature deaths in the United States by 2030. On April 4, 2016, the Obama Administration issued a scientific assessment of “What Climate Change Means for Your Health and Family.” Among the hazards posed by a warmer climate: air pollution, extreme heat that makes outdoor work dangerous, increased risk of water-related diseases, exposure of food to certain pathogens and toxins, and greater risk of Lyme disease. whitehouse.gov

- If we stay on the current emissions path, losses to global portfolios could range from about $2 trillion to $25 trillion. Simon Dietz of the London School of Economics, lead author of the report published in Nature Climate Change, says climate change is a threat to all assets, not just those invested in fossil fuels. hbr.org

Is there some good news about climate? Yes, the surge in renewable energy and reduction in coal use has stalled world greenhouse gas emissions for the past two years. Falling coal use in China and the United States and a shift towards renewable energy globally have helped carbon
dioxide emissions from the energy sector level off at 32.1bn metric tonnes even as the global economy grew over 3%. These figures come from the International Energy Association (IEA) report of March 16, 2016. Electricity generated by renewable sources accounted for around 90% of new electricity generation in 2015, and wind power produced more than half of all new electricity generation. theguardian.com and iea.org

In the “good news if” category: On Earth Day 2016, 175 nations signed the historic Paris climate agreement. The non-binding treaty, approved in December 2015 after years of United Nations climate negotiations, aims to slow the rise of greenhouse gases such as carbon dioxide. The agreement sets a target of limiting global warming by 2100 to “well below” 2 degrees Celsius (3.6 degrees F), as compared to pre-industrial levels. To accomplish that goal, each nation sets its own target for reducing emissions, and updates that mark as needed each year. usatoday.com This is good news if “well below” 2 degrees C is a safe target, if countries live up to their pledges, and if they do so with all possible speed. As United Nations Secretary-General Ban Ki-moon told the gathering at UN headquarters in New York on Earth Day, "We are in a race against time."

INEQUALITY—in the voting booth

The United States ranks high in inequality when measured against other developed countries. This judgment comes from The Poverty and Inequality Report 2016 released by the Stanford Center on Poverty and Inequality on February 1, 2016. The report looks at 21 nations in North America, Continental Europe and Australia—ten well-off and 11 less so. The United States is 10th among the ten well-off countries, and 18th among the twenty-one in three key categories: income inequality, wealth inequality, and safety net. Only Spain, Estonia, and Greece scored worse in these three respects. The report states: “It is noteworthy that the US performs poorly in domains that have historically been regarded as its strengths. . . . [T]he distinctive benefit of its flexible and unregulated labor market was supposed to be the jobs that such deregulation delivered.” Yet only Italy and Spain fare worse than the US in prime-age employment among women, and only Spain fares worse in prime-age employment among men. stanford.edu

Seventeen states have implemented new voting restrictions since the Supreme Court’s Shelby County v. Holder decision in 2013, and categories of people who typically have less income will be most affected by the changes. (The 2013 decision eliminated the need for fifteen states with histories of discrimination in voting to obtain federal preclearance before implementing any changes to their voting laws or practices. wikipedia.org) More stringent voter ID requirements are the most common of these measures, and a new study shows "substantial drops in turnout for minorities under strict voter ID laws." Political scientists at University of California, San Diego analyzed turnout in elections between 2008 and 2012 in states that did and did not implement the strictest form of voter ID laws. They found that these laws consistently and significantly decreased turnout—suppressed it by 10.8 points for Latino voters and 12.8 votes for multiracial Americans. For black voters in the primaries, the strict photo ID laws caused the gap with white voters to almost double to 8.5 points. Young people and the elderly are also more likely not to hold the officially endorsed identification cards. Voter fraud is
the ostensible justification for tighter ID requirements, but “voter fraud is, for all intents and purposes, practically nonexistent. The best available research on the topic, by Loyola Law School professor Justin Levitt, found only 31 credible incidents of voter impersonation in an investigation of over 1 billion votes cast.” washingtonpost.com

Kansas has enacted the strictest voter regulations in the country, led by Secretary of State Kris Kobach who put 37,000 voters in a "suspended registration status" in the 2014 elections. Along with Georgia, Alabama and Arizona, Kansas now requires documentary proof of citizenship—such as birth certificate, passport or naturalization papers. Of the more than 22,000 submitted voter registration applications received between February 1 and February 21, 2016, only 7,444 included proof of citizenship, State Elections Director Bryan Caskey said. That meant the majority of those registrants were put on the suspense list, and their voting registrations will be purged after 90 days unless proper documents are submitted. Younger citizens were affected the most. Although those between the ages of 18 and 29 comprise only 14.9 percent of registered Kansas voters, that age group makes up more than 58 percent of applicants who registered at motor vehicle offices and are on the suspense list. dailykos.com

Texas has the most stringent voter-identification law, one that could cut into the turnout of minority voters and young people, according to several election experts. A federal court in Texas found that 608,470 registered voters don’t have the voter IDs that the state now requires for voting. Residents can vote with their concealed-carry handgun licenses but not their state-issued student university IDs. In North Carolina the new law goes further than requiring a photo ID to vote. It also reduces the number of days of early voting, prohibits people from registering and voting on the same day, stops ballots cast in the wrong precinct from being counted, and ends the practice of preregistering teenagers before they turn 18. washingtonpost.com Limiting when and where voting takes place severely impacts people in low-end jobs with inflexible work hours, those with limited means of transportation, and people with disabilities as well as others who can’t stand in long lines awaiting their turn at the ballot box.

The 20 percent of wealthier Americans represent about 30 percent of the electorate already, partly because of higher turnout levels. An opinion editorial in The New York Times on April 27, 2016, by Thomas B. Edsall puts this finding in perspective. Quoting from “The Continuing Increase in Income Segregation,” a March 2016 paper by Sean F. Reardon, a professor of education at Stanford, and Kendra Bischoff, a professor of sociology at Cornell, Edsall writes that “self-segregation of a privileged fifth of the population is changing the American social order and the American political system, creating a self-perpetuating class at the top, which is ever more difficult to break into.” The research by Reardon and Bischoff shows the percentage of families with children living in very affluent neighborhoods more than doubled between 1970 and 2012, from 6.6 percent to 15.7 percent. The percentage of families with children living in traditional middle class neighborhoods with median incomes between 80 and 125 percent of the surrounding metropolitan area fell from 64.7 percent in 1970 to 40.5 percent. The geographic split leads to greater imbalance in political influence and narrowing of social sympathy. The less contact the wealthier folks have with other income groups, the less they understand or care about what happens to them. When they exercise their already greater
In January 2016 Oregon became the first state to automatically register eligible citizens who request or renew a driver’s license. They are sent a card informing them of their registration status and have 21 days to opt out from the voting rolls. Only 6 percent of registrants have chosen to opt out. nytimes.com When universal suffrage is the objective, however, departments of motor vehicles may be less and less the right entry point for voter registration. The percentage of people ages 16 to 44 in the United States with a driver’s license has fallen steadily for three decades, according to a study by the Transportation Research Institute at the University of Michigan. In 1983, 91.8 percent of those age 20 to 24 had driver’s licenses, but by 2014 that number had fallen to 76.7 percent. thenation.com

CES—A WIDER AND DEEPER ASSOCIATION; AND CES NEWS
By Herman Greene

A WIDER AND DEEPER ASSOCIATION

In the January-February issue of CES Musings, we described CES as an association of people dedicated to research, education, art and action for the transition to ecozoic societies. Then we spoke of our associates as being “people who, including members of CES, are supported by the work of CES, see it as a resource, make contributions to it in the form of articles, poems, music, art, commentary, or donations, or otherwise engage in its programs or work.” We compared CES to the National Geographic Society, which began in 1988 and had 33 founders. They created “a society for the increase and diffusion of geographical knowledge.” They published the first issue of National Geographic magazine nine months after the society was founded.

