

Economics for the People of a Living Earth

*In the spirit of
indigenous wisdom, modern science, Laudato Si', the Earth Charter,
the Declaration Toward a Global Ethic of the Parliament of the World's Religions,
and the WEALL movement for a global Well-Being Economy,
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. Pope Francis speaks of the social and environmental failures of an economy devoted to the idolatry of money. Workers and their unions join in with the wrenching observation that “There are no good jobs on a dead planet.”

China has amended its constitution to incorporate its commitment to an ecological civilization. A youth-led political movement calls for a Green New Deal to transform the US economy. The Club of Rome has launched climate crisis, new civilization, and reclaim economics initiatives addressing humanity's existential crisis. Rethinking Economics, a global student movement demands reform of economics seminars that rarely mention poverty, climate change, or inequality. 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.

These voices and more are responding to a spreading awareness that as more and more people compete for less and less in a world in which power and wealth are increasingly concentrated, humanity is on a path to self-extinction.

Twentieth century economists promised that a growing GDP would lead to ever-increasing prosperity for all. We embraced their counsel and were encouraged by reports of growing national and global GDP. Beneath that growth, however, lay a widening gap between rich and poor as the benefits of growth were channeled to the wealthiest, and the less wealthy struggled with the consequences of a growing human population dependent on the declining regenerative capacity of a dying planet.

The 20th century economics that continues to drive global economic policy assumes we live on an open frontier of endless available resources. An economics grounded in a fundamental fallacy does not, cannot, serve people and planet facing the realities of 21st century life on a finite Earth. As truth bursts into public consciousness, it strips away the credibility of economists who find they have nothing else to offer.

The search for a new economics begins by acknowledging the reality behind humanity's rapidly unfolding existential crisis and the challenge and opportunity it presents. Documents such as the Earth Charter, Pope Francis' encyclical Laudato Si', and the

Declaration Toward a Global Ethic of the Parliament of the World's Religions provide useful guidance.

Humanity's Existential Challenge

By the estimates of the Global Footprint Network, the human species currently consumes at a rate of 1.7 times what Earth's regenerative capacity can sustain. Other sources note that six individuals now possess personal financial assets greater than those of the poorest half of humanity. Many sources document the daily desperation of billions of people struggling to meet their daily needs for food, water, and shelter.

The economics we need to guide our path in a 21st century world will shine a beacon on what is most essential to our well-being and guide us in identifying and exploring pathways to its achievement. It will remind us of our responsibility to care for one another and Earth. 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.

Success will require reducing the human burden on Earth's regenerative systems by at least 40 percent. Far from calling for sacrifice, however, this is an opportunity to fulfill a long-denied dream of a world of peace, beauty, material sufficiency, spiritual abundance, and creative opportunity for all.

We confront an all-hands-on deck emergency that requires rapidly mobilizing 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 second world war.

Our Moral Imperative

As with all living beings, humans are the children of Earth. As Earth's now dominant species and one with a distinctive capacity for conscious choice, we bear a profound moral responsibility for the well-being of ourselves and the Earth that birthed us.

Over billions of years, the ancestors of Earth's countless living species brought life to Earth and Earth to life. That life depends on these organisms' constant and continuous labor in service to one another and Earth to maintain the conditions essential to life's existence.

Labor is the essence of life, a reality demonstrated with great clarity by the tens of trillions of individual cells and microorganisms that together create and maintain the individual human body. Our being depends on the labor by which those cells sustain and manage a continuous and active exchange of nutrients, water, energy, and information. Our heart labors to pump blood throughout our body. Our diaphragm labors to fill our lungs with air. Their labor is continuous, even as we sleep. When they no longer labor, our body dies.

At the 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 microorganisms we can see only with a microscope. 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.

Within the larger scheme of creation, we may assume that human labor on behalf of the well-being of all defines humanity's ultimate moral responsibility and reason for being. Fulfilling that responsibility would earn us a share in the bounty of the whole. The importance of our assuming that responsibility would explain the deep sense of spiritual fulfillment we experience when caring for a child or assisting a stranger in need.

The dysfunctional consequences of our fealty to 20th century economics that urges and rewards irresponsibility are legion. We strip the living soil of the nutrients on which its health 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. And we divide our lands into discrete parcels that disrupt nature's natural cycles as the few take control of our access to food, water, and shelter.

