

A 21st Century Economics for the People of a Living Earth

*An economics for the 21st century will guide us from an economy
that empowers corporations in the service of money
to an economy that empowers people in the service of life.*

Voices from every quarter—from student activists to the Vatican—are stepping forward to call for an economy that serves the well-being of people and Earth. Workers and their unions join in with the wrenching observation that “There are no good jobs on a dead planet.” Pope Francis condemns an economy devoted to the “[idolatry of money](#).” China has amended its constitution to commit to an “ecological civilization.” The Declaration on Climate Change of the Parliament of the World’s Religions embraces a future it also calls an “ecological civilization.”

A global alliance of citizen movements has banded together under the banner of [WEALL](#) to work for an economy devoted to the well-being of people and planet. New Zealand has announced a new budget that puts the focus on growing well-being rather than growing GDP. The Club of Rome, a global alliance of new paradigm thought leaders, has launched initiatives on the climate crisis, a new civilization, and reclaiming economics. Rethinking Economics, a global student movement demands reform of economics seminars that rarely mention poverty, climate change, or inequality. A youth-led political movement in the United States calls for a Green New Deal.

These voices and more affirm a spreading awareness that humanity is on a path to self-extinction. More and more people are competing for less and less in a world in which power and wealth are increasingly concentrated. A viable human future requires deep transformation of culture, institutions, technology, and infrastructure guided by a new economics grounded in indigenous wisdom, the Earth Charter, Pope Francis’ encyclical *Laudato Si’*, and the Declaration Toward a Global Ethic of the Parliament of the World’s Religions.

The Imperative

By the estimates of the Global Footprint Network, the human species currently consumes at a rate 1.7 times what Earth’s regenerative systems can sustain. Any level of consumption over 1.0 means we are destroying Earth’s capacity to sustain life—thus putting the human future in peril. Our existence and well-being depend on the systems by which Earth maintains the health of the soils that produce the foods we eat, the waters we drink, the air we breathe, and the stability of the climate that shapes the daily life of every living thing.

As the environmental crisis unfolds, financial wealth and political power become ever more concentrated in the hands of fewer and fewer. Six humans now hold personal financial assets greater than those of the poorest half of humanity. That is 6 individual

humans vs. 3.9 *billion*. In consequence, billions of people face a desperate struggle to meet their daily needs for food, water, and shelter while a few lavishly indulge themselves beyond the dreams of history's kings and emperors.

Meanwhile, environmental and social breakdown render ever more of Earth's places uninhabitable and drive growing millions of desperate people to abandon their homes in search of refuge in the world's remaining livable places. The United States—a desired destination for many—has its own livability problems. For one, with more billionaires than any other nation, its richest 1 percent own substantially more wealth than the bottom 90% and 4 out of 10 adults don't have enough spare money to cover a \$400 emergency.

The deepening contrast between the promise of economic progress and the reality of growing hardship on a dying Earth explains the falling legitimacy of humanity's most powerful institutions and the widespread appeal of political demagogues to a disillusioned public.

The Failure of Mainstream Economics

The economic theory known as neoliberalism that became the global standard for national and global economic policymaking in the mid-20th century had a major role in guiding humanity into its current existential crisis. That same theory now poses a major barrier to navigating a global course change.

Economics lost its way as an intellectual discipline in the mid-19th century when a group of influential economists sought to raise it to a stature comparable to physics. To that end, they borrowed a mathematical model from physics as the foundation of future economic theorizing and chose money as a readily available metric.

Thus emerged a school of economics for which making money is the economy's defining purpose and GDP growth is the defining measure of economic performance. In the mid-20th century, this school became mainstream economics.

Unfortunately for people and Earth, its theories were based on assumptions contrary to reality. They assumed a world in which money is wealth and a storehouse of value, making money creates wealth, and there are no limits to growth. Based on the assumptions of this imagined world, generations of business and governmental leaders were taught that individuals and corporations best serve society by maximizing their own financial returns without concern for negative social and environmental consequences. To this end, politicians were advised to prioritize policies that support maximizing private returns to private financial assets.

In the real world, money is just a number. Growing it only creates a larger number. Storing it does nothing to assure that tomorrow's air will be breathable, its soils will be fertile, or its climate will be stable. Earth is finite as are the limits of the regenerative systems on which its well-being and ours depend. Markets can provide only what is available for sale. Profits serve only those to whom they flow.