The purpose of CES is to increase and diffuse knowledge of the ecozoic and the Great Work. We do this through research, education, art and action.

This short article is to signal that our associates include all those who are endeavor to live in ecozoic ways, as well as those who directly engage in research, education and arts for the ecozoic. This is the wider association part of this article.

Regarding the deeper . . . , I was recently visited by a remarkable author from Monterey, California. She had just been introduced to the idea of the ecozoic and to the work of CES. She said “I love this, I want to join you, and I want to join with you.” This is the deeper association part of this article. We will work over the next few months to deepen our association. We would love to hear from you how that could happen and what you would like to have from us.
SUCCESSFUL EVENT ON “LIVING THE CREATIVE LIFE: ART, BEAUTY, ECOLOGY”

We have held one other art event. While wonderful, it was not like the one we held on April 29-30, 2016 at the Church of Reconciliation in Chapel Hill. This one combined singing, lectures and multiple workshops. We found our sweet spot, our ecozoic home.

How can this be described? This picture says a lot. One can see the beauty of nature in the background, but also in Sandra’s necklace. Her hands express energy and light and her face engagement. This is how it was, and we became a community for that one grand weekend.

The event opened with Joanna Carey leading us in singing a round. Then Blake Tedder sang three songs. Mary Southard showed and talked briefly about her “Artists Statement.” You can see it here. If you weren’t present, this video gives you a good sense of the place we lived in.

Sandra Lubarsky gave the opening lecture on “The Importance of Beauty.” She said what we speak of as beauty is an affirmation of life. This seems right. What we call beautiful gives us life and affirms life. We feel gratitude, abundance. We are invigorated by it.

On Saturday morning, Mary Southard spoke of her creative life as an artist. She told her story by showing her artwork at different stages of her life. She talked of the highs and lows of her life and how her experiences came to her, as if from afar, as images. These images took over her and came through her to her paintings. We again share her beautiful work on the desert blooming, which was featured in all of our promotion pieces for the event.

We had five workshops, which was too many for the size of our group as one-third joined Mary Southard’s workshop on pastel drawing. Yet each of the workshops was special. I was in the poetry interpretation workshop with five others. We read poems on the current dystopia and on the ecozoic promise. Bill Peck led the poetry interpretation workshop. Maggie

Sandra Lubarsky speaking on “The Importance of Beauty”
Peltier and Eve Olive led a workshop on creative writing. Joanna Carey led a workshop on singing. And Kelly Calegar led a workshop on beauty and motion.

Our closing lecture was by Peter Marcus Ford. He began with a quote from Alfred North Whitehead:

*The teleology of the Universe is directed at the production of beauty.*

He explained why in Whitehead’s understanding it was possible to make such a statement. Like Thomas Berry, Whitehead understood the universe as a communion of subjects not a collection of objects. Those subjects are about something expressed in the unfolding universe.

He contrasted that with mechanistic understandings that have dominated modern thought from Descartes forward and are still being repeated by well-regarded people. He gave these as some of the tenets of this creed:

- The world is organized strictly in accordance with deterministic principles or chance
- There are no purposive principles whatsoever in nature.
- There are no gods and no designing forces and that are rationally detectable.
- There are no inherent moral or ethical laws.
- Human beings are marvelously complex machines. The individual human becomes an ethical person by means of only two mechanisms: deterministic heredity interacting with deterministic environmental influences. That is all there is.
- We must conclude that when we die, we die and that is the end of us.
- Free will, as traditionally conceived, the freedom to make uncoerced and unpredictable choices among alternative possible course of action, simply does not exist.
- The evolutionary process cannot produce a being that is truly free to make choices.
- The universe cares nothing for us.
- Humans are as nothing even in the evolutionary process on Earth.

We closed with a Beltane dance led by Ann Loomis and Betty Lou Chaika. We learned that Beltane was the Celtic name for May Day. It is half way between the vernal equinox and the summer solstice. It is the time that nature is budding forth and growing.

Mary Southard’s art, both original and canvass prints were offered for sale and may still be viewed and purchased here.

**HERMAN GREENE JOINS THE BOARD OF DIRECTORS OF TOWARD ECOLOGICAL CIVILIZATION**

Herman Greene, the President of CES, has joined the Board of Directors of Toward Ecological Civilization (EcoCiv). See article on this new organization in this issue of *CES Musings.*
He joins a distinguished Board consisting of

- Philip Clayton, President of EcoCiv and Ingraham Professor of Theology at Claremont School of Theology.

- Andrew Schwartz, Executive Vice President of EcoCiv, Managing Director of the Center for Process Studies, and PhD candidate at Claremont Graduate Theological Union.

- John B. Cobb, Jr., regarded as the preeminent scholar in the fields of process philosophy and process theology, author of more than 40 books, and Ingraham Professor of Theology Emeritus at Claremont School of Theology.

- Damian Geddry who worked for 35 years in automotive marketing, public relations, and advertising, including 10 years at Grey New York, one of the world’s largest advertising agencies. He won a Cannes Lions International award for digital advertising.

- William Lesher, Chair Emeritus of the Board of Trustees of the Council for a Parliament of the World’s Religions. He is President Emeritus of the Lutheran School of Theology at Chicago and past President of Pacific Lutheran Seminary.

- Mary Evelyn Tucker, Senior Lecturer and Research Scholar at Yale University where she teaches in a joint master’s degree program between the School of Forestry and Environmental Studies and the Divinity School. She directs the Forum on Religion and Ecology at Yale. She is a Trustee of the Thomas Berry Foundation.

DOES THE UNITED STATES PRESIDENTIAL ELECTION MATTER IN THE BIG PICTURE?
By Herman Greene

Ecozoans operate out of a big history.

Thomas Berry said that our present situation is not like any other period in human history because, for the first time, the human species is undergoing a transition in geo-biological eras—from the terminal Cenozoic to the emerging Ecozoic era. This, he said, is not like a disturbance in merely human affairs, like a great depression or even a world war, it’s a change in the way the planet functions. When Berry wrote of the Ecozoic era, he was writing of a contingent promise. He was writing of what could be, not what was destined to be or necessarily would be.

The framework he gave for understanding our times is so broad it is difficult to relate to everyday events. So we might actually have two questions. First: In this ecozoic big picture
framework, does what happens in the US Presidential campaign really matter? Second: Does this ecozoic big picture framework really matter to the US Presidential campaign?

I’ll begin with the first question.

One of the finest documents written on the “great transition” to sustainability, is *Great Transition: The Promise and Lure of the Times Ahead*.¹ In it the authors envisioned six potential scenarios for the future. While the scenarios do not exhaust the possibilities, I continue to find them quite helpful:

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<th>Conventional Worlds</th>
<th>Market Forces</th>
<th>Policy Reform</th>
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<td>Barbarization</td>
<td>Breakdown</td>
<td>Fortress World</td>
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<tr>
<td>Great Transitions</td>
<td>Eco-Communalism</td>
<td>New Sustainability Paradigm</td>
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In *Conventional Worlds*, the future proceeds without major interruptions. Some focus on *Market Forces* as driving world development, and others focus on *Policy Reform* to address issues such as poverty and environmental issues in the process of development. This is business as usual with ongoing improvements. These are the scenarios out of which business and governments operate as, to some extent, do each of us in our daily lives and in our places of work.

*Barbarization* anticipates that Conventional Worlds will not be able to manage the problems of the future. Economic and social institutions will be disrupted leading either to *Breakdown* and conflict and crisis, or *Fortress World* where authoritarian control and defensive measures are applied to establish security and stability.