The result is a society that strips us of the ability as individuals to make many of the moral choices we may wish to make and assures that the moral choices we do make—like recycling or taking public transportation—are difficult and of little significance. We are social beings and our most important choices are collective choices shaped by the institutions we create. Those institutions, in turn, are products of the stories by which we know ourselves.

Institutions Born of Stories

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 creations with no meaningful existence outside the human mind. Nature has no evident counterparts. 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 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 these 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 shatter once the story that sustains

them loses credibility. Think of the sudden disintegration of the Soviet Union and collapse of apartheid in South Africa. Replacing failed institutions with beneficial institutions is a far more difficult process. Success begins with a compelling narrative.

Twentieth century economics framed the dominant story on which our most powerful institutions rest. That story leads the institutions of government to set rules that facilitate the consolidation of monopoly power in profit-maximizing transnational corporations and financial markets delinked from public accountability. They direct public monies that might otherwise support schools, health care, and green infrastructure to protecting and subsidizing corporate profits instead.

Power in this system 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 that operate largely on autopilot beyond human accountability. Individuals find their short-term survival depends on serving these institutions in ways that threaten long-term survival of the species.

In a healthy society, power flows from the bottom up. People create governments and governments create corporations. We urgently need a new economics with a new story that guides us in transforming the institutions that determine the flow of power in society.

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 story through bottom up social movements as we grow new institutions to serve the future we seek, aligned with the values we share. A 21st century economics grounded in an authentic story can help guide us to that goal.

Sources of the Wealth We Depend On

In a quest tracing to the mid-19th century, economists have sought to raise economics to the stature of a science comparable to physics. This required quantification and the application of mathematical models. In need of a defining metric, they chose money. Thus began a process of making money the defining purpose of the economy and the measure of its accomplishment.

Ultimately, 20th century economists invented a fantasy world in which money is wealth and a storehouse of value, making money creates wealth, and if some resource is in short supply, markets will respond and provide an equal or better substitute. In their imagined world there are no limits to growth and responsible policy makers give priority to maximizing the corporate profits from which all good things will flow.

In the real world, money is just a number. Growing it only creates a larger number. And storing it does nothing to assure that tomorrow's air will be breathable, or its soils will be fertile. 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. Acting on assumptions so clearly contrary to these realities has turned out to be a collective act of suicidal insanity.

In the real-world, wealth creation begins with natural capital—clean water, breathable air, living soils, stable climate, and so much more. This is what Earth's community of life created and maintained over billions of years before any humans arrived.

Natural capital represents Earth's common wealth. All living beings have a rightful claim to share in what their collective ancestors created, and we together currently maintain. No species or organism has a right to monopolize the wealth of the whole to the exclusion of others. Because each depends upon the whole, any species or individual that attempts to monopolize control threatens the whole and invites collective resistance. Humans are no exception. Our well-being depends on organizing cooperatively to limit our individual and collective demand on what is available and to invest our labor in maintaining the health of that on which we depend.

As we unpack Earth's history and the evolution of the human species, we begin to see more clearly the implications of the critical and distinctive role of labor. Beyond Earth's original nonliving natural capital, all subsequent capital is the product of the labor of living organisms. Life itself is a product of life's labor. Indeed, life exists only by wit of its constant labor to counter the forces of entropy.

In the case of humans, we depend on our labor at the most basic level to acquire and process the products of natural capital. We gather from the fields and forests. We hunt. We sow, we harvest, and 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. We call the result human capital. If we augment the product of our labor through institutions that facilitate our productive relationships with one another, we call the result social capital.

Focused on what they call financial capital, 20th century economists assume that the rewards of economic activity should go to the owners of that capital. Recognizing that most value comes from labor, 21st century economists are more likely to conclude that the primary rewards should go to the labor that creates the capital. They are also more likely to recognize that the relationships that comprise social capital have value beyond producing goods for sale. These relationships are essential to our mental and spiritual health, which also depend on love, beauty, and sense of self-worth. These in turn relate back to the quality of our relationships with people and nature and the joy we feel in service to others.