Focused on money rather than well-being, 20th century economics also assumes that value is determined by market price. This introduces myriad distortions. We cannot live without air for more than a few minutes. We could easily live our whole life without gold. But gold is expensive, and air is free. Which is more valuable?

We easily monetize some essentials such as food and water. Love, beauty, self-worth, and meaning are beyond price. Their value increases when shared. Their value is diminished or even destroyed by efforts to control, monopolize, and monetize.

Physically, we can go much longer without love than without food and water. Yet we might sacrifice our own life to feed a loved one who otherwise will starve. The new economics we need to address the realities of the 21st century economics will recognize that market price tells us only what the current market values. It tells us nothing about what is most valuable and essential to secure the well-being of people and planet.

While such complexities are of little interest in an economics concerned only with money and markets, they should be foundational concerns of a 21st century economics seeking to reduce consumption while increasing well-being. It recognizes that our ultimate well-being is best fulfilled not by an economy that maximizes consumption, but by an economy that eliminates harmful consumption—such as war—while self-organizing to provide all people with material sufficiency and spiritual abundance.

Some 50 years of public policymaking based on assumptions deeply divergent from reality has served well the interests of aspiring billionaires. For people and planet, it has been a collective act of suicidal insanity.

Public rules and monies that might otherwise have supported schools, health care, clean water, clean energy, soil restoration, natural carbon sequestration, green infrastructure, and much more, have been directed instead to protecting and subsidizing corporate profits. The latter was recently highlighted in the United States by the [multi-billion dollar bidding war](#) among U.S. cities for the second headquarter of Amazon, a now global corporation controlled by the world's richest individual and on a path to global monopoly control of the production and marketing of goods and services.

Corporate media keep public attention focused on GDP as the defining measure of human well-being. Corporate interests make selective use of statistics to assure the public that as GDP grows, life everywhere is getting better for everyone willing to work.

Meanwhile the real outcome of GDP growth is the growing devastation of nature and a concentration of wealth and power that violates the most foundational principles of justice, democracy, markets, and a healthy Earth. The obscenely rich temporarily enjoy increasing opulence and the desperately poor struggle to survive on a declining share of the remaining regenerative capacity of a dying Earth. There are no winners on a dead planet.

An economics grounded in intellectual and moral fallacies does not, cannot, serve people facing the realities of 21st century life on a finite Earth. Daily reports of record-setting

floods, fires, melting icecaps, violent storms, and massive displacements of people makes it ever more difficult to hide the reality of the lives of people in so many places.

Deep change guided by an economics grounded in an authentic story is imperative. The journey ahead begins with a recognition that *humans are a species with significant unrealized potential born of and nurtured by a living Earth*. Our realization of that potential begins with recognition of the fundamental nature and potential of life itself. That is a foundational premise of 21st century economists, such as Peter Brown, Jon Ericksen, Joshua Farley, and Kate Raworth, who are framing a 21st century economics that begins with recognition that Earth's care must be a foundational human priority.

The Miracle of Life and Humanity's Unrealized Potential

As the pioneering biologist Lynn Margulis once observed, “Life is matter with the power to choose.” It is an observation at once simple, self-evident, profound, and long denied by the mainstreams of Western science and economics.

Matter possessed of agency—the power to choose—is a living organism. Matter without agency is just dead matter. And among all known organisms, we humans have a capacity for agency—for self-determination—far beyond that of any other species known to us. It includes our capacity to choose our nature and future as a species—and even to shape the future of Earth. Yet we take it all for granted and forget the distinctive responsibilities that come with this power.

The range of human possibility is truly extraordinary. We have irrefutable evidence of the human capacity for ruthless deceit and violence. Far too high a percentage of those who rise to positions of extreme power exhibit such tendencies. Far from being the norm, however, such behavior indicates extreme emotional and intellectual dysfunction. The emotionally and mentally healthy human is honest, caring, empathic, and gets pleasure from helping other living beings.

The new economics needed to guide our path in a 21st century world will remind us of our responsibility to care for one another and Earth. It will shine a light on what is most essential to our well-being and help us identify and explore pathways to its achievement. To this end, it will challenge us to put cooperation before competition and community well-being before corporate profits. And it will draw from every source of human knowledge and understanding to guide us to the culture, institutions, technology, and infrastructure of a new civilization—an ecological civilization—that secures the well-being of people and Earth in spiritually fulfilling ways.