In the *Great Transition* scenarios, there are two variants, *Eco-Communalism* and *New Sustainability Paradigm*. *Eco-Communalism* focuses on localism, bioregionalism, participatory democracy, organic agriculture, crafts, and autarky. In *Eco-Communalism* hierarchical structures and globalism greatly diminish. In the New Sustainability Paradigm, the complexity and globalism of Conventional Worlds continues, but the character of civilization is changed by transformative new values and there is a greater role for civil society. The authors of the *Great Transition* favor the New Sustainability Paradigm and do not see Eco-Communalism on a large scale without first passing through some form of Barbarization.²

Elements of the New Sustainability Paradigm are given in numerous documents. Moving into this paradigm requires transforming energy production to make energy available in greater quantities and on a wider scale and yet without greenhouse gas emissions. It also requires a

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²*Great Transition*, 15
new transportation system and redesign of cities, suburbs, and even rural areas. It requires greatly increased resource efficiency and greatly reduced toxicity. Goods need to be more durable, repairable and recyclable. Other species need protection and in a way that augments and is coherent with the functioning of natural systems. Further, this paradigm calls for increased social equity and reduced conflict and operating within planetary boundaries.

The New Sustainability Paradigm has an appeal because it preserves the benefits of modernity while extending them to more people and, by definition, it operates within planetary boundaries. It has a Utopian aspect to it, however, and it is relatively easy for a broad range of people to be for it, without any real agreement on what it entails or on the scope and scale of change needed to actually achieve sustainability.

I see Trump operating out of three of these scenarios. In terms of everyday affairs, he has faith in business, i.e. market forces. He even sees running government like a business deal. Where he is primarily, however, is in breakdown and wanting to construct a fortress world. Instead of gated communities we would have a gated country. He has visions of mongrel hoards invading America and taking advantage of us. He wants citizens to stop being stupid and put America first. He is not the only leader in the world acting out of such impulses and American citizens are not the only ones rallying around such leaders.

I see Clinton operating out of policy reform with a vision of the new sustainability paradigm. Many find her uninspiring, but she is a highly committed public servant. Her lifelong devotion to women’s issues and her notion that “it takes a village,” not just individuals, to improve things are guides to what is important to her.

I see Sanders operating out of breakdown. Policy reform is not enough, a revolution is needed. He says climate change is the greatest single challenge facing humanity, and social inequality and the influence of money, especially large financial institutions, in politics as paramount issues. Commentators question whether he has a realistic budget plan to put in place the policies he advocates, but his supporters are undeterred. Socialism, once anathema, he proudly advocates—we can do this if we all work together and support each other. His vision of the Great Transition seems to me to be more eco-communalism than new sustainability paradigm. He sees the issues of the United States as internal to it and gives little attention to the global dynamics and realities that shape our lives. Still it is difficult for me to place him either eco-communalism or new sustainability paradigm. I see little in his proposals that suggests a reduction in scale of enterprise, and rather see a massive state apparatus collecting and distributing benefits. Also, I do not see the fractiousness of our present politics being transformed into a great period of cooperation as Sanders would have it.

Sanders further appears to be a “true believer.” After decades in Congress, he now has his moment in the public eye. He feels it is time to realize what he has fought for his whole life and believes this can be accomplished. He will not, however, win the Democratic nomination. While he will not run a third party campaign, he threatens to be the Ralph Nader of the 2016 election and hand the victory to Trump by withholding his support from, or moderating his support of,
Clinton. Nate Cohn, the pollster’s pollster, makes an interesting observation in a May 23, 2016, article in the *New York Times*, regarding recent polls that show Sanders beating Trump by higher numbers than Clinton. In his view it is the Sanders supporters who are holding down Clinton’s numbers, Trump receives about 40% of the vote against both Sanders and Clinton. A similar point is made in a May 24, 2016, *politico.com* article. Both articles state that while almost all Clinton supporters would vote for Sanders over Trump, only around two-thirds of Sanders supporters would favor Clinton over Trump (the remainder either voting for Trump or for a third party candidate or not voting at all).

The next President of the United States will either be Trump or Clinton. This is not true because these two are the best candidates. It is true because this is political reality. But does it really matter?

Yes, I think it does matter even in the very broad historical context of a change in geo-biological eras. There is a historical necessity that humans deal with the change in the functioning of Earth, but there is no historical necessity that there be a benign outcome. Trump’s efforts to build a fortress world is a frightful thought.

If the largest context for understanding our times is geo-biological change, in terms of human history the largest context is civilizational change. The global stresses to which Trump and Sanders are a response are the breakdown of the economic-industrial age. Commentators who say Trump is no ordinary candidate are right. While there are barbarian threats to US citizens (and others) from outside the United States, Trump is an uncivilized (especially as regards an ecological-cultural age) threat from within.

And now the second question: Will the big picture framework really matter in the US Presidential campaign? “Yes,” again. We are facing and will face increasingly difficult circumstances. For example, people are not migrating for no reason at all. The crucible of this Presidential campaign is the microcosm of the macrocosmic events that are upon us.

These are the areas that need transformative leadership:

(i) creating a new theoretical, practical, historical and philosophical framework for the world of the future;
(ii) dealing with the intimate relationship between people and the natural environment;
(iii) providing uncommon clarity about our best economic and energy options;
(iv) helping people understand and face what will be increasingly difficult circumstances; and
(v) fostering a vision of a humane and decent future.

All will not be lost if Trump becomes President, but for ecozoans carrying out the Great Work, things will be discernibly more difficult. In the above five areas, in my view Trump offers nothing.
And if Clinton becomes President? In this case, Ecozoans will see a lot more of the dysfunctional politics of the last, at least, eight years. The US has been described as a vetocracy, there are so many checks and balances and so many ways to prevent change from happening. I believe that if Clinton is President, we will have someone who understands the world and its people and its environmental challenges. She will be limited in what she can accomplish, but will not herself be an impediment.

THE CHURCH OF ECONOMISM AND ITS DISCONTENTS

By Richard Norgaard

Two centuries of explosive economic growth have radically altered our material and ideological worlds. With human activity now the major driver of geological change, the industrial era has come to be called the Anthropocene. This inquiry instead adopts the term Econocene, underscoring its ideological foundation: economism. The concept of economism, the reduction of all social relations to market logic, often appears in critiques of political movements and neoliberal economics. Our concern here is with economism as a widely held system of faith. This modern “religion” is essential for the maintenance of the global market economy, for justifying personal decisions, and for explaining and rationalizing the cosmos we have created. This uncritical economic creed has colonized other disciplines, including ecology, as ecologists increasingly rely on economistic logic to rationalize the protection of ecosystems. More broadly, economism often works syncretically with the world’s religions even though it violates so many of their basic tenets. A Great Transition is needed to replace economism with an equally powerful and pervasive belief system that embraces the values of solidarity, sustainability, and well-being for all.

Today’s World

Environmental scientists are recognizing that Earth’s geological history has moved into a new phase, as human activity now has a significant impact on the Earth system itself. The term for this era, the Anthropocene, is not yet official, but it has stirred critical discussion about the present and future, human and planetary. Although it identifies humans as the key driver of environmental change, the term Anthropocene suggests that the sheer number of humans alone is driving this change. Some contend that Technocene would be more apt since the development of fossil fuel technology has been critical to the acceleration of local and global change. Let me join this discussion from a social science perspective and offer a new term for consideration: Econocene.

The global human population increased from approximately 1 billion in the year 1800 to 7 billion in 2011. Over this period, the field of economics emerged, transforming political discourse. The institutional conditions for market expansion were put in place, and the success of markets suppressed myriad other ways societies have organized themselves. Economic activity per capita increased somewhere between 10- and 30-fold, resulting in a 70- to 210-fold increase in total economic activity. Population growth has
slowed significantly in recent decades, but both economic growth through market expansion and its attendant environmental destruction have only continued.