Focused on money rather than well-being, 20th century economists assess value by market price, which introduces myriad distortions. We cannot live without air for more than a few minutes. We could easily live without gold. But gold is expensive and air is free. Which is more valuable? We easily monetize some essentials such as food and water. But love, beauty, self-worth, and meaning are beyond price. Their value increases as shared. Their value is diminished or even destroyed by efforts to control, monopolize, and monetize.

The complications are endless. 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. And once our basic needs for food and water are met, we have no need for more. There are no limits on our ability to generate beauty, love, and meaning. The 21st century economist will realize that market price tells us only what the current market values. It tells us nothing about what is most valuable and essential to secure our well-being.

Such complexities are of little interest to the 20th century economist who is primarily concerned with money and markets. They will be foundational concerns to a 21st century economist seeking to reduce consumption while increasing well-being. Achieving such goals may seem impossible, until we realize that our ultimate well-being may best be fulfilled by a world dedicated not to maximizing consumption of market goods, but rather to providing all with material sufficiency and spiritual abundance.

Money as Means

In the real world, money is just a number of no value in and of itself. 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. 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 key stroke. Having more money does not in itself increase well-being. The 21st century economist recognizes 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 corporate profits and GDP grows. We think that society is getting richer, when in fact we are becoming collectively poorer.

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 is declining. Financial assets may grow as well-being declines.

Urban housing prices provide another illustration of the disconnect between market values and real wealth. As housing prices rise, speculators step in to buy and hold often empty houses and luxury apartments as opportunities to store and grow their wealth. 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 well-being declines.

In contemporary society, those who control money’s creation and allocation effectively control our access to the means of living that a healthy Earth provides. 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.

Ten Defining Challenges for 21st Century Economics

Here is an initial take on some of the defining challenges a 21st century economics must help us address.

1. **Make Well-Being Our Common Goal**

We get what we measure, so we best be sure that what we measure is what we want. For some 80 years, most nations have measured GDP and made its growth a defining national priority. Increases in global and national GDP and per capita incomes have been impressive, leading economists to assure us that lives are improving for most people everywhere. Even with the rapid growth of human population, increases in average per capita incomes have been encouraging. Most of the increase, however, has gone to the already well off, while most people have experienced little or no increase in inflation adjusted income. Unconscionable numbers of people experience a daily struggle to acquire basic necessities as they confront the realities of an ever more crowded and dying Earth owned by ever fewer people.

Guided by the theories of 20th century economics, we have selected the wrong goal and the wrong metric. Managing an economy to maximize GDP growth is like flying an airplane with the single goal of maximizing airspeed guided only by an airspeed indicator. Once aloft, we will maximize our speed by putting the plane in a nosedive and crash it into the ground. We currently manage the global economy in exactly this way, with a likely similar outcome.

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. Though the implementation is ultimately complex, the first step is simple and obvious: Choose the well-being of people and planet as our common goal, create a dashboard of indicators to guide us, and adjust the dashboard as we learn.

2. **Learn from One Another and Nature as We Create a New Future Together**

As 20th century economists have grappled with the problem of the human-caused degradation of Earth, the best they have come up with as a solution is a call to hold steady on our pursuit of growth and rely on technology to decouple us from our dependence on nature. This position reveals a stunning lack of understanding of life, our nature as mutually interdependent living beings, and our dependence on the complex synergistic relationships among species on which the well-being of all life depends.

Nature will be our most important source of learning. Natural systems consist of complex and interconnected relationships between species and individuals in which

the relationships benefit the whole and all its members in ways greater than the sum of the parts. We have only begun to understand how this is achieved.

Our challenge is to learn to structure and manage our participation in life's synergistic processes in ways that strengthen—rather than disrupt—them. It will require keen observation, great humility, and an ego-free sharing of insights as we learn as a species what this requires and transform our institutions from the bottom up to align with complex ethical and intellectual principles we are just beginning to understand.

We must engage in continuous cycles of observing, testing, re-observing, adapting, and sharing lessons as we go. Rather than presuming to have final answers, the 21st century economist will need to be a skilled learner and facilitator of the complex social learning processes this will require.