We confront an all-hands-on deck emergency that requires rapid mobilization of the physical, mental, and social labor and skills of every person in a global commitment comparable to the mobilization that occurred in the United States when it made the decision to enter the World War II.

Far from calling for sacrifice, however, even the requirement to reduce the human burden on Earth's regenerative systems by at least 40 percent presents an opportunity to fulfill a long-denied dream of a world of peace, beauty, material sufficiency, spiritual abundance,

and creative opportunity for all as we come to embrace the potentials of both our nature and our contributions to life's evolutionary unfolding.

Finding Our Place of Service in Life's Evolutionary Journey

Over billions of years, the choice-making ancestors of Earth's countless living species brought life to Earth and Earth to life. Life's evolutionary progress was achieved through the constant labor of Earth's many organisms in complex symbiotic relationships that together created and maintained the conditions essential to their mutual existence.

As we unpack history of planet Earth, we begin to see more clearly the critical and distinctive role of labor as an inseparable part of living and the source of all that is essential to our well-being. Beyond the planet's original nonliving wealth, all subsequent wealth is the product of the labor of living organisms. Indeed, life exists only by wit of its constant labor to counter the forces of entropy and thus to create and maintain conditions favorable to life on Earth's surface.

Our most immediate experience with the ability of living beings to self-organize is with our own individual body—the vessel of our consciousness and the vehicle of our agency. Our body is a product of the labor of tens of trillions of individual cells and microorganisms working in complex symbiotic relationship with one another to create a superorganism with abilities far beyond the ability of any individual member cell. They do this through processes that continue to defy human understanding.

Through their labor they manage the continuous and active exchange of nutrients, water, energy, and information essential to the life of all. Together they create and maintain the heart that pumps blood throughout our body and the diaphragm that fills our lungs with air. Their labor is continuous, even as we sleep, constantly adapting to ever changing food and water intake, environmental temperatures, while simultaneously distinguishing between toxins and nutrients and between beneficial and invasive microorganisms and managing accordingly. It all occurs with no known equivalent of money, markets, or casting of ballots. When the cells of our body no longer labor to the benefit of the whole, we declare the body dead.

At a more macro level, the plants and animals of a visible landscape may appear to be silent and inactive, but here too the exchanges of nutrients, water, energy, and information are constant—much of it the work of cells and microorganisms we can see only with a microscope. Here again, we have barely begun to understand the complex details of how it all works. Clearly, however, it does work. And labor is at the heart of it.

In the case of humans, we depend on our labor at the most basic level to acquire and process the products of nature to meet our basic needs. We gather from the fields and forests. We hunt. We sow, we harvest. We prepare, cook, and serve. We shape the stone and the timber. We mine, refine, and forge the metals. We manufacture, build, and construct. And all the while we care for ourselves, our young, our elderly, and our incapacitated. We increase the yield to our labor through our talent at learning new skills and inventing new tools.

As are all Earth's living beings, humans are children of Earth. Yet we are also a species with a distinctive cognitive ability to create and live by stories that represent our collective understanding of creation, our human nature, and our human place in creation's continued unfolding. This gives us a distinctive capacity for choice far beyond that of any other species, including a capacity to choose our future and—in substantial measure—the future of Earth and its many species. That bestows on us a profound moral responsibility for the well-being of the whole and a reason for our being.

That we bear such responsibility helps to explain why mentally healthy humans experience a deep sense of spiritual fulfillment when caring for a garden, child, pet, neighbor, or stranger in need. Only by fulfilling our responsibility to and for the whole, do we in turn earn the right to share in the bounty of the whole.

The dysfunctional consequences of our fealty to a 20th century economics that instructs us to abandon these responsibilities are legion. We strip the living soil of the nutrients on which its health and ours depends. We subsidize global corporations in ways that make it nearly impossible for smaller community-oriented local businesses to survive. Our universities indoctrinate young people in the idolatry of money in preparation for lives in service to profit-maximizing corporations and to governments dedicated to growing GDP and the financial assets of the wealthiest among us.

We design our cities and towns in ways that make us dependent on cars to fulfill our daily routines. We divide our lands into discrete parcels that disrupt nature's cycles as the few take control of our access to food, water, and shelter to reduce the rest of humanity to corporate servitude.

The result is a society that strips us of the ability as individuals to make many of the moral choices we were born to make and assures that the moral choices we do make—like recycling or taking public transportation—are difficult and of little significance.