*Econocene* is a fitting term for this new era because it makes us think about the expanding market economy, the ideological system that supports it, and its impact on society and the environment. Reflecting on environmental boundaries led ecological economist Herman Daly to propose limits on material throughput. Environmental economists propose taxes on greenhouse gas emissions and the creation of markets to resolve environmental conflicts. While acknowledging the importance of making markets work within the limits of nature and for the common good, I will explore how this new dominance of economic thinking, which I will call *economism*, has reshaped the diverse cultures of the world and come to function as a modern secular religion.²

An advantage of *Econocene* is that it evokes the everyday cosmos of modern people. Artifacts of the economy—towering buildings, sprawling shopping malls, and swirling freeways—surround the 50% of the globe’s population who live in cities. A combination of smog and bright lights now obliterates the starry heavens so important to humanity’s historic consciousness and so humbling to our species’ historic sense of importance, focusing our attention on the economic constructs all around us. The cosmos reflected in the term *Econocene* includes not only the material artifacts of the economy, but also the market relations that bind us and define our place in the system. Urban dwellers are now fully dependent on markets for material sustenance. They awake to radio announcers discussing supposedly significant changes in exchange rates, stock markets, and the proportion of people looking for work. The dominance of the market is not just an urban phenomenon: its “invisible hand” guides rural life as well. The crops planted reflect expected future prices, and soils reflect their history of economic use. Farmers have become so specialized that they, too, buy most of their food in supermarkets. In order to grapple with the challenges of this new era, we need to give it a name that resonates with people’s lived experiences.

Although economics is cloaked in the rhetoric of science, the modern economy runs on faith. To begin to understand why faith is so essential to the operation of markets, consider the following scenario:

Imagine that a small number of people realize that our market-based food system is vulnerable to the rapid spread of plant and animal disease, the planetary limits of phosphorous use, the possibility of droughts hitting all of the major areas of grain production, and myriad other problems. These people would likely start trying to develop ways of growing food themselves to ensure their own survival, buying as much fertile land as possible. Now, imagine that this insight spread to more and more people. As these people lose their faith in food markets, they would walk off their jobs and try desperately to grow their own food. If this behavior became widespread, the economy would soon collapse, and the vast majority of humanity would starve, leaving the whole socioeconomic system in shambles. Is such a
scenario any more difficult to imagine than a global financial crisis resulting from the bursting of a bubble driven by the belief that homes always go up in value?

The economy, in other words, really is the world’s greatest faith-based organization.

Understanding Economism

The word *economism* has been around for over a century. Vladimir Lenin introduced the term in 1899 to refer to social movements that sought to improve the wages and working conditions of laborers without also seeking the overthrow of capitalism.3 Antonio Gramsci expanded its meaning, reserving its sharpest use to characterize the work of scholars who saw economic issues as independent of other social spheres — which would include that of most non-Marxist economists.4 Gramsci attributes a religious character to the term, an indication of his disregard for both economism and religion.

Over the past few decades, the term has experienced a revival. Environmental theologian John B. Cobb, Jr., used the term to denote a new era of Western history following nationalism and Christianism.5 Ecological and heterodox economists use the term as an indictment of how neoliberal economics reduces all social relations to market logic. To such economists, neoliberal economics is merely reactionary politics disguised as value-free science. Economism replaces belief in God’s control over human destiny with the belief that markets control our fate. The term also appears in critiques of development, particularly when international and national economic experts have advanced markets at the expense of democracy and cultural values in developing countries.6

In this essay, I will build upon the past usages of the word to argue that today’s uncritical economic thinking operates as a modern secular religion. The social sciences arose in the West out of moral and social philosophy, taking on the role of rationalizing our notions of good and bad, the way people are and could be, and the nature of a good society, without appeals to religious authority. Replacing God is a tall order, and it led to enlightening semi-structured debate around conflicting core theories in all of the social sciences except economics. During the twentieth century, apart from scattered pockets of Marxist dialogue, economics as a discipline set aside moral questions, settling into a discourse that selectively draws on different theories as needed to supplement and support the dominant market paradigm. In doing so, economics resolved its tension with religion by declaring itself its own judge.7

Economists themselves have acknowledged the ultimately religious nature of their discipline. In 1932, Frank Knight, the most scholarly and broad-thinking of the founders of the influential market-oriented Chicago school of economics, literally argued that economics, at a fundamental level, had to be a religion, the basic tenets of which must be hidden from all but a few:

The point is that the “principles” by which a society or a group lives in tolerable harmony are essentially religious. The essential nature of a religious principle is that not
merely is it immoral to oppose it, but to ask what it is, is morally identical with denial and attack.

There must be ultimates, and they must be religious, in economics as anywhere else, if one has anything to say touching conduct or social policy in a practical way. Man is a believing animal and to few, if any, is it given to criticize the foundations of belief “intelligently.”

To inquire into the ultimates behind accepted group values is obscene and sacrilegious: objective inquiry is an attempt to uncover the nakedness of man, his soul as well as his body, his deeds, his culture, and his very gods.

Certainly the large general [economics] courses should be prevented from raising any question about objectivity, but should assume the objectivity of the slogans they inculcate, as a sacred feature of the system.\(^8\)

When I show students these passages in my lectures, they gasp, finally understanding why economics is taught so differently from the other social sciences, why it is presented so uncritically, as if it were a science when it obviously is not.

Comparing economics with ecology illustrates the strangely settled nature of the former discipline. Both ecology and economics provide multiple formal models and other aids for dealing with complex systems. Ecologists peer into the complexity of ecological systems with the help of food web models, population dynamics, energetics, evolutionary ecology, landscape ecology, biogeochemical cycles, theories of biodiversity, etc. Aware of complexity and the multiple patterns of thinking they use, ecologists are typically hesitant to provide single answers for any question or to predict the future without emphasizing multiple contingencies.

Economics also provides multiple approaches to complexity—partial and general equilibrium theories of markets, growth models, macroeconomics, and monetary theories, as well as newer options such as ecological, evolutionary, and behavioral economics. Some methodological traditions stress history and institutions; others, the use of calculus, set theory, statistics, and game theory. However, while economists may come up with different answers and fight amongst themselves, most will contend that there is a right way of thinking about any question and that a right answer does, in fact, exist.

What are the fundamental beliefs embedded within economics that only a very few should know and question? There are many, but most important are the assumptions underlying individualism, property, and the role of information, the foci of the next section.
Parts and Wholes

All of the sciences face a common dilemma: how to think about parts and the systems in which they are embedded. It is easiest to think of systems as being made up of parts that are entirely independent of each other or the nature of the system as a whole: the whole is then simply the sum of the parts. If the flows between parts can be expressed as simple mathematical functions, then prediction is possible. However, the nature of parts and systems can be closely interrelated, often in very complicated ways that make mathematical description difficult. The parts and the relations between them may also evolve over time in ways that render prediction impossible.\(^9\)

Market-based economic theory embraces the simple approach to portraying systems, treating each individual as entirely separate. It takes each individual’s tastes as given, whereas all other social sciences not only acknowledge but also study how society influences individuals and their tastes. In economics, individuals may choose to help others, but they do so only because of the pleasure they derive from doing so. The happiness of society as a whole is then simply the sum of the happiness of each individual.

Similarly, with respect to natural systems, market-based economics assumes that nature is made up of separate parts that can be owned and traded as property. Never mind that water and air, plants and animals, cross property boundaries, “creating” external costs and benefits. They are only “external,” of course, if one adopts the perspective of an economist that nature is simply a bunch of separate things.