3. **Decouple the Economy from Dependence on Growth**

Twentieth century economists generally recognize that the current economy will collapse if it is not growing. But, rather than identify and deal with the cause, they simply cling to growth as a defining imperative. This response is not without reason, because 20th century economies depend on growth to avoid collapse. This dynamic has two primary causes.

The first cause is automation that reduces demand for the labor required to produce the goods and services for which there is established market demand. This can leave major segments of the population with no means of livelihood. The conventional solution is to grow the economy to increase the demand for labor faster than jobs can be automated.

A 21st century economist recognizes that labor is the foundation of life and that service through meaningful labor is an essential foundation of our sense of purpose. To eliminate the need for labor is to eliminate that which gives life meaning. The goal, therefore, is not to eliminate labor, but rather to make our labor more effective and satisfying in service to the well-being of people and planet. Using automation—including more recently artificial intelligence—to eliminate jobs may in some cases be beneficial, but only when it releases workers for other important and satisfying work, including artistic contribution and caring for others.

The second driver of the demand for growth centers on the debt system by which money is created. Banks create new money by issuing a loan. But in doing so they do not create the money needed to pay interest on that loan. So the economy must grow fast enough to generate new borrowing to put enough new money in circulation to pay the interest on the currently outstanding debt.

Basically, the current capitalist-controlled money system is a giant Ponzi scheme. Without growth, mass bankruptcies force the whole system into default. Unless government steps in with a bailout of the lenders that created the problem—and by conventional market logic deserve to fail—the economy will collapse, as history periodically demonstrates. The question is not whether this will happen again. Rather

it is when and whether the government will have the means and the will to bail out the bankers?

Both causes of the growth imperative follow from society's deep division between a majority working class that lives by meager returns to its labor and a minority capitalist class that lives by its control of our access to the means of living. The result is a system in which workers contribute the value. Owners capture the returns.

The system fix is simple in concept and complex in implementation. Eliminate the division between working and capitalist classes through a transition to worker and community cooperative ownership and restructure the banking system to put the government in charge of issuing debt-free money put into circulation by funding public services. Loans for local home buyers and businesses can be safely provided by local cooperative banks that turn local savings into secure long-term loans to community members who are also cooperative owners, sharing in the interest returns they are paying on loans from the same institution.

Under this arrangement, the basic money supply does not carry a debt burden. At the community level debt and interest flows continuously within the community as people rotate between roles as borrowers and lenders and thus essentially pay interest to themselves. Making the financial flow circulate eliminates the problem of a societal division between a lending class and a borrowing class.

Twentieth century economists have no tools even to recognize the source of the imperative for growth, let alone resolve it. So they cling to the growth mantra. Twenty-first century economists will develop a deep understanding of the relevant dynamics and chart and test paths to achieve the essential reforms.

4. Teach, Value, and Reward Cooperation

The theories of 20th century economists assume that humans are inherently individualistic, competitive, and materialistic. Moreover, they assure us that these behaviors are a foundation of human progress. Therefore, it is our moral responsibility to act accordingly.

If these characteristics defined our inherent human nature, humans would have gone extinct long ago. No human can live without nature and none can reproduce without a partner. No parent has any hope of caring for and raising a child alone in a wilderness absent the support of other humans.

Consistent with the imperative to cooperate, most humans are courteous, kind, honest, and find pleasure in helping others. Cooperation is a key feature of healthy societies, as is the free sharing of the lessons of experience. A healthy community recognizes that all institutions, including business, must serve the public interest and the community must hold them accountable for doing so.

The failed theories of 20th century economics celebrate market competition and favor the interests of profit-maximizing transnational corporations over the interests of self-governing communities of place. Corporate lobbyists put in place rules that force communities to compete for corporate favor through subsidies, tax breaks, and rolling back the regulations that limit corporate profits and monopoly power. Through such measures, transnational corporations became humanity's dominant global institutions and the ultimate practitioners of what Pope Francis calls the idolatry of money. The relationships between business and community must be restructured in ways that hold business accountable to community.

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 much needed 21st century economics must build on a sound 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.

5. Advance Worker and Community Ownership.

As humans came to dominate Earth and all its other beings, we forgot that our well-being depends on the health and well-being of the interdependent, indivisible whole and all its many species. Eventually, we came to believe that individual humans are entitled to own, control, and exploit nature for their exclusive benefit even though human labor played no part in its creation and human well-being depends on a synergistic alliance melding human and non-human labor.