Twentieth century economics also assumes that the rewards of economic activity properly go to the owners of financial assets. Aware—as were many classical economists including Adam Smith, David Ricardo, and Karl Marx—that most value comes from labor, 21st century economics will recognize that the primary rewards properly go to those who labor to create essential assets—not to those who game the system to gain monopoly control of the benefits. It will also recognize that the relationships between those who labor are essential not only to productive output but also as a source of the joy essential to our mental and spiritual health.

We are social beings and our most important choices are collective, shaped by the institutions we create. These institutions, like our stories, are purely products of the human mind. Therefore, they can be changed by the human mind.

Aligning Our Institutions with Our Needs and Responsibilities

Human institutions, including the institutions of money, business, government, religion, and the nation state are all distinctive to humans. Though they have a decisive influence in shaping our behavior, they are solely our mental creation. Nature has no evident counterparts and nothing in nature can recognize them. Even humans cannot recognize them until educated to do so.

Our human-created institutions are shaped by the shared stories by which we define ourselves and our relationships with one another and Earth. If we get our shared story wrong, we get our institutions wrong. If we get our institutions wrong, we get our future wrong.

Because institutions are purely human creations, they have no reason to exist other than to serve us at our will. Yet in substantial measure, our most powerful institutions now rule us—and do so to our extreme peril. Hope lies with our ability to shed or transform dysfunctional institutions by changing the narrative that sustains them.

Flawed narratives and the institutions they sustain can hold sway long beyond their useful life. Yet seemingly invincible institutions can quickly crumble once the story that sustains them loses credibility. Think of the sudden disintegration of the Soviet Union and the collapse of apartheid in South Africa. Replacing failed institutions with beneficial institutions is a far more difficult process. Success begins with a compelling alternative narrative.

As currently structured, power in our current institutions flows from the top down, leaving people subservient to corporations and financial markets in fundamental contradiction to the basic principles of democracy, markets, and healthy living systems. Nearly all humans now depend for their living on rogue institutions of business and government that operate largely on autopilot beyond human accountability. Individuals find their short-term survival depends on serving these institutions in ways that threaten the long-term survival of both humans and the living Earth.

In a healthy society, power flows from the bottom up. People create governments and governments create corporations. We urgently need a new economics to guide us in transforming the institutions of business and government to distribute power locally and equitably so that it flows from the bottom up rather than from the top down.

The institutions that currently empower money and corporations cannot and will not of their own volition transform from within to empower people and community. We the people, however, can empower ourselves by changing our shared story through bottom up social movements as we grow new institutions to serve the future we seek, in alignment with the values we share. That story will be the conceptual foundation of a 21st century economics.

Money as a Useful Tool

Within the reality-based story of 21st century economics, money is just a number of no intrinsic value. It is important only because we agree to accept it as a token of exchange in market transactions in which we buy and sell things of real value. It is useful in that way, but should be considered a tool, not a purpose, of the economy.

In the imaginary world of 20th century economics, money is much more than just a number, it is *capital*. Capital is an ambiguous, all-purpose word that is most useful when we want to sound sophisticated, but have no idea what we mean. The statement, “We need capital” most likely means, “I have no idea what we need, but I assume that with enough money we will be able to buy it.”

Any country with its own currency can create money with a computer keystroke. Having more money does not in itself increase well-being.

A 21st century economics will recognize that money is simply a token of exchange. It is useful for that purpose, and its management is important in shaping the economy and its priorities. But simply producing more money does not, in itself, make society better off—and can be deeply harmful.

Our individual dependence on money in a money-centric society leaves us vulnerable to the illusion that our well-being grows as the numbers on our paycheck, in our bank account, or on pieces of paper in our wallet grow. The scarcer natural capital becomes, the more market prices rise, and the more corporate profits and GDP grow.

If we are among society's more fortunate, we think that society is getting richer because we as individuals are getting temporarily richer. But this is happening even as the society is becoming collectively poorer and the social, political, and environmental systems essential to the well-being of all are headed for terminal collapse.

Take farmland as an example. As the amount and fertility of farmland declines, scarcity increases the market value of what remains. Yet our ability to meet our needs for food and water declines. Or take the case of urban housing. Financial assets can and do grow as well-being declines. As housing prices rise, speculators step in to buy and hold often empty houses and luxury apartments as opportunities to store and grow their financial assets. This drives prices even higher, thus affirming the wisdom of their purchase. Meanwhile growing numbers of people are forced into homelessness, possibly living on streets next to vacant apartments. Financial assets grow as relationships disintegrate and well-being declines.