The conceptual problem of deciding how simplified our thinking about systems should be plays out in the realm of morality as well. Each of us struggles with the dilemmas posed by our sense of free will and our need to make choices that satisfy ourselves while meeting our obligations to those to whom we are connected by birth, marriage, parenthood, work, politics, or play. With increasing maturity, we come to realize that who we have become and what our desires are depend on the choices we have made and the people we have known. Our own essence and those of the people closest to us are dependent on and affected by these choices. Economists ignore this reality and worship the “freedom to choose,” treating obligations to wider society as costs to be avoided.\(^10\)

Adam Smith’s *The Wealth of Nations* and the treatises of most nineteenth century economists explored the assumptions behind market thinking, addressing its real-world complications and its conflicts with Judeo-Christian morality. But as market-based theory became formalized and mathematized, economists became less and less philosophical and more and more uncritical of their own assumptions. Most economists now settle into the discipline without thinking much about these foundational assumptions at all. More importantly, as market thinking took hold in popular and political thought, and the economy was increasingly structured around it, it became “sacred” as Knight argued it should be, to question the underlying tenets of the belief system behind these institutions.
How fragile are the assumptions behind market economics? Consider the logic offered to support the intrinsic value of exchange:

If two parties agree to enter into an exchange, both are fully informed, and the exchange is truly voluntary, then the exchange makes both of them better off.

Therefore, government should not interfere with such exchanges, unless there are significant impacts on third parties.

When we are taught that this logic proves that markets support individual choice and thus should not be interfered with except under unusual conditions, we are being asked to assume that being fully informed is common and third-party impacts are rare. The divisibility of societies into individuals and nature into property has, for economists and increasingly for society as a whole, become a default assumption that merits no mention. These provisos, however, are rarely met: social and natural systems cannot be divided into separate parts, and few parties are ever sufficiently informed.

Note also that the first part of the logic is equally valid regardless of how the parties are defined. They could be groups or corporations, communities or states, and the logic would still hold so long as the provisos hold. The logic is invoked to show that markets support free choice among individuals or, as the definition of “individual” has been expanded, corporations. It is never applied to choice among collectives, even though the logic still holds. Given all this, the logic of exchange amounts to little more than the truism “agreement is good.”

If the logic of exchange were based on a complex systems perspective instead, it would look quite different:

A collective body at an appropriate scale should oversee exchange between two parties. Exchange decisions should be bounded and modified as necessary to benefit people and nature as a whole and prevented when they cannot be so modified. The exceptions to this need for collective oversight are situations in which the property involved is truly divisible, no third parties are affected, both parties are fully informed, and the exchange is purely voluntary.

As this reframing shows, exchange between individuals without collective oversight would be rare if the full complexity of our social and natural systems were the default position.

For most of human history, populations were much smaller, and the technologies available were simpler and less likely to affect third parties or the natural system as a whole. Accordingly, people needed less knowledge to be sufficiently informed. However, since Adam Smith presented us with the logic of exchange nearly two and a half centuries ago, population levels and the impacts associated with new technologies have grown dramatically. A complex systems perspective, then, should have increasingly become our default perspective. Instead, an ideology of atomistic individualism and private property
has become entrenched despite its clear limitations. Economics, law, and much of political science—all supposedly scholarly enterprises—have been fully complicit in this folly. The invasion of the field of ecology by market-based reasoning is especially problematic, as its object of inquiry—the environment—is often harmed, rather than helped, by markets. While all of the sciences strive to understand complex systems, ecology focuses on the part of the universe which people most closely relate to. Systems models used in ecology are thus more accessible to the general public and provide better counterexamples to simple market thinking than the equally complex models used in astrophysics, epigenetics, or cognitive psychology.

**Economism as Everyday Religion**

Economic beliefs now reverberate through our individual and collective discourse and are invoked routinely in political rhetoric. These beliefs explain one’s place in the world, play a normative role in guiding social relations, and define the purpose of individual and collective life. They even offer new creation stories and houses of worship.

The moral dimension of economism becomes apparent in how it is invoked to justify the status quo. Since the neoliberal transition that accompanied the election of Ronald Reagan, Margaret Thatcher, and Helmut Kohl, it has become increasingly common, in both private conversation and political rhetoric, for people to argue that markets correctly determine who gets what. The achievement of great wealth is a sign of merit, even moral probity, whereas poverty is a result of individual moral failings. Because wealth is “earned,” it should not be taxed, even to provide for basic needs such as public education. The wealthy are the “job creators” on whom the system depends, and increased taxation would hinder them in performing the “good work” of getting rich. Economism, by rationalizing market outcomes, becomes the new “opium of the people,” playing the role Marx once attributed to religion in keeping people from rising up against the system.

Each of us is now connected to more people than ever before in history. The vast majority of these connections, however, are impersonal, mediated through markets both locally and globally. Child care and elder care, education, health services, and domestic work are increasingly based on contractual agreements rather than familial or communal connections. While care may still exist in market-based relations, it is a lot easier to terminate contracts than personal relationships. In local markets a century ago, the same people were encountered again and again on the other side of transactions, resulting in friendship and trust. More products were made locally, so the community in which one lived felt the consequences of good or bad work. Today, many urban and rural consumers shop at large chain stores, queuing in lines with strangers and rarely encountering the same checkout clerk (if a human even plays that role anymore). Many of those upon whom we depend live and work much farther away than they did in earlier times, even on the other side of the globe. The logic of the market—that everyone gains from
specialization, trade, and mass production—takes the place of the ethical responsibility that once guided commerce.

Economism provides a way to justify the conditions found in the global market economy. Factory workers in developing countries may be paid little and labor under dangerous conditions, but, we are told, they choose to become factory workers because they think it is better for them than staying on the land. This “choice,” as just a little research would show, reflects the commodification of agricultural products through market-led development, specialization, and industrialization, developments that are crippling rural communities and pushing people off the land development, specialization, and industrialization, developments that are crippling rural communities and pushing people off the land. But that additional information is more than most people seek. We are also told that expanding markets benefit everyone because they make goods cheaper. We hear these economistic invocations whenever moral issues concerning the social and environmental consequences of our actions arise, the impersonal nature of the global market economy making it easy to evade the traditional criteria of interpersonal morality.

Just as markets distance us from each other, so, too, do they distance us from nature and our impact on it. Economism justifies both forms of distancing in comparable ways. As distance increases, caring weakens, and local governance faces increasing difficulties managing problems that arise from afar.

In response to this weakening of personal relations and increasing distance from nature, economism glorifies the individual and rationalizes material greed. Economic models focus on the individual, assume utility maximization, treat society as the sum of individuals, and omit society’s influence back on the individual. Care for others and the land may give people utility, but there is no obligation to care. This view runs contrary to all major religious traditions, effectively competing with the teaching they provide.

Growing the economy—that is, increasing the rate of GDP growth—is put forward as the solution to problems of poverty, unemployment, crime, and even pollution. The economy, of course, has grown and grown. Yet the problems persist, and some, like homelessness in our cities and mountaintop removal in coal mining communities, have become accepted as the way things are. Continuous economic growth has become the goal of almost all nations, and ever-increasing material consumption and the acquisition of possessions are presented as forms of personal transcendence.

The Econocene has even spawned its own creation stories: economic parables of entrepreneurs, investment, and transformative growth explain the emergence and character of the world in which we all now live. Churches and other places of worship, with spires reaching toward the heavens and names commemorating important religious figures, now cower beneath skyscrapers named after corporations and their founders. According to both textbooks and popular understanding, markets have expanded naturally, with the demise of the former Soviet Union a testament to the superiority of markets over central planning. For those areas not yet so materially developed, economics offers a guiding hand.
Follow the wisdom of the economic gurus, and growth will come. Of course, there will be sacrifices along the way, but the gains will be more than worth the costs.  