We earn our right to share in the surplus of the whole through our paid and unpaid labor in service to the whole. The presumptive owners of natural capital have no inherent entitlement to a reward beyond whatever contribution they may make through their labor to sustaining or enhancing nature's regenerative yield. This is basically the concept of use rights common in traditional societies.

Twenty-first century economists will work with legal experts to redefine the nature of ownership and property rights as they relate to the different forms of capital and restructure the law to distribute those rights and responsibilities in ways consistent with the well-being of the whole. The competitive conflict between labor and capital largely disappears if ownership resides with workers and the communities in which they live. Thus, a defining challenge for 21st century economists will be to identify and advance policies that support a transition from capitalist ownership by the few to cooperative worker and community ownership by the many.

6. Manage Technology in Service to Life.

Most technologies are inherently neither good nor bad. Their value depends on how they are used. Humanity is currently overwhelmed by technological advances in

communications, artificial intelligence, genetic modification, pest and disease control, and material resource extraction. Some pose major threats to the well-being of people and planet if applied to serve short-term profits rather than long-term well-being. The result is lost jobs, manipulation of public opinion, suppression of dissent, and acceleration of natural resource extraction, contamination, and depletion.

Most technologies have potential to benefit people and planet, but only if used judiciously and responsibly.

Humans have the right and the means to favor the development and application of technology to reduce human environmental impact, restore the regenerative capacity of Earth systems, and facilitate global understanding, cooperation, and learning as we transition to an ecological civilization. The needed 21st century economics will help us identify and make choices appropriate to a future in which technology is the servant of life, not its master.

7. Manage Our Human Numbers and Distribution

A viable human future depends on taking individual and collective action to manage our human numbers and distribution across Earth's surface as part of fulfilling our responsibility to manage our individual and collective ecological footprints.

The health of any natural system depends on its ability to balance the populations of its varied species. We do not fully understand the dynamics, but it seems that in nature, numbers are constrained by interactions among the species and the limitations of the resources on which they all depend. Healthy bodies may mobilize in defense against rogue cells and microorganisms. And ecosystems may mobilize to protect against rogue species.

This dynamic suggests that either humans self-manage their reproduction and distribution to align with Earth's needs and capabilities or Earth will define us as a rogue species and do it for us. Some observers believe the Earth that has for so long nurtured us, now recognizes us as a threat and has begun to mobilize its defenses. Better both for Earth and ourselves that we self-correct.

To control our 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. Twenty-first century economists will need to develop the tools that help us define, choose, and implement appropriate action.

8. Eliminate the Abuse of Nature

An unconscionable portion of humanity's collective environmental footprint comes from activities that provide only short-term benefits for a few people or produce no benefit for anyone. War and the preparations for war are a prime example of activities

that, if eliminated, 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 from war-related labor 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.

Significant human talent, energy, and technology resources can be freed up by eliminating advertising that encourages us to purchase harmful or simply unneeded products. We can do the same by eliminating financial speculation and the related expenditure of talent, energy, technology, and precious metals for the computer power devoted to creating unearned financial windfalls for those who already have far more than any human could possibly need.

There are also important opportunities to reduce humanity's Earth burden by eliminating the release of toxic chemicals into soil, air, and water to achieve temporary increases in crop yields at the expense of Earth's regenerative capacities. Eliminating these harmful acts would also create improvements in human health and reduce the labor and natural resources burdens required to provide the high-tech medical care that victims of the toxins otherwise require.

Excessive dependence on automobiles for daily movement can be eliminated by designing infrastructure to support people in living near where they work, shop, and play. The New York City of twenty years ago, with its extensive and reliable system of public transportation, was an impressive example of how a city can be structured to provide a high quality of life by organizing space, sidewalks, and public transit to provide ample and enticing public spaces while largely eliminating the need for private automobiles. Such design can significantly reduce the environmental impact of hundreds of millions, even billions, of people while simultaneously improving their quality of life.

There are significant opportunities to eliminate the routine, wholly unnecessary, and vastly destructive global movement of people and goods by air, land, and sea by keeping production and consumption local and relying on recycled materials. We can share ideas, technology, culture, and learning electronically to greatly reduce the need for physical travel.