Eight Principles of 21st Century Economics

The understanding of life and human possibility outlined above can be distilled into eight defining principles of a 21st century economics. Together they frame essential elements of the agenda for society's urgently needed civilizational transition.

Principle #1. Evaluate the economy's performance by indicators of the well-being of people and planet; not the growth of GDP.

We get what we measure. So, choose to measure what we want. If our goal is to increase the financial assets of the rich so they can claim an ever-growing share of what remains of Earth's real wealth, then we should keep the focus on growing GDP. In the mid-20th century, most nations made growing GDP the goal of their economic policy. That continues to be their priority.

The results of this experiment are now in. If the goal is to grow the fortunes of billionaires, a focus on growing GDP works extremely well. If, however, our goal is to meet the essential needs for food, water, shelter, and other basics of all people, it is a very poor choice, because it takes no account of the fact that we depend on the regenerative capacity of a finite planet that must be maintained and shared.

Managing an economy to maximize GDP growth is like flying an airplane with a goal to maximize airspeed, guided only by an airspeed indicator. Once aloft, we will maximize our speed by putting the plane in a nosedive. Speed will increase and we can celebrate success—until we crash. We currently manage the global economy in exactly this way, with a likely similar outcome. Thus, we best put GDP behind us and focus instead on measures of progress toward securing the well-being of people and planet.

Managing a complex economy to secure the well-being of people and planet requires a dashboard of indicators that guide us in the complex processes of maintaining a balanced relationship between people and Earth. These indicators can be modeled on those advocated by Kate Raworth in her book *Doughnut Economics* and then adjusted as we learn.

Principle #2. Seek only that which benefits life; not that which destroys life.

We must put behind us those activities that result in net harm to people and Earth. This includes war and preparations for war, advertising that encourages people to purchase harmful or unneeded products, financial speculation, industrial agriculture that destroys soils, pollutes air and water, and undermines human health. We can eliminate the need for most cars by designing infrastructure to support people in living close to where they work, shop, and play. We can eliminate most global movement of people and goods by keeping production and consumption local, and relying on recycled materials. We can further reduce the need for physical travel by using communications technologies to share ideas, technology, culture, and learning with little or no need for physical travel.

Eliminating harmful activities would significantly reduce humanity's ecological footprint and simultaneously produce a massive increase in human well-being. Yes, there would be lost jobs. But there are so many ways the people freed up can be put to work to advance the well-being of people and planet. These include caring for and educating our children, caring for the elderly, restoring the health and vitality of Earth's regenerative systems, and rebuilding infrastructure in ways that reduce dependence on fossil fuels and simultaneously strengthen our beneficial connections with one another and nature.

We also have win-win opportunities to reduce environmental burdens that weaken or eliminate family and community relationships. For example, the current trend toward single-person households isolates us from one another and eliminates opportunities for sharing shelter, tools, furniture, utilities, food preparation, and other essentials. The related disruption of family and community self-care reduces well-being and increases the need for government-funded social safety nets.

Twentieth-century economics focuses on profits, jobs and financial costs. It ignores many of the possibilities at the top of the agenda of 21st century economics.

Principle #3. Honor and reward all who provide beneficial labor, including nature; not those who exploit life's labor to grow financial assets.

Our existence depends on life's labor. We earn our right to share in the surplus of the whole through our paid and unpaid human labor in productive service to the whole. The

presumptive owners of natural assets have no inherent entitlement. Their proper reward is in proportion to the labor they invest in sustaining or enhancing the regenerative yield of that to which they may claim ownership. This is basically the concept of use rights common in traditional societies.

A 21st century economics will not start with the question, “How can we create more jobs?” Rather it will ask: “What work is needed to enhance and secure the well-being of people and Earth? How can people be engaged in doing that work in ways that align with their interests, skills, passions, and callings? How can our community or society facilitate making that connection in ways that fulfill both material and self-worth needs?”

In a healthy society, no person should be without a means of living and a respected, meaningful means of contributing to the whole consistent with their abilities and distinctive sources of joy. Creating a society that achieves this outcome for all people will be a defining priority of 21st century economics.

In public debate, we assume that society’s defining economic choice is between capitalism—ownership by transnational corporations, or socialism—ownership by national governments. Narrowing the choice to these two simplistic options evades the more essential question. Do the returns go primarily to those who provide the labor that creates the real value? Or do they go to those who claim ownership of the product of the labor?