Realizing the religious character of economism raises the question of how religions have responded to this secular competition. Theologians have pondered the rise of economic man in a Judeo-Christian world. Some portray the two as complementary, with religion serving to tame materialism and ensure that markets serve the common good. There has been a modest, but important, greening of religion that admonishes against worshipping Mammon and causing social and environmental harm. *Laudato Si’*, Pope Francis’s encyclical released in June, is a powerful indictment of human greed and an economic system that pays insufficient attention to the environment and the poor. In August, sixty Islamic leaders from twenty nations issued a shorter statement emphasizing the responsibilities of rich nations and oil-producing nations to correct the disaster their economic success created. Going further in this direction, efforts are now underway to portray a wondrous universe, consistent with that described by science, within which people are only very recent beneficiaries and novice players. Similar greening is occurring in religions around the world.

However, at the same time, a large number of people have been brought into the fold of Christianity through the rise of prosperity theology. It is not surprising that this development, emphasizing how God bestows economic success on the faithful, has been especially well received among the poor and by people in developing countries. Much as slaves from Africa blended African and Christian beliefs to create systems that provided meaning and supplied comfort, economism frequently works alongside and through religion in overt syncretism.

**Towards a Great Transition**

In the Econocene, everyday life is driven and maintained by economism, which operates via common beliefs, is reinforced through public media, dominates political discourse and public decision-making, and is invading the natural sciences. Economism is embedded in the way we think and in how our institutions—from markets to political, legislative, and regulatory bodies—are structured. Its influence extends from familial relations to religious teaching. Economism is the pervasive, interactive, mutually reinforcing system of personal beliefs, methods of formal analysis, and institutional rationales that we must overcome to create a socially equitable, environmentally sustainable, and personally meaningful world. Portraying the current human condition in this way underlines just how sweeping and thorough a Great Transition must be.

Achieving a Great Transition requires a comprehensive change in our belief system and the institutions in which it is embedded. Incremental changes will likely be overwhelmed by the larger economistic structure. Efforts to use economistic logic to solve problems created by that same logic, as seen in the discussion around “ecosystem services,” will simply reinforce the underlying problem. However, if we address the structure and belief system as a whole,
exposing its flaws again and again, there is a chance that we can escape the destructive feedback loop it has produced.

As we move beyond the Econocene, our guiding philosophies—the “isms” of the future—need to acknowledge the interconnectivity of natural systems as well as the interplay between individuals and societies. This complex systems approach must be applied in all areas, from our daily discourse to the structure of our institutions. With broad enough acceptance of such an approach, we can envision and develop institutions that support a healthy mix of individual and collective choice.

So long as anthropogenic stressors like greenhouse gas emissions continue to drive rapid global change, whatever “isms” we develop will have to emphasize and facilitate adaptation to unexpected outcomes. Reasoning about the future will have to accept the limits of prediction in a world of complex interconnectivity in the midst of an age of rapid human-driven change. We need to be much more open to continual learning and adaptation, moving from arrogance toward humility in our approach to social and natural systems. To adapt effectively, we must monitor outcomes much more intensely than we do now and prepare for an array of possible futures depending on how things unfold. Being more cautious and adaptive will require reallocating resources to monitoring, learning, and resilience.

In light of these points, it is unlikely that a transition can be done “right” in one global, universal way. Instead, we will need to encourage considerable regional differentiation and experimentation. This will likely be possible only with significantly fewer and weaker global interconnections than we have now. However, the connections that endure will need to facilitate the transfer of sustainable and equitable lessons learned from experimentation in a way that creates a great coevolving patchwork quilt. We will also need to make sure that each region operates in a way that is sustainable and equitable for the whole. A limited unifying “ism” will be necessary to do this.

Essential to any unifying “ism” will be honoring our ability to care. Our species has survived through our ability to care for one another. To my knowledge, we are the only species that cares for its ancestors and descendants, that is capable of exhibiting a keen sense of the great chain of life. Bringing care to the forefront of our personal and political consciousness and demonstrating it in personal action and policy decisions will help us to live successfully with each other and with nature. Care—so humanly natural, socially good, and encouraged by the religions of the world—cannot be replaced by the market. If we are to balance our pursuit of self-interest with the needs of future generations, care is essential. It is also contagious and powerful.

A successful transition will depend on a diverse collection of efforts, including urging negative population growth; supporting sustainable consumption and degrowth; promoting the commons paradigm; working with religion to foster an ethic for an equitable and sustainable planet; furthering justice; improving the sciences; promoting agroecology; facilitating local markets; encouraging progressive forms of corporate
ownership, governance, and practice; and warning of limits and the possibilities of tipping points. We will need all of these efforts and more to shift to a socially just and environmentally sustainable world. We will even need the insights of economists, but with a diversity of forms of economic thinking. We will need markets, but we will have to be far more aggressive in telling the “invisible hand” where to go. Hopefully, exposing the interrelationships between economism and the Econocene will help us see the depth and breadth of the problem and the role each of us can play in a collective solution.

The challenges of such a transition are so great that the solutions are only barely imaginable. Yet I lay out these broad and challenging thoughts sustained by hope that fortunately has some evidentiary basis. We know that humanity has lived under significantly different social and political arrangements and has survived the transitions between them. When we contemplate the long human experience, it is truly amazing how diverse and adaptable we have been.

However, I worry that we will not be able to initiate the necessary changes without “crashing” the current system, causing starvation and other calamities on an unprecedented scale. With economism in place across the globe, how can we develop alternative “isms,” get enough people on board, and then switch? Linking economistic beliefs to their disastrous social and environmental consequences has its risks. It violates the caution given by Frank Knight: we are looking at the nakedness of man, his soul as well as his body, his deeds, his culture, and his very gods. However, we need to do exactly that while projecting hope and working to build a better future.

Endnotes


10. This is the title of Milton Friedman’s most famous popular book, which he co-authored with his wife, Rose: *Free to Choose: A Personal Statement* (New York: Harcourt, 1980).


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TOWARD ECOLOGICAL CIVILIZATION—AN IMPORTANT NEW NONPROFIT AND MOVEMENT

By Herman Greene

Toward Ecological Civilization, a California nonprofit public benefit corporation (EcoCiv), emerged out of the vision of John B. Cobb, Jr., Professor of Theology (emeritus) of Claremont School of Theology, Claremont, CA, a 501(c)(3) organization (CST), and the work of the Center for Process Studies (CPS), a center within CST. Under the leadership of Cobb, CPS organized an ambitious conference that was held at Pomona College, Claremont, CA, in June 2015 titled, “Seizing an Alternative: Toward an Ecological Civilization.” The purpose of this transdisciplinary event was to work together on reenvisioning the various sectors of society through an ecological lens. The conference was a success. Over 800 scholars participated in the 80+ working groups of the conference and an additional 1,200 people attended the plenary sessions or other special events. The conference was intended as the beginning of an ongoing movement toward ecological civilization—toward a sustainable future.
The organizers of the conference decided that to take the work of the conference forward a new organization was needed which would focus solely on ecological civilization. A generous donation of $150,000 was given to CPS so that it could launch this new organization.

In July 2015, Philip Clayton and Wm. Andrew Schwartz, who held positions in CPS and were part of the June 2015 conference planning committee, were selected to take responsibility for this new initiative. The strategic plan for the first few months was to focus on clarifying the mission, purpose, and structure of EcoCiv. To this end, a website was created (ecociv.org), fundraising documents were drafted, and initial staff were hired. The first public event organized by EcoCiv was a conference on “Ecology of Community,” held in October 2015, which was co-sponsored by CPS, Pando Populus, and the Environmental Analysis program of Pomona College. That same weekend, EcoCiv held private research consultations on the topic “Economics Toward Ecological Civilization.” In that consultation EcoCiv interviewed leading theorists in the field for the purpose of drafting a roadmap for action and policy recommendations related to economics.
In February 2016, EcoCiv held an additional research consultation on “Education Toward Ecological Civilization.” In April 2016, EcoCiv held a second research consultation on economics and co-hosted a public conference on the Pope’s encyclical *Laudato Si’: On Care for Our Common Home*.