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 economists who think only in terms of profits, jobs and financial costs take little interest in possibilities that will be at the top of the agenda of 21st century economists.

9. Favor Cyclical Suburban-Free Bioregional Economies

Nature's economy is everywhere local, cyclical, and synergistic. It meets local needs with local resources, requiring minimal long-distance movement of inputs. Except for toxins that nature sequesters and energy that the sun continuously renews, everything is reused and recycled in perpetuity as the wastes of one become food for another. With the guidance of 21st century economists, humans can learn to live by similar principles.

Twentieth century human economies are mostly linear. By the logic of 20th century economists, this is more efficient. Products are cheapest when we import them from low wage countries with lax environmental regulations and throw them away in a local waste dump. Thus, resources are depleted and waste dumps grow.

As 21st century economists work with educators and religious leaders to shift society's defining value from money to well-being, support for profit-seeking transnational corporations will languish, and power will shift to well-being seeking local communities. With further guidance from 21st century economists, communities will localize economies and implement circular production processes that minimize waste through reuse and recycling, provide good jobs, and maximize the regenerative health of people and planet in perpetuity.

Food wastes will be recycled to regenerate soils. Timber, fiber, and pulp will be reused. When reuse is no longer feasible, they will be composted to regenerate soils that grow new timber, fiber, and pulp. Localizing economies will minimize dependence on international trade, the need for long-distance air, land, and sea transport, and competition for resources, jobs, and markets. Trade wars will be consigned to history.

In the 21st century economy, products made from non-organic materials extracted from the Earth will be perpetually repaired and recycled. Waste energy will be captured and reused. Toxic materials will be isolated from air, soil, and water and continuously reused, transformed, or permanently re-sequestered deep underground.

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.

We will design urban infrastructure to make it easy and attractive for people to meet their needs for services, shopping, education, spiritual practice, work, and recreation within walking or biking distance from where they live. Rural communities will organize around vibrant towns and villages that offer essential services and are connected by public transport.

The goal will be a world in which, other than a few remote rural farm families, most everyone will live in a city, town, or village that provides access to basic facilities, facilitates community relationships, and serves as a public transportation hub. Cities will serve as bioregional hubs connecting to one another through high speed transit. The significance of national governments will decline as power shifts to bioregions.

Urban and rural dwellers will 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 biowastes from nearby urban areas. Cities will provide cultural and educational opportunities for both urban and rural dwellers and rural areas will provide urban dwellers—especially children—with nature immersion experiences, including summer agricultural work opportunities for students.

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

Here again, 21st century economists will help to guide the public in identifying and implementing actions that reduce human consumption and increase the health and well-being of humans and Earth.

10. Honor Labor in All Its Forms

As legendary evolutionary biologist Lynn Margulis observed, “Life is matter with the capacity to choose.” Choosing is itself a form of labor and labor is the difference between dead matter and live matter. When we cease to labor, we cease to live.

Life as we know it exists only as active communities of living organisms that together create and maintain the conditions essential to their common existence. Sometimes those communities are clearly defined as multi-celled organisms. Other times we know them as a beehive or an ant colony. We humans also know them as families, communities, societies, ecosystems, and ultimately as living Earth.

Labor defines the distinction between dead and living matter. When the labor stops, living matter becomes dead matter. It is the same for human families, communities, and societies. Each is defined by the relationships of those who labor on their larger behalf. No wonder meaningful work is essential to our sense of self-worth and well-being.

Twenty-first century economists will not start with the question, “How can we create more jobs?” Rather they will ask: “What work is needed to enhance and secure the

well-being of people and Earth? Who are the people available to do that work? How can our community or society prepare them to do it and draw them to it in ways that increase their sense of self-worth?"

In a healthy society, no person should be without both 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 the 21st century economist.

A narrow focus on money and financial return rendered 20th century economics wholly inadequate to the task of guiding us in managing the human household 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 is taught and practiced by its true believers 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 their own stash of money. Yet we cling to this deeply flawed economics for lack of an established alternative.

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](http://davidkorten.org) as a contribution to discussions framing a new economics for the 21st century. It may be freely shared in whole or in part. More information is available at: <http://davidkorten.org>