A 21st century economics will recognize that too often the current economic system channels rewards to those who claim ownership to the exclusion of those who provide useful labor. The obvious fix is direct worker or community ownership. This will end society’s division between a privileged owning class and an indentured working class. Ownership by some distant corporation or government is rarely, if ever, appropriate.

Principle #4. Create society’s money supply through a transparent public process to advance the common good; not through proprietary processes that grow the profits of for-profit banks.

In a modern society in which access to the essentials of life depends on money, those who control the creation and allocation of money control the lives of everyone. It is therefore essential that the process of money creation and allocation be public, transparent, and accountable to the people whose well-being depends on it. Every citizen needs to understand how the process works so they can participate in holding their financial institutions accountable. It defies reason to assume that society benefits from giving this power to global for-profit corporations dedicated only to generating profits for the already richest among us.

When private banks issue a loan, they introduce new money into the economy for which they expect society to provide them with an interest return, but they do not create the money needed to pay that interest. Consequently, society must continuously grow GDP to create new borrowing (i.e., new debt) sufficient to pay the interest on previous borrowing. Without that growth, massive loan defaults will force private banks into

bankruptcy. As bank accounts disappear, economic exchange dependent on money will halt, and the economy will collapse—unless government steps in to bail out the banks.

By conventional market logic, the banks that create the problem deserve to fail—but they are too big for the government to allow them to fail. It is a sophisticated version of a Ponzi scheme rigged to assure that the rich win and the society pays.

As history demonstrates, the question is not whether a crash will happen again. Unless the system is transformed, it is only a question of when the next crash will come. When it does, 20th century economics will provide the dictum for a government bailout. A 21st century economics will counsel a government takeover of the failed banks as a step toward making money creation public and accountable in service to the public good.

The power to create money must be public, transparent, and accountable to the people whose living depends on access to money. It must reside in democratic governments, ideally supported by public banks and supplemented by individual community-owned cooperative banks through which local people aggregate their savings to finance loans to themselves to support local home and business ownership.

Principle #5. Educate for lifetime learning in service to life-seeking communities; not for service to profit-seeking corporations.

As life is labor, so too, life is learning and sharing. We must educate ourselves and our youth accordingly. It is an extraordinary commentary on modern society that our most prestigious universities feature economics courses that advocate societal psychopathology as a human ideal and give legitimacy to institutions that serve only money with no responsibility for the common good.

The 21st century economics by which we prepare youth for future leadership must build on a moral foundation that recognizes our responsibility to and for one another and Earth, favors cooperation over competition, and prioritizes life over money and community well-being over corporate profits.

More generally, education for a 21st century world must recognize that no one knows how to get where we now must go. Education cannot provide us with answers we do not have. It can, however, prepare us to be life-long learners skilled in asking the right questions and in working together to find and share answers appropriate to our specific situation. This is a very different process than teaching students to compete to provide the largest number of textbook approved answers on a standardized test.

Principle #6. Create and apply technology only to serve life; not to displace or destroy it.

Technology must be life's servant, not life's master. Most technologies have potential for varied applications, some beneficial and some harmful to life. To choose applications based solely on which will produce the greatest financial return is collective madness. The technophile's drive to eliminate the need for humans should qualify as a crime against humanity.

Humans have the right and the means to favor the development and application of technology to reduce destructive environmental impacts, restore the regenerative capacity of Earth's living systems, and facilitate global understanding, cooperation, and learning as we transition to an ecological civilization.

Principle #7. Organize as cooperative, self-reliant, regenerative communities that share knowledge and technology to serve life; not as incorporated pools of money competing to grow by exploiting life.

Life in the natural world self-organizes everywhere as self-reliant, local communities that maintain constant cyclical flows of resources to meet local requirements with minimal need for the distant inputs provided by specialized species like migratory birds and fish. Except for toxins that nature sequesters and energy that the sun continuously renews, everything in nature is reused and recycled in perpetuity as the wastes of one become food for another. Up until less than a hundred years ago, humans did much the same. We can learn to do it again, this time with the beneficial assistance of modern knowledge and technology.

Urban and rural dwellers can rediscover their interdependence as cities meet their needs for food, timber, fiber, and pulp from nearby rural areas and rural areas regenerate their soils with bio-wastes from nearby urban areas. Cities can provide cultural and educational opportunities for both urban and rural dwellers. Rural dwellers can provide urban dwellers with food, water, and nature immersion experiences, including summer agricultural work opportunities for urban youth.