In June 2016, EcoCiv will hold a research consultation on Business & Management. In Fall 2016, EcoCiv expects to hold its first “convening”—a gathering of leaders representing different sectors of American society, such as business, nonprofits, government agencies, environmental organizations, religious organizations, and perhaps a union leader, an urban designer, a university president—with the purpose of considering, critiquing, and providing feedback on the recommendations from the research consultations so as to forge a multi-sector roadmap toward ecological civilization. The convenings are also intended to encourage these leaders to take the recommendations to their networks and to become advocates for needed changes in their institutions and other areas where they have influence. This first convening will probably be held in Washington DC. Also, EcoCiv plans to hold a convening with a group faith-based eco leaders at Yale University in fall 2016.

EcoCiv has identified 12 initial sectors of society to examine and influence, as follows:

- Agriculture
- Energy & Technology
- Education
- Business & Management
- Economics
- Social Structures
- Law, Politics & Political Structures
- Climate, Nature and Non-Humans
- Communities
- Religion & Spirituality
- World Views, Philosophy & Ethics
- Creative Arts

The process of research consultations and convenings will continue in relation to each of these sectors, as additional sectors are identified and explored. The basic method and process of EcoCiv is the following theory of CHANGE:

- **COLLECT** information about the major sectors of society, trends, and paradigms.
- **HOLD** consultations and conferences with experts from each sector in order to identify shared values that unite currently fragmented sustainability efforts.
- **ARTICULATE** a roadmap toward sustainability, including—how each sector must be organized to make its particular contribution, which will win broad consensus.
- **NAVIGATE** between academics and activists, between theory and practice, so that the solutions offered are broad enough to unite but specific enough for concrete action.
- **GATHER** leaders from government, business, and nonprofits to further refine and take ownership of the roadmap, which they will then disseminate among their communities to form a coalition for action.
EDUCATE the general public about concrete steps they can take.

The overall mission of EcoCiv is to identify how the major sectors of human social, political, and economic life will need to be organized if humans are to live ecologically and sustainably on this planet for the long term. Its intent is to develop clear ideas through research and dialogue and communicate them through networks of networks to influence change.

EcoCiv will also identify certain on-the-ground sustainability action projects and will collaborate with them in their work. EcoCiv plans to begin featuring "ecological laboratories" (EcoLabs), communities that are already in existence around the country. The aim is to support key experiments toward ecological civilization, provide an online platform for connecting these experiments with one another, and publicize the most important among them. By doing this, EcoCiv will bring attention to important initiatives in sustainability.

For more information about EcoCiv contact info@ecociv.org.

INTRODUCTION TO QUANTUM POLARITY
By Dirk Kelder

Editors Note: Dirk Kelder is the webmaster of CES. He has training in physics, theology and psychotherapy. In his early career he was a computer programmer and in his later career a counselor. He has developed a way of understanding the world known as “quantum polarity.” Here are two introductory articles to his thinking from some years ago, and a poem he just wrote. We will continue to provide articles by Dirk on quantum polarity. It is a way of knowing and understanding that overcomes dualistic thinking.

On Stillness (A Message from the Tree of Life)

"Have you ever experienced stillness?"
"I don't mean quiet!" the tree said to me.
No, stillness is something else.
In fact, I suspect I have avoided stillness
Much like I avoid a cobra or a tarantula.
For stillness has a bite to it,
That can be deadly to who I think I am.
But if I keep avoiding it,
I will incur something worse than its bite.

When I approach stillness with an open heart and mind.
It invites me into its chambers.

There I experience a lifetime of blessings and wonders
That have been waiting for me,
That in fact I have been searching and longing for
In the secret places of my heart
Ever since I can remember.

But when I ate of the forbidden fruit
From the other tree—I forgot.

A New Response
October 2010

The times we are going through are demanding a new response from us. For unless we find this new response, we will bring about the end of civilization and perhaps the end of humanity and/or life itself. The times demand that we take on a totally different perspective on how we engage with the world, with each other, and with ourselves. In effect they demand a quantum change in consciousness. Our consciousness especially in the West, but more recently all over the world, has been dominated by intellectual, rational thinking. Our emotions have largely been left out and have in consequence directed our consciousness unconsciously.

We are starting to pay attention to the emotional aspect of our being and this is certainly part of what is needed. But because of the present way we categorize and frame our conscious awareness, this will set up a dichotomy between our thinking and our feeling, and the time and effort to find a resolution of the two will not be short and smooth. Unfortunately the situation is presently so critical and desperate that much is needed in a short amount of time. And there is also more than just the emotional to deal with. We are in a true dilemma.

Our usual approach to dealing with difference and dichotomy is to further and more intensively engage in the way we have dealt with things in the past. Einstein pointed to the quandary we face very well in a number of quotes:

The unleashed power of the atom has changed everything save our modes of thinking
and we thus drift toward unparalleled catastrophe.

A new type of thinking is essential if mankind is to survive and move toward higher levels.

The significant problems we face cannot be solved at the same level of thinking we were at when we created them.

The world we have created today as a result of our thinking thus far has problems which cannot be solved by thinking the way we thought when we created them.

If we persist on our present course, what will likely happen is a shift of the pendulum from the intellectual toward the emotional – or some other opposite of our present approach to understanding reality and life. As these issues and questions are similar to the challenges faced by quantum physicists, we are in what might be called a "quantum conundrum." Scientists are still trying to solve the problems of quantum physics with the analytical mind. What is needed, rather, is the kind of mind that sees not only the parts but especially how these parts are interconnected and how they work together to create the whole picture. Although it is still not easy, that kind of a mind or thinking is able to play with the parts until it becomes able to juggle them in a way that is harmonious and amazingly simple and which corresponds to their natural state.

Enter Quantum Polarity, a new way of approaching these kinds of questions and challenges. Although seemingly simple in its essence, it is able to connect all parts of the issue, including the whole, in a way that includes both independence and dependence between all aspects in a mutually beneficial way.

A New Reality
November 2011

As anyone with sensitivity can see, the world is in process of falling apart. The forces playing a part in this are tremendous in many areas: global warming, pollution, the rainforests, impending economic collapse, population growth, the dying out of many species of plants, insects and animals, the growth of materialism and consumerism, the growing disparity in income and increasing poverty, increase in the speed of life, etc. What is not so obvious to everyone is what's really behind all this and how to turn it around.

I will offer one perspective that may make a difference, and that has to do with perspective itself, or rather cognition. Our minds have one way of seeing and processing the world that have served us well in the past, but this way has rendered our reality out of balance and many things have now gone to an extreme. The unbalance of the mind has to do with reason which has not been complemented with imagination, humor, the arts, and other factors. These have not been taken seriously nor contributed to our understanding of reality and how reality is put together. For understanding reality we use only the scientific approach, which requires if we
are going to believe something, that it has to be backed up or confirmed by solid reasoning and material evidence.

But going deeper than this, we see that in the scientific approach our reason and material evidence are based on our senses. Our cognitive framework is the basis not only of our perception, but of how we form our reality from our perceptions. This can be seen quite clearly by the image shown, which is either a vase or two faces (and is also both). We rely on our cognitive framework to interpret what comes through the senses and create a reality that "makes sense," i.e. where there is coherence in what we have received through the senses. There is a story that when the Europeans arrived at the "new world" the natives could not see the large ship on the horizon. This may be an urban myth, but its point is that we cannot see what does not "make sense" or fit in with our understanding of reality. This happens for example when scientists deny observed facts that are incompatible with current theory.

The relationship between a cognitive framework and so-called "reality" is like the relation between a map to the territory it depicts. If the correspondence between them is not accurate, relying on the map will cause us trouble. At the same time, any map cannot portray all of the territory it represents. We have road maps, topographic maps, weather maps, and so on, each depicting part of the territory. Each map reduces the territory to a limited aspect of its reality.