Suburbs that now occupy massive tracts of land for low-density, low-interaction, energy-inefficient living can convert to either high-density, high interaction, energy efficient urban habitats, or low-density, high-nature intensive rural habitats. This will improve resource efficiency and quality of life while restoring natural regenerative capacity.

As cities restructure to eliminate dependence on cars, people will walk, cycle, and use public transportation, meeting and greeting on the streets, in sidewalk cafes, and in parks with beautiful gardens. The car-free cities of an ecological civilization will feature multi-generational, multi-family living units that function as vibrant eco-communities sharing facilities, tools, resources, and labor—with residents looking out for one another and their children as intact tribal communities still do.

Principle #8. Seek a mutually beneficial population balance between humans and Earth's other species; not the dominance of humans over all others.

The health of any natural ecosystem depends on its ability to balance the populations of its varied species. While we do not fully understand how these dynamics work in nature, populations are constrained by interactions among species and the limitations of the resources on which they all depend. Just as healthy bodies mobilize against rogue cancer cells, ecosystems mobilize against rogue species.

This dynamic suggests that either humans will self-manage their reproduction and distribution to align with Earth's needs and capabilities or Earth will define us as a rogue species and attempt to do it for us—which may already be happening.

To voluntarily control our population numbers, we can provide educational and occupational opportunities for women and make fertility management methods freely available to all who seek them. To manage our population distribution, we can facilitate voluntary resettlement from over- to under-populated countries and localities.

A narrow focus on money and financial return rendered 20th century economics wholly inadequate to the task of guiding us in managing a global economy on a living Earth. The well-educated 21st century economist will be schooled in ethics, institutions, culture, biology, politics, and much more. The reinvented discipline will seek fact-based objectivity while applying its knowledge and expertise to purpose-driven work to assist humanity in confronting its most essential and complex ethical choices.

Many people believe they don't understand economics because to them it makes no sense. It turns out that such people likely do understand economics, because as 20th century economics currently is taught and practiced, it does not make sense.

The well-respected economist Kenneth Boulding once observed, "Anyone who believes that exponential growth can go on forever in a finite world is either a madman or an economist." You might say the same for anyone who believes that society is best served by people intent on maximizing growth of their personal stash of money. Yet we cling to this deeply flawed economics for lack of an established alternative.

A society that destroys its essential means of living to make money for a privileged few can hardly claim to be intelligent or civilized. Modest personal adjustments will not correct the failures of an inherently self-destructive cultural and institutional system. Our future depends on a unified human effort dedicated to driving deep system change. For example:

- Going beyond stopping the use plastic bags, we can create an economy that produces no waste.
- Going beyond buying organic, we can create a food system in which all food is produced in ways good for Earth and healthy for people.
- Going beyond asking corporations to be responsible, we can break up concentrations of corporate power and render the pieces accountable to the communities in which they do business by converting them to worker and community ownership.
- Going beyond protesting a current or proposed war, we can dismantle the apparatus of war and the military industrial complex.
- Instead of buying an electric car, we can design neighborhoods and transportation networks to do away with our need for cars.

- Instead of providing everyone a guaranteed income, we can provide everyone with work that meets their material needs with dignity.
- Instead of measuring and growing GDP, we can measure and grow the well-being of people and planet.
- Instead of accepting all migrants fleeing social and environmental collapse, we can seek to secure the social and environmental health of all places where people live and the right of every person to a livable place.

The basic frame of 21st century economics contrasts sharply with that of 20th century economics. The new frame is far more complex and nuanced. Yet it is likely that most people will readily grasp it because it is logical, consistent with foundational ethical principles, and reflects the reality of our typical daily experience in which most people are kind, honest, and find pleasure in helping others.

Transdisciplinary and inclusive of non-specialists, the new economics will welcome the engagement and contributions of all who embrace the goal of a society dedicated to the well-being of people and planet. Ideally, we will all strive to be competent in 21st century economics and possessed of the moral commitment on which the well-being of people and planet in the 21st century depends.

This working paper was written by author, independent scholar, engaged citizen, and former Harvard Business School professor [Dr. David Korten](#) as a contribution to discussions framing a new economics for the 21st century. The development of a 21st century economics is an ongoing process and this working paper may be updated from time to time. It may be freely reproduced and shared in whole or in part.

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