The cognitive framework we currently use is based on what we receive through our senses and is thus one that portrays the outer, material world. But reality is much larger than that. It includes the inner world which includes the mental, emotional, spiritual and other worlds we know little of. Our present cognitive framework cuts out much of that and leaves us with a severely limited view of reality.

Going deeper again, our present cognitive framework, being based on the senses and the physical world, is grounded on the concept of simple polarity. We use polarity to differentiate between things in our space-time reality using size, weight, distance, and so on. Things are high or low, heavy or light, far or near, dark or bright, hot or cold and so on, with a spectrum in between those dualities/polarities.

Our present cognitive framework is severely limited and does not accurately portray reality in its fullness, a reality greater than what our senses offer us. When replaced by one that is more in harmony with this larger reality, we will come to function cooperatively with all that this reality includes. Once this happens, only then can we be in harmony with the world and the world can come to a state of harmony and peace not previously experienced.

A cognitive framework that can hold much more than what is provided through our current cognitive framework is one that is based on what I call Quantum Polarity. It does this by taking simple polarity and applying it to itself in a way that creates a system that is both self-referent
and intertwined. It addresses both the human quality of self-awareness and detachment, as well as the complex interconnection and interdependence of the natural world. As such it creates a bridge between two worlds that at the present time are often separated by an abyss: the human and the natural.

UPCOMING EVENTS; ALSO, SUPPORT THE CENTER FOR EDUCATION, IMAGINATION AND THE NATURAL WORLD
By Herman Greene

A 2.5 DAY WORKSHOP AND AN EVENING WITH SALVATORE GENCARELLE
- “Native American Teachings from the Woptura Lineage for the Modern Age,” Oasis, Carr Mill Mall, Carrboro, NC, Thursday, June 9, 7:00 – 8:30 pm
- “Introduction to Life Within” Off Turkey Farm Road, Durham, NC June 10-12

For additional Information contact Nancy Hardy, nancynomad@hotmail.com

A deep sense of separation from self, nature, and each other afflicts our modern culture. It has been called the “Disconnection Sickness.” Woptura (One Becoming Many), known as Chipps, and his descendants have been powerful spiritual interpreters for the Oglala Sioux since the early 1800’s. The lineage has been credited with keeping Lakota religion and ceremony alive and with developing practices which enable human beings to re-integrate and re-activate our natural connections. Salvatore has been authorized to mentor others in teachings from this lineage. After sharing some of the teachings that have special significance for us in the modern age, Sal will be available for questions and book signing.

Salvatore Gencarelle is a cultural bridge between traditional healing ceremonies and the modern world. Sal went through an intensive mentoring period with Godfrey Chipps, great-grandson of Woptura Chipps, that required both dedication and sacrifice for over 27 years as a ceremonial guide, creator, singer, and mentor, under direct supervision. It was through this process he earned the responsibility to pass on these teachings.

Sal is the author of A Man among the Helpers, and founder and lead instructor of the Helpers’ Mentoring Society. The Society currently offers nine year-long courses which range from basic concepts such as Elemental Connections, Natural Body Movement, Flourishing with Nature, Heart Song, Vision and Purpose, to an advanced four-year course such as the Leadership Initiation Project, as well as various one- to four-day workshops and speaking engagements. Certification is offered through many of the courses.
“BRINGING HOPE TO THE CLIMATE CRISIS THROUGH FAITH & ACTION”: EcoJustice Workshop with Rev. Dr. Jim Antal, United Church of Chapel Hill, Saturday, June 4, 10am – 12 Noon

The scale and urgency of climate change requires our generation to reassess our lives, repurpose our religious practice and reorient our assets in ways that align with our covenant with God and preserve the Eden into which we were born.

Come to this workshop to be inspired by courageous initiatives already underway, and to consider how you and others might harness your religious communities to meet the greatest moral challenge humanity has ever faced.

As Archbishop Desmond Tutu has said, “Twenty-five years ago people could be excused for not knowing much, or doing much, about climate change. Today we have no excuse . . . . To serve as custodians of creation is not an empty title; it requires that we act, and with all the urgency this dire situation demands.”

The Rev. Dr. Jim Antal, has been Minister and President of the Massachusetts Conference United Church of Christ since 2006—a covenant of 360 UCC churches along with over 800 authorized UCC ministers who serve throughout the Commonwealth.

After teaching and leading two national peace organizations, Rev. Antal spent twenty years leading vital churches of all sizes in Massachusetts and Ohio. Rev. Antal brings insight from his mentors—Henri Nouwen and William Sloan Coffin, Jr—to his work on climate change. He authored and was lead proponent of the UCC’s vote in 2013 to divest from fossil fuel companies—the first denomination to do so.

He has also engaged the spiritual discipline of civil disobedience numerous times, most recently at the White House to stop the Keystone XL pipeline. In his role as Conference Minister, he is the public voice and strategic leader of the Conference seeking to enlarge the witness of the UCC in Massachusetts.

Join us on Saturday morning from 10am to 12Noon at United Church of Chapel Hill. For more information, go to www.unitedchurch.org, or call 919-942-3540.

HOW YOU CAN HELP THE CENTER FOR EDUCATION IMAGINATION AND THE NATURAL WORLD

The mission of the Center for Education, Imagination and the Natural World is to bring to life a new vision of the relationship between the inner life of the child and the beauty, wonder and intimacy of the universe. Here’s a note from the Educator Council of the Center:

We at the Center work in small and deep ways to invite children and adults with children in their care into this conversation. This way of working, especially with constituents who are often not in a position to support the Center financially, depends
on the support of those in the culture who recognize the deep value of this work and are in a position to help.

Recently we learned that several friends of the Center have chosen to make a donation through the Amazon Smile Foundation, a gifting opportunity that was new to us here. We have now registered the Center with Amazon Smile so that others can make the same choice in the future.

Here's how it works:

When you are making a purchase at Amazon, go first to **smile.amazon.com** where you will be guided to select a charitable organization that you wish to support. Look for The Center for Education, Imagination and the Natural World. Once you've selected the Center, you'll be taken to the usual Amazon site where you can shop as you normally would on Amazon. Your prime membership (if you have one) is still active and prices will be the same. The only difference is that Amazon will donate 0.5% of all your purchases to the Center. You just have to remember to go to **smile.amazon.com** each time you want to make an Amazon purchase (Amazon will remember that you've selected the Center as the organization you are supporting) and you will be taken directly to the shopping site.

We would be so deeply grateful if you would remember the Center each time you make a purchase at Amazon. These small donations will multiply and make such a difference in our ability to continue to offer Center programs.

We, of course, also welcome donations directly to the Center at [https://beholdnature.org/donate.php](https://beholdnature.org/donate.php)

With gratitude,

The Educator Council of the Center for Education, Imagination and the Natural World

**BECOME A MEMBER, MAKE A DONATION, VOLUNTEER**

Your support of CES through becoming a member or making a donation is important. Benefits of membership include a subscription to our print publication, *The Ecozoic*, and discounts to
CES events. Membership is on a calendar year basis. Memberships received after November 1 of a calendar year count as membership for the following calendar year.

You may become a member at [http://www.ecozoicsocieties.org/membership/](http://www.ecozoicsocieties.org/membership/). Or, you may send a letter to CES at 2516 Winningham Road, Chapel Hill, North Carolina 27516, USA, with your contact information (name, address, email and phone) and dues. Dues for regular membership are US$35 (individual or family). You may become a sustaining member of CES for US$135 each year or by paying $5 or more monthly through an automatic payment service. Alternately you may become a member (and pay by credit card or PayPal) by contacting us at ecozoicsocieties@gmail.com. CES also accepts members who pay lesser dues or no dues, and we welcome your articles and comments.

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